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# NEOLITHIC IN TURKEY

## THE CRADLE OF CIVILIZATION

*NEW DISCOVERIES* *TEXT*

Edited by Mehmet Özdoğan / Nezi̇ Başgelen



ARKEOLOJİ VE SANAT YAYINLARI

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*Henry T. Wright III*

National Geographic Society  
Committee for Research and Exploration

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(TEXT)

ÖZDOĞAN  
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BAŞGELEN

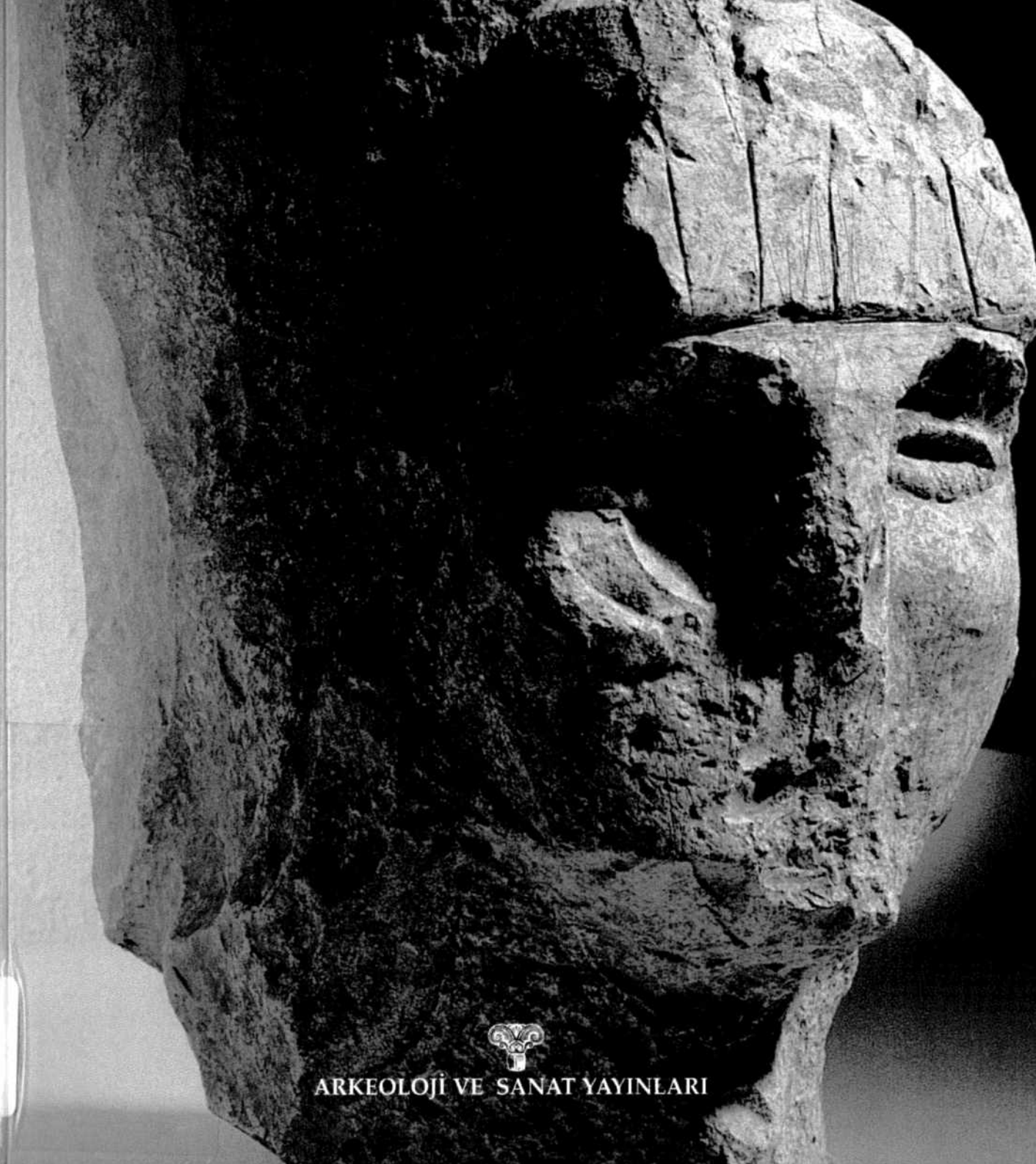
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# Foreword

*Nezih Başgelen*

The interval known as the Neolithic Period symbolizes one of the most progressive stretches along mankind's itinerary toward civilization. This productive era represents man's advancement from his existence as a nomadic hunter to that of a permanent settler subsistent on his fields and flocks. By the close of this period the foundations of civilization as we know it today had been laid.

Anatolia possessed a very special status within this Neolithic Period. It was cultural accumulation, as much as the favorable natural environment, that made Anatolia a prime mover in this marriage of culture and economy; in relation to other regions in the Near East, a very highly developed civilization had developed here. The most recent investigations have revealed that Anatolia was the home to cultures so complex and developed that they alter the very definition of the Neolithic Period. Anatolia's character as a bridge transmitting this new lifestyle based on agriculture and husbandry to other geographical regions—Europe in particular—was another significant factor in the role played by the region during this period.

The first research significant for the Anatolian Neolithic began in the 1960s at large and important sites such as Çatalhöyük, Can Hasan, and Çayönü. Most particularly within the last ten to fifteen years investigations into the Anatolian Neolithic have accelerated to an astonishingly swift pace. It is the many recent archeological excavations carried out in Turkey that have stimulated Arkeoloji ve Sanat Yayınları's (Archaeology and Art Publications) new publication project aiming to provide a first-hand account of the research from the pens of the excavators themselves.

The present publication represents the first volume. The magnificence of the cultures of the Anatolian Neolithic and their significant contribution to the history of civilization is presented here—for the first time—as a corpus.

In this volume are included the oldest known settlements of the Anatolian Neolithic, Hallan Çemi in Batman; the site of Çayönü, which mirrors the entire developmental sequence of the period; the only site excavated in the mountainous region of Eastern Anatolia, Cafer Höyük the masterpieces of art and magnificent temples of Nevalı Çori and Göbeklitepe; Yumuktepe, representative of the Neolithic cultures of the Mediterranean coastal region; Aşıklı Höyük, a predecessor to the Çatalhöyük culture—previously the earliest known from the Central Anatolian Neolithic—and its successor Musular; investigations at the sources of the 'natural glass' obsidian, the commodity most significant in the trade and commerce of the period; the excavations at the mounds of Bademağacı Kuruçay, and Höyücek, which reflect the entire sequence of the Neolithic in the Lake District; Ilıpınar (in Orhangazi), which opened the door to the west for the cultures of the Anatolian Neolithic; the Thracian sites of Hoca Çeşme and Aşağı Pınar that laid the foundations for the Neolithic in Europe; not to mention the sites of the earliest cultures in Istanbul: Fikirtepe, Pendik, and Yarımburgaz.

Arkeoloji ve Sanat Yayınları is honored to publish this work on the occasion of the 75th anniversary of the Republic of Turkey and the 20th anniversary of our founding as a publishing house. We wish to thank all of those individuals and institutions who have contributed to this volume.



## Editorial Notes

This volume was intended to be published a year ago, celebrating both the 75th anniversary of the modern Turkish Republic and inaugurating the 20th year of Arkeoloji ve Sanat Yayınları. For reasons beyond our control the publication has been delayed for some time, for which we wish to express our sincere apologies to the contributors. Considering the rapid pace that Anatolian archaeology has taken in recent years, we are aware that what was written a year ago may already be out of date by now. Therefore, some of our colleagues have updated their papers with minor changes.

To attain consistency throughout this volume, some editing was necessary. This is particularly evident in the case of radioactive dates. Throughout this volume calibrated dates are given in capital letters, while the conventional uncalibrated ones are in miniscule (i.e., BC or BP for calibrated dates, bc or bp for uncalibrated ones). In the spelling of site names the format used by the excavator of that site has been accepted as the standard (i.e., Çatalhöyük and not Çatal Höyük, Nevalı Çori and not Nevalo or Navalli Çori). Other than that, the texts appear as submitted by the authors.

As for terminology, we are indeed conscious of the fact that taken literally the terms "Neolithic" and "neolithization" are meaningless, and that the terminology suggested by Braidwood is much more meaningful. However, it is also evident that Braidwood's terminology, e.g. "incipient farming villages", is also inappropriate for most Anatolian Neolithic sites, since hunting-gathering continued to be the principal means of subsistence for a long period of time. Thus, to avoid further terminological confusion, we have opted to retain the "old-fashioned" conventional terms, considering them as archaeological terms only, not literal interpretations.

*Mehmet Özdoğan*

## PREFACE

*Mehmet Özdoğan*

The Neolithic period is one of the most fascinating epochs in cultural history. Even though it was of relatively short duration, the amplitude of changes that took place in every aspect of life during the Neolithic period can only be compared to that of the Industrial Revolution. It can even be said that the roots of our present civilization were founded during the Neolithic period. Thus, the emergence and the development, as well as the consequences of the process of neolithization have provoked the interests not only of archaeologists and cultural historians, but also of a wide range of specialists, including zoologists, botanists, sociologists, environmentalists, and architects. Likewise, there is no shortage of theories on any aspect of the Neolithic.

The significant role played by the Near East in the process of "neolithization" is evident. The initial steps of the "Neolithic way of life" were set in the Near East and before it spread to other regions, it completed its full development with numerous innovative achievements in the place of its origin. Whether these developments are taken as a "revolution" or as a gradual process of evolution, their consequences had far-fetching impact over a geographical area wider than its place of its origin. Conventionally the term "Neolithic" was used to imply a change in subsistence patterns; now, however, considering the evidence

of the Near Eastern Neolithic cultures, the need for new parameters to define what "Neolithic" implies is evident. The Neolithic of the Near East was not a simple shift in subsistence pattern from hunting-gathering to farming and domestication, but more significantly-a period of major social, economic and technological innovation. It was a period of experimentation, with a high momentum of stimulation and change. Clearly, in the Near East, it was not a period of simple villagers struggling to survive, as Childe once described it (Childe 1951: 83); on the contrary, we can now speak of issues such as the presence of stratified society, an intensive network of trade (not only of essential commodities but also of luxuries) and monumental architecture that would require organized labor, drawing the picture of a complex and flourishing society within the Neolithic period. It is due mainly to such innovative developments that such an overwhelming interest in the Neolithic period has been inspired.

The significant role that Anatolia played in the formation of Neolithic cultures has generally been overlooked. Even though some finds from the Anatolian plateau had been ascribed to the Neolithic period as early as the first decade of this century (Peet 1909, Ormerod 1912), the presence of Neolithic cultures in Anatolia was rejected, or at best met with con-

siderable scepticism<sup>1</sup> until James Mellaart's significant discoveries. Within the history of Neolithic research in Turkey, the courageous initiative taken by Mellaart must be acknowledged. It was he who first "dared" to ascribe a "Neolithic" date to some Anatolian cultures including Fikirtepe culture, contrary to the opinions of the eminent authorities on Anatolian archaeology. Even the subsequent recovery of undeniably Neolithic cultures, first at Hacilar and soon followed by the flamboyant remains of Çatalhöyük, were not enough to activate the interest that these cultures deserved. Actually Mellaart was not a theoretician; he was more interested in analyzing the artifactual assemblage than in questioning "why" and "how." It was probably for this reason that Çatalhöyük was never incorporated into the theoretical framework of Neolithization.

While Mellaart was making significant discoveries in Central Anatolia, another major project was under way in Southeastern Anatolia; this new project however, was much more involved in theory. Braidwood, whose main concern in Neolithic research was to seek answers to "why", "where" and "how," had formulated a new definition for the Neolithic homeland. The new concept of the Braidwoods was "the natural habitat zone" which included at least parts of Southeastern Turkey. This substantial new undertaking of Braidwood and Çambel not only resulted in the discovery of numerous Neolithic sites in Southeastern Anatolia, but also led to the excavations at Çayönü, which is now considered one of the key sites demonstrating the process of Neolithization. These efforts as well, however, were not properly appreciated until about a decade ago.

The significant contributions of Mellaart, Braidwood and Çambel were soon to be fol-

lowed by others: the surveys and the Can Hasan excavations of D. French, and the Süberde and Erbaça excavations of J. Bordaz and R. Solecki. The outcome of these pioneering efforts would have been sufficient to instill in an unbiased observer the intuitive awareness that the Neolithic of the Anatolian plateau was of major importance<sup>2</sup>. Nevertheless, in most of the works on the Neolithic of the Near East, the Anatolian evidence continued to be disregarded, underestimated or considered as a late reflection of events which had taken place in the Levant. The spectacular finds of Çatalhöyük and Çayönü were generally regarded as incidental cases. During last forty years there have been numerous publications theorizing and/or interpreting the process of Neolithization; it is of note that scarcely any of them consider Anatolia as a part of the core region or attempted to integrate the Anatolian evidence with that of the rest of the Near East. This trend is more evident among our colleagues working the Levant, where in the decades following the 1960's, the pace of Neolithic studies increased considerably.

Nevertheless, during the last decade, after the excavations at sites such as Nevalı Çori, Hallan Çemi, Göbekli and Aşıklı, there have been indications that this trend is changing and that Anatolia is finally being included in the formative zone of the Neolithic. It is clear, however that the study of the Anatolian Neolithic is still in its incipency. One should consider that the total number of excavated Neolithic sites in Israel, Jordan, Lebanon, Syria and Iraq is more than 400, whereas in Anatolia, covering an area almost twice as large as these countries, the number is only 34 (Harmankaya *et al.* 1997). Accordingly, it should not be surprising that every new excavation in Anatolia has been revealing a hither-

to unknown culture, while elsewhere in the Near East, details of already known cultures are being filled in by new excavations.

This present volume aims to present a first hand update on the Neolithic excavations conducted during the last decade or so in Turkey. We are aware that some of the evidence presented here has already been published elsewhere<sup>3</sup>. However, much of this has appeared only in annual reports, presentations from which an overall picture of the available evidence is difficult to glean.

It is not the intention of this publication to reassess the Neolithic cultures of Anatolia. In spite of its early date, the voluminous work of Mellaart, the Neolithic of the Near East (Mellaart 1975) still remains the major handbook incorporating the Anatolian evidence with that of the rest of the Near East. In this context the successive works of Mellaart (1965), Singh (1974), Esin (1979), Balkan-Atlı (1994) and Yakar (1991, 1994) still hold ground in presenting a conspectus of the available information at the time of their publication.

In our view, the available evidence of Anatolian Neolithic is not yet adequate to manipulate complex theoretical assessments. In the present status of Neolithic research, we are still yet at a stage where the picture has just begun to emerge- not in all, but only in some regions of Turkey. Even in the relatively better explored areas the basic chronological sequence is still unresolved, and for a substantial part of the country it is not possible to define cultural assemblages with any certainty. Nevertheless, there are now at least four distinct areas where the study of Neolithic cultures shows a relative intensity: the Urfa-Diyarbakır region, the Konya-Aksaray region, the Lake District and the Marmara Region. In all other areas, our knowledge of the period is either non-existent or dependent on isolated excavations.

It is perhaps natural for colleagues not familiar with the geography of Turkey to consider the Anatolian Neolithic as a single entity, as is the Neolithic of the Syro-Levant region. However, Anatolia comprised of a number of distinct ecological zones, each of which is at least as large as the Levant. When we speak of the Konya-Aksaray zone and the Urfa-Diyarbakır region as being distinct cultural entities, it must be remembered that the distance between them, or rather the extent of the unexplored area between Aşıklı and Göbekli Tepe, is not only vast but also ecologically varied. The distance is almost equal to the width of Syria. This inevitably obscures cross cultural comparisons. Likewise, the distance from Ilıpınar to the next excavated Neolithic site, Hacilar, is almost 400 kms. In most of the Levant, if a problem remains unresolved at one site, the thing to do is to look at the already existing evidence of another site in the next valley for possible solutions. In Turkey we are still trying to interpret over distances that represent hundreds of kilometers. Even in Southeastern Anatolia, where we feel we can make reasonable comparisons, Çayönü and Nevalı Çori are 160 km, and Nevalı Çori and Göbekli Tepe are 70 km apart.

Nevertheless, in spite of these difficulties, there is now convincing evidence of the significant role that Anatolia played in the formation of Neolithic way of life. The present volume attempts to pull the distinct nature of the Anatolian evidence.

We are also conscious that this volume would have been much more comprehensive had it included papers on recent developments in environmental studies, geomorphology, archaeobotany, archaeozoology, archaeometallurgy and human remains. Particularly in the course of the last decade there have been considerable achievements in these fields, many of which are directly relevant to the Neolithic period. However, both page limitations as

<sup>1</sup> E.g. Lloyd 1956. For further discussion of this issue see Özdoğan 1995.

<sup>2</sup> Alkim (1968: 47) actually wrote "the study of Anatolian Neolithic is already opening up the most encouraging prospects for the future". (1968: 68) and "...Anatolian Neolithic has revolutionized the prehistoric archaeology of the Near East". Likewise, Esin and Benedict (1963: 345) have expressed their concern about Neolithization models excluding the Anatolian peninsula.

<sup>3</sup> In earlier years most of the annual excavation reports on the Neolithic period were published in *Anatolian Studies*, later *Actas of the Turkish Antiquity Service Symposiums* (Kazı Sonuçları Toplantısı) and *Anatolica* became more effective in this respect.

well as our concern of not being able to bring so many papers together, have prevented us even attempting to expand this work further. Regretfully, for reasons beyond our control, Köşk Höyük, one of the most challenging sites currently being excavated, could not be included in this volume.

As the editor of the present volume, I would like to express my gratitude to all of my colleagues not only for their valuable contributions, but also for their patience and friendly cooperation. If it had not been for the undying enthusiasm of Nezih Başgelen, editor in chief of the Arkeoloji ve Sanat Publishing House, the volume might have never materialized as it has. Mr. Başgelen's collegial approach, as

well as his enthusiasm for Neolithic archaeology, has helped overcome all handicaps throughout the preparation of this volume. I owe him and to his colleagues many thanks for making all means of his publishing house available by forcing all of its limits to the end. It would otherwise not have been possible either to attain this quality of printing, or to include so many colored illustrations. Then last, but not least, the success of this volume owes much to the meticulous efforts of Zafer Örenlili and Füsün Uluölke. We are also grateful to Jean Efe, who translated papers by Duru, Esin, A. Özdoğan and went over some of the papers. We have now only to hope that this volume will stimulate even more new research.

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# INTRODUCTION

## The Neolithic in Turkey: A General Review

Ufuk Esin\*

### INTRODUCTION

Looking back as we prepare to leave the 20th century, we notice that the archaeological excavations and investigations of recent years have brought a wealth of new results to the intensified study of cultural history begun in Turkey since the late 1950s. This is especially evident in prehistory. Whereas only a few years ago, looking for predecessors to the Neolithic cultures outside southern Anatolia would never even have come to mind, excavations have produced striking evidence that such cultures were concentrated in other regions as well, each separate area distinguished by its own traditions (cf. J. Cauvin 1994, Balkan-Atlı 1994, Harmankaya *et al.* 1997). With the neothermal conditions introduced at the beginnings of the Holocene - some 13,000 years ago by our calendar-human communities first began to settle in Turkey and the neighboring countries of the southwestern Asia, founding small villages and progressing step by step to create, over a span of three thousand years, cultures that can be termed Neolithic, a "revolution" in the eyes of Childe (Childe 1958, Mellaart 1975, Esin 1979: 5-22, J. Cauvin 1994, 1996, Price and Gebauer 1995a).

The sites first disclosing such Neolithic cul-

tures to their excavators include *Hacılar*, excavated in the 1950s (Burdur: Mellaart 1970); and *Çatalhöyük* (Çumra, Konya: Mellaart 1967, Hodder 1996), *Çayönü* (Ergani, Diyarbakır: Çambel and Braidwood 1980, A. Özdoğan 1995), *Suberde* and *Erbaba* (Suğla, Burdur: Bordaz 1973), as well as *Can Hasan III* and *I* (Karaman, Konya: French 1972, 1998) in the 1960s. More Neolithic sites in the south and southeast of Anatolia were added to the list in the late 1970s and 1980s when salvage excavations took place in the areas to be flooded by the reservoirs of the Karakaya and Atatürk Dams: *Gritille* (Adıyaman: Voigt 1988), *Hayaz* (Adıyaman: Roodenberg 1979/80), *Cafer Höyük* (Malatya: Molist and J. Cauvin 1991), and *Nevalı Çori* (Şanlıurfa: Hauptmann 1993, 1999). These were followed in the 1990s by excavations behind still other new dams planned in the region: *Hallan Çemi* (Batman: Rosenberg *et al.* 1995), and *Gürcütepe* and *Göbekli Tepe* (Şanlıurfa: Schmidt 1995: 9-10, 1997: 8-9, Beile-Bohn *et al.* 1998 - *in press*).

Parallel to the more recent work in southeastern Anatolia, excavations in Central Anatolia began in the '80s, with work still underway at *Aşıklı Höyük* (Kızılkaya, Aksaray: Esin 1998a, 1998b), and at *Köşk Höyük* (Bor, Niğde:

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Silistreli 1991, Gates 1997. Even more recent are the excavations at *Musular* (Kızılkaya: cf. M. Özbaşaran in this volume) and the obsidian atelier at *Kaletepe* (Göllüdağ, Niğde: cf. N. Balkan-Atlı in this volume). In southwestern Turkey there have been excavations at *Kuruçay* and *Höyücek* in the Lake District (Burdur: cf. Duru in this volume) as well as at *Bademağacı* (Antalya: Duru in this volume). These researches have demonstrated the existence of both Aceramic and Ceramic Neolithic cultures distinct from those known in the southeast of Anatolia.

At present there are Neolithic settlements under excavation in the Marmara Region as well, most notably those of the Ceramic Neolithic found and selected for digging by M. Özdoğan during his surface surveys in eastern Thrace. Excavations in the Marmara basin, including work at *Ilıpınar* and *Hacılar* (Orhangazi, Iznik: cf. Roodenberg in this volume), *Hoca Çesme* (Enez, Edirne) and *Aşağı Pınar* (Kırklareli: Özdoğan 1998) have enlarged the cultural mosaic of Turkey; we now have more concrete evidence to suggest that the Marmara Region has served as a bridge between Anatolia and southeastern Europe since at least the 7th millennium BC.

#### CHARACTERISTICS DEFINITIVE FOR THE NEOLITHIC PERIOD: PARAMETERS

Indeed, in the New World as well as the Old, the start of the *Neolithic age* and the qualities which define it, represent a great step in the cultural history of mankind (Price and Gebauer 1995a). In the light of investigations now, we may define the characteristics of Neolithic culture in southwestern Asia with the following parameters:

- Some 12.500-10.000 years ago (corresponding to calendar years from the 11th through 8th millennia BC by calibrated radiocarbon dating) the Ice Age gave way to warmer and more humid climatic conditions much more congenial to human life (Esin 1979, J. Cauvin 1994, Price and Gebauer 1995b: 3 ff.).

- According to Wechler and Gebel the Late Natufian culture survived over a thousand-year span (approximately 10.800 to 9.800 BC) during the Dryas III, which corresponds to the end of the Pleistocene in southwestern Asia (Wechler 1995: 12, fig. 1). The Aceramic Neolithic A cultures (Sultanian - Khamian) lasted from about 9.800 - 8.000 BC, that is to say they existed at the beginnings of the Holocene, under climatic conditions described as Preboreal; by the period of the Aceramic Neolithic B cultures (ca. 8.000 - 6800) a continental Boreal climate existed in the region (*ibid.*). An Atlantic climate continuing over a relatively long span and presenting a "climatic optimum" then prevailed over Anatolia and the rest of southwestern Asia from about 6.800 - 3.700 BC, to the benefit of the Pottery Neolithic (Ceramic Neolithic) and Chalcolithic cultures (Wechler 1995: 12, fig. 2).

- As a result of the climatic changes at the beginnings of the Holocene, the vegetation broadened to include trees, grasses and wild grain; with the spread of these the period for plant and animal domestication had arrived (J. Cauvin 1994, Price and Gebauer 1995b: 3ff.).

- During this same period, between the 11th and 8th millennia, man now gave up his semi-nomadic lifestyle to settle permanently; the first farming villages and village communities were born (*ibid.*).

The first permanent shelters were round in plan and sunk into the ground, completed with a superstructure of wattle-and-daub; later, man began to build rectangular houses of stone or mudbrick (*ibid.*).

- It was also during this period that these "first permanently settled village communities" were able to develop a mixed economy based on agriculture and husbandry as well as hunting and gathering (*ibid.*).

- During this time span the techniques man was using to create tools of chipped stone remained largely restricted to those of the traditional blade and microlithic industries of Late Paleolithic and Mesolithic/Epipaleolithic times. Most important during this period is

the local differentiation that appears both in the materials employed and in the technologies used to fashion the tools (J. Cauvin 1994, Bar-Yosef and Meadow 1995: 63 ff.). The arrowheads/spear points developed in the Epi-Paleolithic and Neolithic Levant have come to represent a chronological criterion (*fossile directure*) of the Neolithic, most particularly within the region and its immediate surroundings (*ibid.*, Bar-Yosef 1981: 559-561, figs. 2-3). Such points can be followed chronologically and labeled as Harif, Halutza, Abu Madi, El-Khiam, Helwan, Jericho (Sultanian) and Amuq points (Bar-Yosef 1981: 559-563, figs. 2-3). As indicators for the Aceramic Neolithic B phase, O. Bar-Yosef also accepts the 'naviform' cores flaked from two directions, and the application of heat in retouching flint as well as the transition from the long or short Helwan points to the Jericho and Amuq points (Bar-Yosef 1981: 562). Recently, adjustment involving the end of the Natufian period and the Aceramic A and B phases has been proposed on the basis that both Khiamian and Sultanian chipped tools have now been found together (Kuijt 1997: 3-6). A further suggestion in terminology for the Aceramic Neolithic B involves the Byblos points found in the workshop at Gürcütepe in southeastern Anatolia; it has been proposed that the Gürcütepe points, representing a variant of the Byblos point, be called "*Palmyra points*" (Schmidt and Biele-Bohn 1996: 9-11).

Likewise it is claimed that the Nemrik points - named after their findspot in Iraq - may be considered an indication of the transitional subphase at a variety of sites dated to the Pre-pottery Neolithic A (Rosenberg and Peasnell 1998: 195-197). They have been found among the surface material collected at Güzirtepe in the area surveyed for the Tigris-Euphrates dam projects, in the recently investigated site at Demirköy (Batman), in the Aceramic Neolithic levels of Hallan Çemi (Batman) characterized by shelters built over round pits, and in the chipped stone industry of the Round-Building Sub-Phase at Çayönü (Diyarbakır). During surface survey in the Rift

Valley in the vicinity of Sakçagözü (Gaziantep), A. Garrard has identified four sites from the Aceramic Neolithic (Garrard 1997: 318-319); of these, he has labeled Sak. 4/5 as being Aceramic Neolithic B on the basis of blades and blade cores - "Type Y" and "naviform" - and Byblos points (as was also the case at Hayaz Höyük and Gritille). (*Ibid.*)

In Central Anatolia the obsidian arrowheads of Aşıklı constitute a guidepost for the Aceramic Neolithic (Balkan-Atlı 1994). At the Aceramic Neolithic sites of Çalca and Musluçeşme revealed by survey in the Marmara Region near Çanakkale, on the other hand, M. Özdoğan reports a conspicuous absence of all the above-mentioned guideposts among the chipped stone industry of the Aceramic Neolithic (Özdoğan and Gatsov 1998: 214-223).

The ground and polished stone industry, as well as that of antler and bone implements, provides evidence for a mixed subsistence economy as well as for other activities meeting the needs of a Neolithic society (Davis 1982: 73-152). Baked, half-baked and unbaked clay tokens represent a stage preparatory to the beginnings of writing, and religious beliefs find expression in human and animal figurines, which have also been interpreted as forerunners of the manufacture of pottery (Schmandt-Besserat 1992, J. Cauvin 1994). Most significant in this respect are small stone plaques recently found at Jerf el-Ahmar in Syria; the representations and markings on the surfaces of these, as well as being a concrete expression of man's religious beliefs, indicate his progress towards writing (Stordeur *et al.* 1996: 1-2, fig. 2).

- Towards the end of this period experiments with pottery-making took place at several sites, only to be later relinquished. Calibrated radiocarbon dates suggest that the Ceramic Neolithic period - with pottery in regular use - began within a period ca. 7.200 - 5.000 BC (Esin 1981: 76-84, J. Cauvin 1994: 20-21).

- Although not widespread, "pyrotechnology", or the application of heat in metallurgy, was

being employed at several sites, and by the beginning of the Ceramic Neolithic period, a proper smelting of copper ore with the use of lead had begun (Esin 1976, 1995).

- Objects with symbolic or religious connotation -both small finds and architectural features- of various size, material and technique now appeared, as well as structures that can appropriately be called temples, some decorated with statues or reliefs, and burial traditions had been established (J. Cauvin 1994). These are developments indicating the establishment of a more complex society. The most outstanding evidence for this in Anatolia is found at the sites of Nevalı Çori, Göbekli Tepe, Gürcütepe, Çayönü and Aşıklı (Hauptmann 1993, Schmidt 1997: 8-9, M. and A. Özdoğan 1998: 581 ff., Esin 1996, 1998a); among these, Aşıklı is the only site where figurative images have not been found within the structures identified as temples (Esin 1996: 37).

- Most scholars agree that those cultures socio-economically and socio-politically are dependent on a productive agricultural system -be they Aceramic or Ceramic Neolithic-trade, that is to the transport and distribution, of obsidian and exclusive luxury materials also played an important role (Singh 1975: 214 ff., Mellaart 1975: 76, 91 ff., Schoop 1995: 65-81, M.C. Cauvin and Chataigner 1996: 529-541, Özdoğan 1996: 423-431).

Looking back, one realizes that of the stimuli leading us to the parameters or factors listed above, there was one in particular very much stressed in the archaeological research carried out during the second half of the 20th century; it has been the great interest shown in interdisciplinary study (L.S. and R.J. Braidwood 1986, Price and Gebauer 1995a, J. Cauvin 1994). The socio-economic "Neolithic Revolution" described by Childe, on the one hand still a theoretical concept, was demonstrated to have evolved step by step in the concrete phases excavated by Kenyon at Jericho (Childe 1958: 59-86, Kenyon 1960: 36-57). According to the sequence at Jericho, the Epi-Paleolithic Natufian culture was succeeded by strata first

of Aceramic Neolithic A and then of Aceramic Neolithic B cultures; above these came strata of Ceramic Neolithic A and B (Kenyon 1960: 36-67). Today there is a trend towards inserting an Aceramic Neolithic C phase into the sequence, a stage lingering behind the Aceramic A and B periods, one in which pastoralism remained strong (G. and K. Rollefson 1993: 33-42). On the basis of a change in the numerical frequency of animals of prey (hunted cattle and deer) and those cultivated (sheep and goats), M. Özdoğan has recently chosen to designate the final phase of this period at Çayönü *Aceramic Neolithic C* (Özdoğan *et al.* 1994).

Braidwood and his colleagues began interdisciplinary research with the attempt to answer the questions of where, under what conditions, and how the Pre-pottery Neolithic first developed as one of their primary goals (L.S. and R.J. Braidwood 1986). Other scholars such as J. Cauvin were quick to follow suit with intensive investigations along the same lines (J. Cauvin 1994, Price and Gebauer 1995a). We cannot say, however, that these questions have been answered yet in full or that all the problems that have arisen are now solved. Now that intensive genetic research with DNA has speeded up, we have become aware of interim periods in the symbiotic relations among men, animals and plants (Price and Gebauer 1995b: 8-11, 13-19). Especially in the domain of conscious agricultural practice and animal domestication, the concrete evidence for the stages known as "proto-domestication" must be better archaeologically defined.

Apart from this it is clear that there are still questions about the transition from the Aceramic to the Ceramic Neolithic periods: exactly how it came about, whether there is a cultural gap in the evidence yet to be filled, and what socio-politic and cultural changes are implicit. There can be no doubt that the above questions underline the necessity for further investigation.

## ACERAMIC AND CERAMIC NEOLITHIC CULTURES IN TURKEY

Just what is the state of research in Turkey as regards the Neolithic periods discussed above and the questions concerning them? In order to better understand and clarify the Neolithic cultures (Ceramic or Aceramic) of Southwestern Asia and Southeastern Europe, what contributions does the Neolithic in Turkey offer for us to focus upon?

Many of the answers to these questions are, in a sense, to be found in the following pages treating the individual sites and their cultures one by one. It must be kept in mind, however, that when we discount the chance finds and material from surface surveys, the number of Neolithic cultures in Turkey actually known to us through proper archaeological excavations is still less than those in either the Near East or southeastern Europe (cf. Harmankaya *et al.* 1997, J. Cauvin 1994, Papathanassopoulos 1996, Tringham 1971, Phillips 1981: 147-189).

Moreover, the knowledge we have at hand about the Epi-Paleolithic and Mesolithic cultures in Turkey is sorely limited (Esin 1981: 6-18, Harmankaya and Tanındı 1996-98). Because no open-air campsites have yet been excavated, we have only the evidence from the rock-shelters and caves of Öküzini, Belbaşı and Beldibi in southern Anatolia to work with (Esin and Benedict 1963, Harmankaya and Tanındı 1996-98, M. Özdoğan 1997).

Stratigraphically, therefore, the transition from the cultures of the Epi-Paleolithic to those of the Aceramic Neolithic remains largely in the dark (*Ibid.*). On the evidence we have from the sites of Hallan Çemi and Çayönü, it appears that the Aceramic Neolithic A cultures in southeastern Turkey remain relatively close to the Near Eastern models known from Syria and the Levant. In the Aceramic Neolithic B period, on the other hand, (with the exception of Gritille in Adıyaman), local cultural traits come to the fore -as witnessed at Çayönü, Nevalı Çori, the mounds of Göbekli Tepe and Gürcütepe (Şanlıurfa), Hayaz (Adıyaman) and Cafer Höyük- with an emphasis on specializa-

tion within the community as seen in architecture, sculpture and other symbolic art forms. Nonetheless there are obviously some religious practices -the skull cult, for example- and certain iconography that reflect those of the neighboring cultures to the south. This situation would imply that the southeastern Anatolian Neolithic B cultures in particular must have retained some cultural relations with their contemporaries to the south (cf. J. Cauvin 1994). Why the new cultural elements were adopted by the Aceramic Neolithic cultures of southeastern and eastern Anatolia from the northern Mesopotamia and Syria, and whence they came, however, has not yet been fully clarified. We then encounter the Ceramic Neolithic in southeastern Anatolia at the sites of Gritille and Çayönü (Voigt 1988: 225, M. and A. Özdoğan 1993: 95-102); at both sites the transition again raises questions: whether or not there was a hiatus preceding the Ceramic period (at Çayönü following the Aceramic B/C phases) and what other changes aside from the introduction of pottery -ecological, socio-economic and socio-political aspects- are implicated.

We do not know yet whether or not cultures corresponding to the Aceramic Neolithic A of the Near Eastern (or southwest Asian) model existed in the Central and Lake District of Anatolia or not. For this reason a division of the early cultures of this area into Aceramic Neolithic A and Aceramic Neolithic B must be approached with caution; such a distinction may not be appropriate.

Reviewing such Aceramic Neolithic cultures as those Aşıklı (Aksaray), Can Hasan III (Konya), Suberde (Suğla) and Hacılar (Burdur), we see that local cultural attributes predominate (Esin 1981: 30-46, 63-84, Esin 1996, 1998a, 1998b, Esin *et al.* 1991, Harmankaya *et al.* 1997). Both at Suberde and in the Aceramic levels of Hacilar in particular, it seems that very early attempts at pottery making began, but foundered (Bordaz 1969: 52, Bordaz 1968, Duru 1988: 99-104). The agglutinive architecture -with or without stone foundations- seen at Aşıklı, Can Hasan III, Hacilar and Suberde

clearly represents the roots of later village architecture throughout Anatolia. The case-mate wall of Phase 2 at Aşıklı and the enclosing fortifications of later phases at the same site are prototypes for the Anatolian fortification systems of much later date (Esin 1996). The constructions seen at Musular, with stone masonry complementing a working of the bedrock, can be interpreted as the beginnings of a long-standing tradition in Cappadocia.

We cannot say that the chipped stone industries or the development of production followed any one pattern at these sites, either (Esin 1981: 71-73, Balkan-Atlı 1994). That trade relations existed, however, is underlined by the mass production of *naviform cores* in the obsidian workshops of Kaletepe and Kömürcü (Göllüdağ, Niğde). These were then distributed to various sites in southwestern Asia and Cyprus identified as belonging to Aceramic Neolithic B, including Tell Halula, Mureybet, Dja'de and Shillurokambos (personal communication from Balkan-Atlı, 1998). This situation clearly demonstrates the continuation of intensive trade between Central Anatolia and the areas of Syria and Cyprus during the Aceramic Neolithic B period. That relations within these areas had long existed is shown by a find from Aşıklı: a small stone plaque decorated with incised motives on one face, a near parallel to those known from Aceramic Neolithic A levels at Jerf el-Ahmar (cf. Stordeur *et al.* 1996: 2, fig. c).

In Central Anatolia and the Lake District there is likewise no evidence of how the transition from Aceramic into Ceramic Neolithic took place. The sherd material from Aşıklı, of mixed context, represents a variety of periods, and the pottery recovered in the uppermost architectural phase at Musular has not yet been firmly dated (personal communication from Özbaşaran, 1998). The latter belongs to a ceramic group known at Gelveri, where it continues in use from early stages, probably within the Neolithic period, throughout the end of Chalcolithic times and is thereof of little help in relative dating (Esin 1993: 50).

As mentioned above, it would seem that the transition into the Ceramic Neolithic period - with whatever socio-political and cultural aspects were involved- must have come at the end of a long period of cultural evolution. When one looks at the architectural evidence from the Ceramic building levels at Çayönü in southeastern Anatolia, however, this does not appear to be the case at all (Özdoğan *et al.* 1992: 112-115, figs 2-5a, Özdoğan *et al.* 1991: 96 ff.). Here for the first time the characteristic features of traditional Anatolian architecture appear suddenly: structures joined to one another, arranged around open courts and divided by streets. The pottery in these levels, similar to that of pre-Hassuna and Hassuna, suggests that the Pottery Neolithic phase at Çayönü should be earlier than the Ceramic Neolithic phases of the Amuq and Cilician plains (M. and A. Özdoğan 1993). At the site of Tepecik, at sites within the Amuq plain, and at Mersin and Tarsus/Gözlükule in the Çukurova (representing eastern, southeastern and southern Anatolia) there appears no such specifically "Ceramic Neolithic architecture" (Mellink 1992). The defining criteria for the Ceramic Neolithic culture is the pottery itself and any symbolic figurative representations found. Such considerations demonstrate that the Ceramic Neolithic cultures in Turkey originated within different cultures in different ecological regions (Mellink 1992). The settlements in eastern Anatolia south of the Taurus reflect the Pottery Neolithic cultures known in northern Mesopotamia and north Syria (Mellink 1992). The common factor uniting these cultures is the dominance of *Dark-Faced Burnished Wares* among their pottery (Mellink 1992). The dispersion of this ware group as far as the Aegean and southeastern Europe, then, becomes a gauge for the spread of Neolithization to the west.

Without doubt the known sites best representing the Pottery Neolithic are those of *Çatalhöyük East* and *Can Hasan I* (Levels 4-7) in the Konya plain; *Hacılar* (Levels VI-IX), *Erbaba*, *Kuruçay* (11-12/13) and *Bademağacı* in the Lake District; and *Köşk Höyük* (Niğde) to the north.

At Kuruçay, architecturally striking for its fortification wall with bastions, there are also special representative vessel shapes among the pottery. *Çatalhöyük East*, *Höyücek* and *Köşk Höyük* are especially outstanding for their sacred structures or shrines. The above are indications of cultural similarities linking the Neolithic settlements within a region stretching from Konya and Niğde over the Lake District as far as Antalya (cf. the individual sites in this volume; Mellaart 1975: 98 ff.). The roots of the symbolic and iconographic artwork exemplified at *Çatalhöyük* are most probably to be found in the cultural group represented by the sites of Nevalı Çori, Göbekli Tepe and Gürcütepe (J. Cauvin 1994, cf. Esin 1998c).

Evidence from sites such as the *Cave of Yarımburgaz* and the sites of *Fikirtepe* and *Pendik* (Istanbul), *Ilıpınar* (Orhangazi, İzmit), and *Hoca Çeşme* (Enez) and *Aşağı Pınar* -layers 6-4- (Kırklareli) in Thrace has now been synthesized to define the Pottery Neolithic of the Marmara Region (M. Özdoğan 1998). As is to be expected, these cultures can be differentiated from one another by certain local characteristics of their own; their roots of these cultures are nevertheless Anatolian to the extent that they exhibit parallels with the Ceramic Neolithic of the Lake District (M. Özdoğan 1998). Özdoğan thus suggests searching for their more immediate origins in northwestern inland Anatolia or the Aegean coastal region (*ibid.*). These cultures of the Marmara Region, on the other hand, and most especially those in East Thrace, seem to increasingly intensify their relationships with the cultures of southeastern Europe during the Ceramic Neolithic period (M. Özdoğan 1998: 71 ff.). Rectangular structures of wattle and daub begin to predominate the architecture, and cultural objects such as the pottery and figurines more and more closely reflect those of Pre-Karanovo and Karanovo I-IV (Bulgaria) as well as of other contemporaneous cultures in southeastern Europe (M. Özdoğan 1998). Thus it was during the Pottery Neolithic period that the first close cultural relations between East Thrace and the Balkans began (M. Özdoğan 1998).

## CONCLUSIONS

At present the *Neolithic cultures* of Turkey, a land of four seasons with greatly varying ecological environments, are known only through those sites which have been excavated. The information from these sites, moreover, is by no means balanced because they have not all been investigated to the same extent. Working with the human skeletons found in excavation, it is not even possible at certain sites to achieve the numerical and demographic statistics needed to form a reliable picture of the past. Furthermore, evidence for the production of tools and weapons and the documentation of hunting and dietary regimes have not been as fully considered at some sites as at others.

Nevertheless, the organization of the more broadly excavated settlements -be they Aceramic or Ceramic Neolithic- have provided us with most intriguing clues to the formation of a social system. At sites of the Aceramic period such as Nevalı Çori, Göbekli Tepe, Gürcütepe, Çayönü and Aşıklı we see that sacred edifices were distinct from residences of the inhabitants in both architecture (how they were built) and location (where they were built). This must reflect progress over the settlements of Mesolithic/Epi-Paleolithic times, not only the division of labor, but the beginnings of a system of social hierarchy as well. The distinction between sacred and secular architecture; the expression of religious beliefs through iconography and sculpture; the gathering of edible plants and herbs, hunting and the initiation of agriculture; the acquisition of essential raw materials and the sharing/trading of these as well as of luxury substances; and the development of tool and weapon industries must all have called for occupational specialization. This, in turn, would have demanded administrators within the populations, for without the efficiency of authority such achievements could not have been accomplished so soon. The known settlements of the Pottery Neolithic period -*Çatalhöyük East* included- have not yet revealed so much evidence reflecting social organization. It

seems that during the Aceramic Neolithic, the Pre-Pottery period, more steady and nearly universal headway in social organization had been made. If indeed Höyücek represents a site devoted specifically to religious practice, this would mean that within the Neolithic period those first working the land within in the Lake District had already established a kind of coterie, an association which bound the communities together. This would explain the congregation of people from various communities at Höyücek to participate in ritual ceremonies. Further investigation will doubtless provide further elucidation on this point. Religious iconography, harking back as far as Hallan Çemi and most particularly apparent at the sites of Nevalı Çori, Göbekli Tepe, Gürcütepe and Çayönü, demonstrates a pictorial development from *theriomorphic* to *anthropomorphic* divinities. Thus the stage for the polytheism and mythological predisposition of the later civilizations of Anatolia was set as early as the Aceramic Neolithic period. The origins of the magnificent sculpture suddenly appearing in southeastern Anatolia to replace the artwork of the Upper Paleolithic -with influences reaching further westward in south Anatolia- remain a mystery (Hauptmann 1999). The cultic ornament uncovered in the

structures at Çatalhöyük East confirms that the *theriomorphic-anthropomorphic* transition and the tendency toward mythology begun in Aceramic times was continuing. A classic example of this is the baked clay figurine of the Mother Goddess, seated on a throne flanked by panthers, giving birth to a ram (Mellaart 1975, 106, fig. 14).

When compared with the various other Neolithic cultures of southwest Asia, those in Turkey -scattered over a vast geographical area- distinguish themselves through a well developed social model which, beginning in the Aceramic Neolithic period, was generally ahead of the times. This can be seen in the varied architecture and settlement patterns of the Neolithic communities, in the fantastic artistic depiction of their religious beliefs, in their burial customs, in the manufacture of tools and weapons, in their subsistence economies and in their use of trade for the extension of benefit from natural resources, as well as their socio-political development. Nor does it seem out of place to add here as well the contributions made by the Neolithic cultures in the Marmara region to those of southeastern Europe (M. Özdoğan 1998).

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# Hallan Çemi

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**KEYWORDS:** *Neolithic, Anatolia, Domestication, Sedentism.*

**ANAHTAR KELİMELELER:** *Neolitik, Anadolu, Evcilleştirme, Yerleşik Yaşam.*

## ÖZET

Güneydoğu Anadolu’da, Batman il sınırları içindeki Hallan Çemi tepesinde yapılan kazı çalışmalarında, günümüzden 11 bin yıl öncelerine tarihlenen bir köy yerleşmesi ortaya çıkmıştır. Sürekli yerleşildiği anlaşılan bu köyde yaşam daha çok avcılık ve toplayıcılığa dayalı olmakla birlikte, başta domuz olmak üzere hayvan evcilleştirmesi ile ilgili deneysel nitelikte de olsa bazı uygulamaların yapıldığı anlaşılmaktadır. Hallan Çemi’de görülen ve oldukça zengin ve gelişkin olduğu anlaşılan kültürel yapı özellikle Zağros-Toros dağlık silsilelerinin etekleri boyunca uzanan kuşak ile ilişkili olduğu gibi, köklerinin “Zarzi” evresine indiği anlaşılmıştır. Hallan Çemi kazıları, yoğun tahıl tüketimine yönelmemiş olan Güneydoğu Anadolu bölgesinin, Neolitik kültürlerin gelişminde, Levant bölgesine göre farklı bir yol izlediğini göstermiştir. Hallan Çemi ile ortaya çıkan bu sonuç, Yakın Doğu’da besin üretimi ile yerleşik yaşamın ortaya çıkışı ile ilgili kuramların yeniden sorgulanması gerektiğini ortaya koyduğu gibi, gelişimin de tek doğrultu üzerinde olmadığını göstermiştir.

## ABSTRACT

Hallan Çemi Tepesi, in eastern Anatolia, has yielded the remains of a small permanent village dating to the end of the 11th millennium BP. The site’s inhabitants were dependent primarily on hunting-gathering, but were already experimenting with animal domestication involving pigs. They also possessed a rich and complex culture with affinities to both earlier (Zarzarian), contemporary, and later sites along the Taurus-Zagros flanks. The evidence from Hallan Çemi suggests that the evolution of Neolithic societies in this area took a somewhat different trajectory than did the evaluation of Neolithic societies in the Levant, one that did not always involve the intensive exploitation of cereals. This has ramifications for theories concerning the origins of food production and settled village life in the Near East.

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## INTRODUCTION

Hallan Çemi Tepesi was discovered in 1990, during the course of archaeological surveys designed to identify sites endangered by dam construction associated with the Güneydoğu Anadolu Projesi (GAP) (Algaze *et al.* 1991, Rosenberg and Togul 1991, Rosenberg 1992). It was in immediate danger of being flooded by the Batman Dam, which was nearing completion, so a four year salvage excavation was begun at the site in 1991 under the joint sponsorship of the University of Delaware and the Diyarbakır Museum (see Rosenberg 1993, 1995, 1996, Rosenberg and İnal 1994).

Hallan Çemi is located in Batman Province, ca. 50 km north of the City of Batman. It is a small stratified mound situated on the west bank of the Sason Çayı, a tributary of the Batman Çayı and the Tigris respectively. It is roughly 4.3 meters deep and the aceramic occupation covers an area of less than .5 hectares. At least four aceramic building levels are known to exist, but architectural remains from only the upper most three were ever excavated to a meaningful degree before work at the site had to cease. A series of radiocarbon dates indicate that Hallan Çemi was occupied for several hundred years toward the end of the 11th Millennium bp in C<sup>14</sup> years (Rosenberg and Davis 1992, Rosenberg 1994, Rosenberg *et al.* 1995).

Based on the presence of substantial architecture and the seasonal availability of the different types of animal and plant remains found at the site, Hallan Çemi was clearly occupied on a year-round basis (see Rosenberg 1994:130). Thus, Hallan Çemi is the oldest fully settled village site thus far known from eastern Anatolia and probably represents the culture ancestral to the later, more fully Neolithic cultures of that region represented by sites such as Çayönü (Özdoğan and Özdoğan 1989, Schirmer 1988, 1990) and Nevalı Çori (Hauptmann 1993).

## COMMUNITY ORGANIZATION

The spatial layout of the Hallan Çemi Neolithic community consisted of a variety of structures and features arranged around an open central activity area that was ca. 15 meters in diameter. The deposits in this open central area consist of extremely dense concentrations of animal bone and fire-cracked river pebbles/cobbles. The animal bone in this area is often in the form of large, still articulated parts of animal carcasses and includes a linear arrangement of three sheep crania. It has been suggested (Hayden 1995) that this kind of deposit is consistent with the conspicuous public display and consumption of foods -in other words, public feasting.

Scattered among the clearly recognizable stone structures ringing the open central area are a number of low circular platforms and expanses of a thick white plaster-like material. The platforms were made of various materials, including stone (in at least one case covered with a layer of mud plaster), packed mud, and a plaster-like material. They average ca. 2 meters in diameter and 10 - 40 cm in preserved height and do not appear to have been constructed for the purpose of covering anything. For the moment, the most plausible explanation for these features is that they were the foundations for storage silos. This is because storage pits appear to be absent in all levels of the site.

Low, raised plaster features (other than platforms), typically rounded and between 50 to 70 cm. in diameter, were encountered both inside and outside the stone structures in all three building levels. These were presumably hearths, as in many cases the plaster enclosed fire-cracked rocks that had apparently cracked while encased.

In addition to the platforms and hearths, large, thick, irregularly configured expanses of a white plaster-like substance are also scattered among the stone structures, as were several groups of postholes. Some of these plaster expanses are directly adjacent to stone structures and likely represent exterior activity

areas associated with those structures. Others, however, may represent the only remaining traces of free-standing structures built of materials less durable than stone. Fragments of burnt mud with wood impressions occur all over the site, suggesting that wattle and daub was also used for construction purposes, which may have included any superstructures that were associated with these plaster areas.

All the stone structures thus far known from the lowest excavated building level (level 3) are relatively simple and probably domestic in nature. All are surface structures, ca. 2 meters in diameter, with walls constructed of river pebbles/cobbles cemented in courses using a plaster-type material. All are C-shaped structures and their floors are unpaved.

By the second building level, there is some architectural differentiation evident. A total of five recognizable structures are thus far known from this building level, but only four were completely excavated. The four that were excavated are again all surface structures, with walls constructed in the same manner as the level 3 structures. However, three of these four differ from the level 3 structures in that they had floors paved with closely-fitted sandstone slabs. The floor of the fourth was unpaved. One of these paved structures is particularly large, with a diameter of ca. 4 meters and a small plastered basin at its center. There is, however, as yet no clear evidence that this particular building served a different purpose than did the others; nor is it clear whether the paved buildings in general served a different purpose than did the unpaved one(s).

By the upper most building level (level 1), however, there is strong evidence for the existence of structures that are not strictly domestic in nature and instead served some kind of public function. A total of four excavated structures are known from this building level. They all differ from earlier structures in that they are constructed out of sandstone slabs and not river stones. Two of these are relatively small surface structures, about 2.5 meters in diameter and, like many of the structures from

level 2 and 3, C-shaped in configuration. These appear to be domestic in function (Rosenberg 1994, Rosenberg *et al.* 1995). In contrast, the other two structures are significantly larger -about 5 to 6 meters in diameter and similar in area to what are said to be public buildings at other early Neolithic sites (see Byrd 1994). Both are fully circular and semi-subterranean in their construction. They also contain distinctive features, in the form of a semi-circular stone bench/platform that is set against the wall of each structure. The floors of each structure were resurfaced multiple times with a distinctive thin yellow sand and plaster mixture over a layer of relatively sterile dirt fill and were generally devoid of materials and objects commonly associated with domestic activities (e.g., grinding slabs).

On the other hand, imported materials, such as obsidian and copper ore, are strongly associated with these buildings, and in the case of the copper ore almost exclusively so. The presence of these materials at the site indicates the existence of long distance trade networks at even this early time. Their association with these large semi-subterranean structures suggests that the community-level groups that used these structures were somehow involved in this trade.

Finally, one of these semi-subterranean structures contained a complete aurochs skull that appears to have once hung on its north wall, facing the entrance (see Rosenberg 1994). Whether it simply symbolized the group that used this structure, or whether it had a more elaborate ritual meaning, remains unclear.

The transition to settled village life is known to have required the development of new social institutions for both resolving conflict in the now-permanent communities and providing the context in which the community could act as a whole (e.g., see Flannery 1972). It has been suggested that public buildings served as physical elements of these more formal sociopolitical structures that emerged with the beginning of settled village life (e.g., Byrd 1994). The data from later aceramic sites such

as Çayönü (cf. Özdoğan and Özdoğan 1989, Schirmer 1990), Nevalı Çori (cf. Hauptmann 1993), and Göbekli (Schmidt 1999) indicate that the new social institutions represented by public buildings clearly become more elaborate and important over time. However, the Hallan Çemi data indicate that they were a feature of settled village life from its very beginnings.

Public activity is also implicit in other categories of finds from the site. For example, Hallan Çemi has yielded the remains of numerous stone bowls. These are typically made of either a grey/green-black chloritic stone or a white limestone and often decorated with finely incised (and occasionally relief) designs in both geometric and naturalistic motifs. The site has also yielded a series of sculpted stone pestles. These are typically made of the same chloritic stone as the bowls, but a few examples made of sandstone have also been found. The majority of these pestles have handles sculpted in a variety of naturalistic forms, stylized to varying degrees. Recognizable motifs include goat heads, paired laterally projecting straight or curved flanges that may represent bovid horns, and one or more type of mammalian animal devoid of horns.

These sculpted pestles, particularly those made of the chloritic stone, are made to the same approximate scale as the stone bowls and were certainly capable of being used together with them. Given the evidence for possible public feasting implicit in the nature of the central activity area deposits, it seems highly likely that these bowls and pestles were used in the formalized preparation and consumption of food as part of that behavioral complex. Such feasting may have functioned to integrate the community as a whole, in similar fashion as the behaviors associated with the public buildings. Alternately, it may have functioned at the inter-community level as the basis for establishing and reinforcing social ties between communities in the face of tensions, if not outright hostility (cf. Hayden 1996).

That such ties existed, can be seen in the evidence for long-distance trade at Hallan Çemi. The nearest sources for obsidian, a valued raw material for the manufacture of chipped stone tools, are in the Lake Van and Bingöl regions, both ca. 100 km away from Hallan Çemi, to the northeast and northwest respectively. Despite these distances, obsidian accounts for 58% of the chipped stone at Hallan Çemi and material from both sources is present at the site. Copper ore, presumably used for pigment, is also present at Hallan Çemi. The nearest known present-day source for this material is near the modern town of Maden, ca. 150 km to the west of Hallan Çemi. Lastly, sea shells, likely derived from the Mediterranean, are also present at Hallan Çemi.

That the possible need for some such inter-village ties existed, is suggested by another category of artifact found at Hallan Çemi. These are varieties of vertically drilled stones that can best be described as mace heads. While only a few of the drilled stones from the site fall under this heading, the examples in question are all again made of the same materials as the stone bowls, come in a variety of elaborate forms, and are highly polished and sometimes decorated. Some also exhibit battering around their edges. Their presence at Hallan Çemi implies some degree of violence, an implication born out by evidence for violent deaths at the somewhat earlier site of Zawi Chemi in northern Iraq (see Agelarakis 1993).

The development of a public domain at Hallan Çemi is matched by apparent changes in the status of individuals within the community. These changes are suggested by a category of stone artifacts called notched batons. These notched stone batons are known from several fragmentary and one possibly intact example. They are generally made of a relatively soft, micaceous grey metamorphic rock (perhaps a schist). Though their full form is problematic, virtually all the pieces exhibit certain features. Those are: a lenticular cross section with a maximum width of no more than 1.5 cm and maximum height of ca. 3 cm; a length of at least 15 cm, tapering down to either a convex

or dimpled tip; and, a variably spaced series of sharp notches cut into one or both edges, usually quite neatly. These notches range from one to eight in number on the examples at hand.

On the single possibly intact example, the end opposite the notched tip is bluntly rounded, devoid of notches, and (in this case) decorated with an incised hourglass design. There is some evidence of breakage and reshaping at the blunt end of this example, which leaves open the possibility that this piece was originally of a different form. In fact, out of the approximately 35 pieces of this type found, only the single 'intact' example and another questionable one had such a blunt end. All the rest of the pieces are notched tip or shaft fragments, which suggests that these notched batons may actually have been bilaterally symmetrical (i.e., cigar shaped) and that the 'intact' example is just a broken one that has been repaired.

To the naked eye there is no evidence of wear within the notches or elsewhere on these objects; the notches were simply cut into the stone, as if to keep a formal count of something. If so, whatever was being tallied, it was arguably socially, economically, or politically important enough to record permanently on a highly uniform (i.e., formal) class of objects.

In mobile hunting-gathering societies, such as those that preceded the development of Neolithic settled villages, individual actions are generally not recognized in any formal manner. This is a feature of the strict socio-political egalitarianism that characterizes such societies. Thus, the existence of such tallies implies a change from the strict egalitarianism typical of mobile hunter-gatherer societies to a more complex form of socio-political organization, based at least in part on the formal recognition of individual action.

#### CULTURAL AFFILIATIONS

The finds from Hallan Çemi also contain evidence of cultural relationships to other cul-

tures, including earlier, contemporary and later ones. Within the chipped stone assemblage, the strongest typological links are to the lithic assemblages from Zawi Chemi Shanidar and other late Zarzian sites. In typical Zarzian fashion, the Hallan Çemi lithic assemblage is characterized by blades produced from single platform cores, with a significant number of such blades modified to form geometric pieces, particularly scalene triangles. Convex pieces (i.e., lunates) are also present, but relatively rare.

Equally noteworthy are the other early chipped stone types which do not occur in the Hallan Çemi chipped stone assemblage. Specifically, characteristically Natufian-type backed and truncated blades are completely absent, as are all other distinctly Natufian types.

The connection of Hallan Çemi to the earlier Zarzian is reinforced by another category of artifacts. These are relatively large button-like objects made of animal bone. They are found in a variety of configurations, including ovate, rectangular, and sinuous. They are also often decorated. Similar type bone objects were recovered from the late Zarzian site of Zawi Chemi in the Mosul region of northern Iraq (see Solecki 1981: Pl.10:k-l, q), further strengthening the conclusion that Hallan Çemi is derived from the Zarzian and not the Levantine Epipaleolithic tradition.

Connections to broadly contemporary sites along the Taurus Zagros arc are also visible in the artifacts from Hallan Çemi. Of these, the most striking is the clear similarity between the Hallan Çemi sculpted pestles and similar stone objects from the early aceramic Neolithic site of Nemrik 9, also located in the Mosul region (Kozłowski 1989, Kempisty and Kozłowski 1990). Objects of this type do not occur at contemporary sites in the Levantine corridor; nor do distinctively Levantine type objects of this time occur at Hallan Çemi.

The chipped stone tools reflect the same pattern. Though projectile points only occur rarely at Hallan Çemi, a significant number of

those that do can be most readily classified as variants of the Nemrik type, which is largely restricted in its occurrence to the Taurus-Zagros arc. Completely absent are Levantine PPNA type side notched (i.e., Khiam) points, which incidentally do occur at contemporary sites further south in the Mosul area. The clear implication is that, at least along that part of the Taurus-Zagros arc bordering the upper Tigris, Levantine influence was minimal.

Lastly, both sculpted pestles and decorated stone bowls of the type found at Hallan Çemi are found occasionally at later aceramic Neolithic sites along the Taurus-Zagros arc, notably Çayönü in southeastern Turkey (see Davis 1982, Özdoğan and Özdoğan 1993), indicating a cultural tie to these later sites.

This relationship between Hallan Çemi and these late aceramic sites in eastern Anatolia is most strongly visible in the finds from recent soundings at the site of Demirköy Höyük (see Rosenberg and Peasnell 1998), another early aceramic Neolithic site within the Batman drainage. Demirköy is located ca. 40 km down stream from Hallan Çemi and apparently dates (on typological grounds) to the chronological gap between the abandonment of Hallan Çemi and initial occupation of Çayönü. It also clearly links these latter two sites. Stone bowls, including decorated examples, sculpted pestles, Nemrik type points, and scalene type chipped stone geometrics occur at Demirköy. These link it to Hallan Çemi, while the added presence of human and animal burials and clay figurines at Demirköy indicate that it is of slightly later date than Hallan Çemi. On the other hand, shaft straighteners of a type resembling those found at Çayönü, but not Hallan Çemi, also occur at Demirköy along with several chipped stone point types (other than Nemrik) that again occur at Çayönü, but not Hallan Çemi. These link Demirköy to Çayönü and so also link Hallan Çemi to that site.

An entirely different connection between Hallan Çemi and later Anatolian sites seems to be visible in the area of iconography. Besides

the afore-mentioned aurochs skull, a number of stone objects were found that appear to be miniature stylized bucrania. The bovid motif is found at numerous Neolithic sites throughout Anatolia, most famously Çatalhöyük, but also at Göbekli in southeastern Anatolia (see Schmidt 1999). Also found were two bone objects depicting snakes. The snake motif appears on the sculptures from both Nevalı Çori and Göbekli (see Hauptmann 1993, Schmidt 1999).

In sum, there are clear artifactual and iconographic ties between Hallan Çemi and the later Neolithic cultures of eastern Anatolia and Anatolia in general. The later aceramic Neolithic sites in eastern Anatolia do exhibit some aspects of Levantine influence, notably in the domain of stone tool technology. However, a strong case can nevertheless be made that the primary roots of the cultures represented by these later aceramic sites are in earlier local cultures, as exemplified by Hallan Çemi, not Levantine ones.

### ECONOMY

Though Hallan Çemi was occupied by a fully sedentary society, the economy of site's inhabitants was based primarily on the hunting-gathering of wild animals and plants (see Rosenberg 1994, Rosenberg *et al.* 1995). The carbonized botanical remains indicate that nuts, including wild almond and pistachio, and pulses, including lentils and vetches, were the most intensively exploited plant resources. Of particular noteworthiness is the fact that cereal grasses are conspicuously absent from the plant remains found at the site. This is consistent with the virtual absence of sickle blades in the chipped stone assemblage. Thus, at Hallan Çemi, we clearly have an early sedentary society that was not dependent on cereal grass exploitation. The significance of this point lies in the fact that cereal grass exploitation has often been theorized to play a central role in precipitating the shift from mobile hunting-gathering economies to ones involving sedentary lifeways and food production

(e.g., Henry 1989, McCorriston and Hole 1991, Moore 1985, 1989). Clearly, at least in eastern Anatolia, the process worked somewhat differently than it is commonly theorized to have worked.

The faunal remains from Hallan Çemi were also inconsistent with expectations based on current theories. The animal species exploited by Hallan Çemi's inhabitants include sheep/goats, deer, canids, pigs, bears, and a variety of small mammals, birds, reptiles, and fish (see Rosenberg *et al.* 1995). Though most of the animals consumed by Hallan Çemi's inhabitants were, as expected, wild and obtained by hunting, there is strong evidence that the site's inhabitants were beginning to experiment with animal husbandry. However, these early experiments in animal husbandry did not involve sheep or goats, which had until then been assumed to be the earliest animal domesticates; rather, they involved the husbandry of pigs. Sheep and deer were the most intensively exploited animal species at Hallan Çemi. However, the data indicate that all the bones from these species were from morphologically wild individuals and were obtained by hunting. The pig data, however, indicate that some form of primitive animal husbandry was likely being practiced to some degree (see Rosenberg *et al.* 1995). Specifically, the survivorship curve indicates that an uncommonly high percentage (43%) of the pigs did not live beyond one year of age, a pattern typically seen at sites with domesticated pigs and not at sites where pigs were obtained by hunting. Also, the sex ratio is biased toward males, presumably because females were being retained as breeding stock. In addition, the ratio of bones from various body parts indicates that more pigs were being butchered at the site (as opposed to away from the site) than were individuals of the other main food animal species. The implication is that at least some pigs were being maintained at the site prior to butchering.

Domesticated sheep and goats have been the most economically important food animals in the Near East from the late Aceramic Neolithic

to the present day. They were also among the most important food animals during previous periods. For that reason, it was commonly assumed that they were also the earliest animal domesticates (e.g., see Hole 1984, 1989). They apparently were not. Though the discovery of primitive pig husbandry at Hallan Çemi was initially surprising, in retrospect the early domestication of pigs is logical in view of their attributes. These include their greater fecundity than sheep and goats, faster growth rates, ease of taming, and the ease with which young pigs can be obtained (see Rosenberg *et al.* 1995).

In any case, the presence of early pig husbandry at Hallan Çemi is significant at two levels. The first is historical, in so far as it corrects the history of animal domestication in southwestern Asia. The second relates to the question of why food production first develops. That is, the early domestication of pigs demonstrates that the shift to food production is not simply an outgrowth of the ever more intensive exploitation of a given plant or animal species. Rather, it indicates that at the earliest stages of the process produced resources were not staples, but supplements. It also indicates that the initial decisions to actively produce a given resource were governed by practical considerations, such as energy input in relation to rate of return. In other words, it supports the suggestion that produced resources initially served as dietary insurance (see Redding 1988) to protect against the local resource depletion that commonly results in the vicinity of sedentary sites (see Lieberman 1993).

### CONCLUDING REMARKS

In conclusion, the discovery and subsequent excavation of Hallan Çemi has generated important results on a number of fronts. To begin with, Hallan Çemi demonstrates that the elaborate cultures of the late aceramic Neolithic in eastern Anatolia had their primary cultural roots in earlier local cultures and were not imports from adjacent regions. In

addition, Hallan Çemi demonstrates that the cultural institutions which reach their full flowering during the late aceramic Neolithic, first developed at the earliest stages of the shift to settled village life. With respect to the questions of how and why settled village life first began, Hallan Çemi has demonstrated that the economies of the earliest settled village societies were more varied than was previously believed. This means that theories which tried to explain the beginnings of settled village life as being rooted in particular subsistence behaviors (e.g., cereal exploitation) will require revision. Lastly, Hallan Çemi shows that the origins of food production were not as linear a process as was once thought. It shows that food production did not develop simply through a process of ever

more intensive exploitation of particular resources such as cereals or sheep and goats. Consequently, to the degree that most current theories that attempt to explain the origins of food production in southwestern Asia are based on such linear thinking, they too will require revision.

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# Çayönü

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**KEYWORDS:** *Çayönü, Pre-Pottery Neolithic, Pottery Neolithic, Architecture, Space Organization, Domestication, Dead Cult.*

**ANAHTAR KELİMELEER:** *Çayönü, Çanak Çömleksiz Neolitik, Çanak Çömlekli Neolitik, Mimari, Alan Kullanımı, Evcilleştirme, Ölü Kültü.*

## ÖZET

İstanbul ve Chicago Üniversiteleri tarafından 1962 yılında kurulan Güneydoğu Anadolu Tarihöncesi Araştırmaları Karma Projesi kapsamındaki Çayönü kazıları, yoğun toplayıcılıktan besin üreticiliğine, nerede, nasıl ve ne şekilde geçildi sorularına ve bu geçişin insanın yaşamı üzerindeki etkilerine yanıt bulmak amacıyla, 1964 yılından beri, bölgenin durumundan ötürü zorunlu ara verilen 1992 yılına kadar sürdürülmüştür. Çayönü kazılarının en önemli özelliği en başından beri uluslar ve disiplinler arası çalışmayı ilke edinmesidir. Bu niteliğinden ötürü oldukça karmaşık bir yerleşme olan Çayönü ile ilgili yayınlar, raporlar ve tezler bazen birbirini tamamlamakta, bazen çelişkiler ve değişik yorumlar içermektedir.

Çayönü, Çanak Çömleksiz Neolitik A'dan Demirçag'a kadar kesintisiz iskanın görüldüğü bir kazı yeridir. Bu kadar uzun süreli bir yerleşime sahne olması Çayönü'nün değişik dönemlerin ekonomik gereksinmelerine cevap verecek değişik coğrafi bölgelerin kesişme noktasındaki konumundan kaynaklanmaktadır. Bu konumu Çayönü'nüne değişik dönemlerde farklı bölgelerle ilişki kurma olanağını da sağlamıştır.

Çayönü Yakınođu'da kazılmış en geniş Neolitik yerleşme olması ve değişik nitelikteki zengin buluntuları ile bütün kültür basamaklarının izlenebildiği Çanak Çömleksiz Neolitik dönem için bir "anahtar yerleşme" özelliğini taşımaktadır. Çayönü'nün gerek mimarisi gerekse buluntu topluluğu, özellikle daha kapsamlı olarak incelenen oldukça uzun bir dönemi kapsayan Çanak Çömleksiz Neolitik içinde hangi bölgelerle ilişki kurmuş olduğunu, nerelerden etkilendiğini ve nereleri etkilediğini yansıtmaktadır.

Yerleşmenin değişik özelliklerine ve bu özelliklerin bileşkesine dayanarak Çanak Çömleksiz Neolitik dönemini dört ana bölüme ayırarak inceleyebiliriz. Bu bölümlerde Çayönü yerleşmesinin gelişimi, değişimi, arayışları, inançları, günlük uğraşları ve yozlaşması yansıtılmaya çalışılmıştır. Son yıllarda yoğunlaşan yontmataş topluluğu ve hayvan kemikleri üzerindeki çalışmalar yerleşme ile ilgili ufkumuzu genişletmiş, bazı sorunlara çözüm üretirken bazı sorunları daha karmaşık hale getirmiştir.

Bu makalede son yapılan araştırmalardan elde edilen sonuçlar doğrultusunda Çayönü'nün yaşam modeli geliştirilmeye çalışılmıştır. İlerki yıllarda ortaya çıkacak yeni bulguların bazı sonuçları değiştireceği ya da yeni yorumlara yol açacağını da hatırdan çıkarmamak gerekir.

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## ABSTRACT

Çayönü Tepesi was excavated within the framework of the SE Anatolian Joint Prehistoric Research Project with the collaboration of Universities of İstanbul, Chicago, Karlsruhe and Rome between 1964 and 1991. The main aim of the project was to answer questions about the transition from an intensive collecting and hunting stage to a food-producing stage and from a nomadic to a sedentary life style, as well as to investigate the impacts of this on cultural development. Participation of scholars from various branches and from different Universities and Institutes have reflected the inter-disciplinary character of the Project from the very beginnings onward. Since 1969 numerous preliminary reports and articles on Çayönü have been published by the excavators and other scholars, sometimes complementary, sometimes challenging ideas and interpretations, not only of the stratigraphy but of the artifacts as well.

Çayönü Tepesi was occupied in varying degrees of density almost without a break from 10.000 BP to modern times. The reason for such permanency might be its location at the transition point of zones of different environmental settings which were suitable to meet the demands of different life styles of the different periods. Its location also enabled the people of Çayönü to communicate with different regions distinct in tradition.

Çayönü is a key site in the Near East. With wide exposures comprising rich finds, all the steps of cultural development as well as relationships between different regions can be followed from the PPNA into the PN.

The PPN phase at Çayönü comprises four evolutionary stages recognizable in the lithic, artifactual and faunal assemblages as well as in the settlement organization. These stages reflect development, transformation, and decline at Çayönü. This article is an attempt supported by the recent studies on different materials, to describe living conditions at Çayönü, mainly in the PPN period.

## INTRODUCTION

Çayönü is a widely exposed site in SE Anatolia well-known not only for its nearly uninterrupted occupation since 10.000 BP, but also for its "first innovations" within the PPN, as well as its clear continuity throughout all the stages of cultural development.

Since 1969 numerous preliminary reports and articles on Çayönü have been published by the excavators and other scholars, sometimes complementary, sometimes challenging ideas and interpretations, not only of the stratigraphy but of the artifacts as well. This, of course, has created general confusion and much speculation<sup>1</sup>, in Braidwoods' words, "More exposures [create] more problems!"

To help resolve these conflicts, we are presenting here the basic development in the stratig-

raphy and a summary including the most recent studies and new analyses and interpretations of the animal bones, the chipped stone industry, the small finds and the PN pottery, a brief up-to-date version of an earlier paper with the inclusion of the recent results (Özdoğan 1995). We shall also try to avoid, as much as possible, repeating the "classic" information already published elsewhere in detail.

The major revisions in the stratigraphy of the PPN occupation were made in the spring of 1988 after six years of a long and exhaustive study by M.K. Davis, E. Bıçakçı and myself. Further excavation between 1988 and 1991 forced us to make some minor revisions in our interpretations of the geomorphology of the

mound, the relationship between the PPN and the Pottery mound(s), and the subdivisions of the Round Building Subphase. The detailed study of the Neolithic pottery entailed re-consideration of the mound formation in the different periods<sup>2</sup>. A preliminary study<sup>3</sup> on the lithic material from some of the so called "basal pits" has clarified the highly debated position of these features in the Çayönü sequence. In short, I think this case is a very good example of the danger of misinterpretations lurking in sites with only limited exposure- and/or of short-term excavation.

## Brief History of the Joint Prehistoric Research Project in SE Anatolia and the Çayönü Excavations

In 1962, the Universities of İstanbul and Chicago collaborated to found the Joint Prehistoric Research Project in SE Anatolia focusing especially on the early village-farming communities along the Taurus piedmont near the Upper Tigris Basin, an area that was until then archaeologically *terra incognita* (Çambel-Braidwood 1980: 36-37, Braidwood-Çambel 1982: 3-4). The object here was to enlarge the research that had begun in early the 1950's in Iraq and Iran, likewise the natural habitat zone of incipient domestication (Çambel-Braidwood 1980: 34-35). After intensive surface survey in the provinces of Diyarbakır, Urfa and Siirt, three promising PPN sites were selected; of these Çayönü Tepesi was chosen for excavation, not only as potentially informative but due to its logistic facilities (Çambel-Braidwood 1980: 4).

The main aim of the project was to answer questions about the transition from an intensive collecting and hunting stage to a food-producing stage and from a nomadic to a sedentary life style, as well as to investigate the impacts of this on cultural development. During the 16 campaigns at Çayönü -between 1964 to 1991, with intervals- some questions

were reformulated and new queries arose, but the basic question still remained valid.

For a long time Çayönü was the only site representing the Prepottery Neolithic of SE Anatolia. Due to its "isolated" location (at a much higher elevation) in the N and its assemblages and architectural features totally different from those of the contemporary sites in the Levant and Mesopotamia, Çayönü was open to all kind of speculative interpretation. Our understanding of the developments at Çayönü is the result of the widely excavated area, over 8000 m<sup>2</sup>. This is reason why Çayönü became a key site in the Near East. Despite the many sites excavated in the last decade, Çayönü has retained its "status."

The first four campaigns took place under the combined field direction of H. Çambel and L. and R.J. Braidwood. W. Schirmer from the Institut für Baugeschichte (University of Karlsruhe), M. Özdoğan from the University of İstanbul, and M.K. Davis joined the staff in 1978. Since 1990, I. Caneva and her team from the University of Rome "La Sapienza" have also been collaborating. E. Bıçakçı and I first joined the team as students in 1978, and I became the field director in 1985. Participation of scholars in various branches, -archaeozoology, archaeobotany, physical anthropology, metallurgy, etc.- from different universities and institutes reflect the inter-disciplinary character of the Project.

## Environmental Setting and Location of Çayönü

SE Anatolia is where the two ends of the "Fertile Crescent, separated by desertlands, join together to form its widest and northernmost middle section" (Erinç 1980: 74-75). The Ergani plain, ca. 15 hectares in the N-NW of this region, is surrounded by different geographical zones: in the N, the SE Taurus Mountain range; a series of plains of different character running in an E-W direction on the

<sup>1</sup> See recent publications of Bıçakçı (1998) and Davis (1998).

<sup>2</sup> Studied by N. Yalman for her M.A. thesis.

<sup>3</sup> By I. Caneva and by G. Coşkunlu.

hilly flanks at the W of the Ergani Plain, the area cut by two water systems, the Tigris and Euphrates with their tributaries; and in the S, the Diyarbakır basin (Fig. 1, 2).

Çayönü is located in the middle of the second zone, just near the junction of the three zones. Its location in the transition zone of different geomorphological settings enabled the people of Çayönü to access various raw material within the vicinity, such as basalt from Karaca Dağ, copper and malachite from the sources between Ergani and Çermik, marble from limestone outcroppings, and various other metamorphic and sedimentary rocks within a distance of 10-20 km. Obsidian was brought from sources near Bingöl, about 150 km from Çayönü. The pinkish calcareous stone in the Terrazzo floor was carried from a source across Zülküf Mountain near Ergani (Şaroğlu 1989).

Geomorphological and archaeological surveys conducted in the Ergani Plain in 1990-91 demonstrated a relationship between soil composition and the distribution of settlements in various periods. The earlier settlements usually low mounds or flat sites grouped near one another, were located on the plio-quaternary deposits at the edge of the alluvial plain and in the northernmost part it, close to the rocky ridges. Whether on the piedmont, on the slopes of hills, or in mountainous valleys, the PPN settlements were always near a source of water. Except for that of Çayönü, the locations of the PPN settlements were not suitable for agriculture. Settlements from EBA times onward were located in the middle of the plain on the Holocen alluvial deposits, scattered over a wider area (Caneva, *et al.* 1993: 163).

Çayönü Tepesi is located to the north of Hilar (Sesverenpınar) village, ca. 7 km SW of Ergani, in Diyarbakır Province. It lies at an elevation of 832 m on the north bank of the Boğazçay, a

small tributary of the Upper Tigris River. An intermittent stream (Bestakot) and a series of springs exist to the N and E of the mound. Today Çayönü is a flat oval mound with dimensions of at least 160 m N-S and 350 m E-W. The total deposit measures 4.50 m in the southern half, whereas it is ca. 6 m in the northern half; the actual mound might have been even higher. The area has been occupied in varying degrees of density almost without a break from 10.000 BP up to modern times (Özdoğan *et al.* 1992, Özdoğan 1995).

In the general overview, Çayönü seems to represent an exception within the PPN and PN periods by being in the middle of a plain far from a main water source. Today it is surrounded by the treeless fields of the Ergani Plain at the junction of the SE Taurus Mountains and Mesopotamian sector of SE Anatolia: in terms of natural vegetation in the vast *Irano-Turanian Subregion* (Zohary 1973: 90, 181). Environmental conditions in 10.000-8.000 BP, however, were totally different from those of the modern times: the intermittent stream in the north (Bestakot) and the series of springs formed ponds and or a wider and deeper river surrounded by marshes and swamps that were relatively close to the settlement. The beaver (*Castor fiber*) and otter (*Lutra lutra*) especially in the earlier stages, bivalves (*Unio*) and freshwater gastropods (*Theodoxus jordani* and *Melanopsis praemonisa*) indicate deep rivers or ponds and a wetter environment than that of today. The surrounding area was once covered by open woodland; the limestone outcrops probably had steppe vegetation<sup>4</sup>, and further south there was a transitional "almond-pistachio forest-steppe zone" (Van Zeist and de Roller 1992: 65-67, fig. 2). The destruction wrought by man on the vegetational cover in the marginal area might have caused the changes in the water system. The Boğazçay (now in the S) formed its bed sometime during the 3rd millennium. The settle-

ment pattern of each PPN subphase seemed to be established depending on the minor (or occasionally major ?) fluctuations of this water system; sometimes flood damages were also visible (Fig. 11).

Both the earlier and most recent studies confirm that the surroundings had been quite rich in various game<sup>5</sup> that is also an indicator of the different environmental conditions: wild boar (*Sus scrofa*), aurochs (*Bos primigenius*), wild sheep (*Ovis orientalis*), wild goat (*Capra aegagrus*), red deer (*Cervus elephus*), fallow deer (*Cervus dama*), gazelle (*Gazella*), equid (*Equus*), bear (*Ursus arctos*), common fox (*Vulpes vulpes*), marten (*Martes*), hare (*Lepus capensis*), hedge hog (*Erinaceus europaeus*), and such small mammals as sciuridae (*Sciurus* or *Spermophilus*), wild cat (*Felis sylvestris*), weasel (*Mustela nivalis*) and badger (*Meles meles*).

#### Description of the Mound Formation

Three main phases of occupation had been defined according to the intensive surface survey collections (Çambel-Braidwood 1980: 13, 21-22, Çambel 1980), but the excavations of the deposits yielding pottery in the NE section, in the riverside cut, and in various pits in different parts of Çayönü all demonstrated the existence of additional later habitation at the site. A brief explanation of these periods are given below.

**Phase III: EBA II - Medieval Times.** Scattered sherds from classical and medieval times as well as the second millennium have been found. The only occupation remains are from the Early Iron Age; stone architecture of this period is located at the NE, and numerous pits are found in different parts of the site. This phase was excavated only in limited exposures -100 m<sup>2</sup>- over a short period in 1979. The Early Bronze Age people settled near Hilar vil-

lage on the rocky area where they were more protected, and used the N part of Çayönü as a cemetery<sup>6</sup>; and the S slope with many slags, dated to 4320±60 BP (ETH 7111: 2709 BC), was used for copper smelting. Wheel-made pottery (with a late version of reserved-slip ware and the earlier type of goblet) is predominant. Hand-made red and black burnished Karaz wares are also found (Çambel-Braidwood 1980: 13, 21-22). Bronze needles with disc-shaped heads are among the typical finds of EBA II-III (Özdoğan *et al.* 1991, fig. 15b).

**Phase II: PN and EBA I.** Pottery of this phase includes sherds that were not easily dated except for some Dark-Faced Burnished Wares and three Hassuna type "husking tray" bottoms. Çambel and Braidwood commented that the pottery "....assigned to the earlier ceramic occupation is much more difficult to place as to time or as to analogous types given a lack of any key sequence for reference...." (Çambel-Braidwood 1980: 52)<sup>7</sup>. This phase actually defines two different time periods: PN (*Ila*), LCA-EBA I (*Ilb*) (Özdoğan *et al.* 1991: 101, Özdoğan 1992: 96, 100, Özdoğan 1994: 27); further limited investigations in 1990-91 and a more detailed study of the pottery then confirmed the existence of two settlements with different architectural traditions within the PN<sup>8</sup>.

**Phase Ila: Pottery Neolithic.** Two major occupations existed in the PN, the earliest in the NE, partly over the northern extension of the Cobble-paved Building Subphase of the PPNB mound and partly on the alluvial of the "flood" deposits up against the N slope of the PPNB/C mound. The final (?) occupation partly disturbed the early Large Room Building EF on the N terrace and the N part of buildings BE and BD. Neither of the PN occupations occupied the PPNC living surfaces of the main PPN mound<sup>9</sup>.

<sup>4</sup> An increase in precipitation due to the series of big dams on the Euphrates has encouraged the expansion of oak especially outside the fields, on the rocky outcrops.

<sup>5</sup> Lawrence 1980, 1982, Kuşatman 1983, Meadow 1986, Hongo 1999, Öksüz 1999 and İlgezdi 1999.

<sup>6</sup> A cist grave with a single burial and grave goods was exposed in 1968.

<sup>7</sup> For more detailed information see Çambel and Braidwood 1980: 13, 21-22, 52, Özdoğan and Özdoğan 1990: 66.

<sup>8</sup> Detailed descriptions are in N. Yalman's unpublished M.A. thesis. See also Özdoğan *et al.* 1990, Özdoğan *et al.* 1991, Özdoğan and Özdoğan 1993: 95.

<sup>9</sup> The relation of the PPN and PN mounds as described in Özdoğan and Özdoğan 1993 has since been revised.

Soft, light gray ashy deposit with many carbon particles and burnt kerpiç lumps suggested an architecture without stone foundations or sockels. The structures must have been built mainly of kerpiç and light perishable materials like reeds or thin branches. The only architectural remains thus far are stone-paved ovens, fire-places and some traces of beaten earth floors (Fig. 48). The dimensions of this settlement are not known yet, but the thickness of the deposit, partly disturbed by the EBA cemetery and the stone architecture of Early Iron Age, seems to be at least 2.50 m.

The successive settlement is a building complex with stone architecture preserved up to 6-7 courses high. It occupies the terrace on the NW of the PPNB/C mound extending to the N, parallel to the "lake", and the W terrace of the earliest PN mound, supported by heavy terrace walls at the E and W. The known dimensions of the complex are 55 x 25 m. The thickness of deposit is about 1.50 m. The stratigraphy shows three main rebuilding phases with annexes. The W terrace wall was also rebuilt and reinforced three times. (Figs. 4, 5)

The agglutinative complex is composed of rectangular rooms sometimes with beaten earth floors, communicating with each other by doorways. An E-W passage nearly at the center separates the complex into two main compounds. The area along the W terrace wall functioned as a courtyard.

*Phase IIb: Late Chalcolithic and Early Bronze Age I.* Late Chalcolithic occupation is represented by Dark Faced Burnished and Chaff Wares. No architecture has yet been discovered. Some pits were found in the western section of the site, and the pithos burial of a 4 year-old child is intrusive in the Pebbled Plaza.

*Phase I: Main Prehistoric Phase of Çayönü, (PPNA, PPNB and PPNC).* This phase is the

long dominant era of Çayönü (Fig. 3). The known dimensions of the PPN mound are at least 200 x 100 m. The excavated area totals 4654 m<sup>2</sup>, which represents about 22% of the mound.

#### Stratigraphical Division of the Main Prehistoric Phase

The stratigraphical division of the PPN settlement -incorporating numerous architectural layers- into subphases has been determined by alteration in the basic plan of the buildings (e.g. the large-room and round buildings), in the foundation plans (e.g. the grill, channelled and cell buildings) and/or in other significant feature(s) (e.g. the cobble-paved building). Although it seems as if the ground plans displayed very different plans and features, there is actually a gradual development of building techniques that can be followed from the very beginning of the settlement onwards. This development demonstrates how the Çayönü people applied their experience to the use of the local material (Özdoğan 1995: 81, Bıçakçı 1998). The "Unique Buildings" or "Cult Buildings" have also been named according to their significant features.

The subphases of Çayönü are abbreviated using the first letters of their English names (English is the common language of the Project)<sup>10</sup>. In our previous publication, the Main Prehistoric Phase of Çayönü consisted of seven subphases according to stratigraphical division (Özdoğan 1995: 81), but recent studies have suggested that the "Cell Building /Large Room Building Transition Subphase (c/lr)" is not an independent subphase; rather, it covers the earlier part of the Large Room Building Subphase as well as the later stages of Cell Building Subphase, but still keeps its transitional characteristic in the PPNB/C period<sup>11</sup>.

Another problematic and speculative issue

concerns the so-called "basal pits" (bp) which were thought to be contemporary with the Round, Grill and early Channelled Building Subphases<sup>12</sup>. Later studies have shown that some of them were presumably the remnants of round huts with sunken floors, which had later been used as garbage pits,<sup>13</sup> while others were storage pits located in the open areas between the early grill buildings, which then functioned as rubbish areas. The inventory of contents reflects mainly the grill assemblage, and the C<sup>14</sup> dates fit very well with the Round- and early stages of Grill Building Subphase. The typology of the lithics corresponds to that of the PPNA industry.

The PPN settlement is dated between 10.200-8.100 BP by thirty-nine C<sup>14</sup> dates. This chart shows the *stratigraphical division* of the PPN subphases with their abbreviated codes<sup>14</sup> and their C<sup>14</sup> dates:

Name of the subphases	Codes	app.date (BP)	
Round Building	r1-4	10200-9400	PPNA
Grill Building			
early grills	g (1-4)	9400-9200	PPNA
late grills	g (5-6)	9200-9100 (?)	EPPNB
Channelled Building	ch1-4	9100-9000	EPPNB
Cobble -Paved Building	cp1-3	9000-8600 (?)	MPPNB
Cell Building	c1-3a-b	8600-8300	LPPNB
Large Room Building	lr1-6	8200-8000?	PPNC <sup>15</sup>

Since detailed dating of the subphases has already been discussed with analogies by Bıçakçı (1998), only the changes relating to stratigraphical problems will be mentioned here.

There are two dates available from the earliest level of the Round Building Subphase: GrN 19481:10.020±240 (8070±240 BC) and GrN 19482:10.230±200 (8280±200 BC). These dates fit very well with the those of Hallan Çemi level 2. The other dates are from the later layers of the Round Building Subphase, so they do not create a problem<sup>16</sup>. A sample from the wattle-and-daub building RB gives a date GrN 10359: 9050±40 (7100±40 BC), which is contemporary with the dates of the grills. An intrusive burial might have contaminated the fill.

Two dates from the Grill Building Subphase are from the late grills: GrN14861:9090±50 (7140±50 BC) and GrN 16462:9040±70 (7090±50BC). Some of the dates from the so-called "basal pits" originally belonging to the early grills and the late round huts, so they fill the gaps between the late grills and the early round huts: GrN 6243: 9320±55 (7370±55 BC), GrN 8821:9175±55 (7225±55 BC), GrN 8079:9250±60 (7300±60 BC).

Some of the dates from the Large Room Building Subphase are too late for the PPN period, but being nearer to the surface and partly disturbed and reused (?) by Pottery occupations, they are misleading.

#### EVOLUTIONARY STAGES OF PPN OCCUPATION

The extent of the Çayönü settlement during the PPN period can be considered in various evolutionary stages that can be distinguished

<sup>10</sup> As early as 1974 it was decided not to number the Subphases of Çayönü (Braidwood *et al.* 1974: 568). In spite of this decision, some members of the excavation team went ahead and numbered the subphases on their own prerogative.

<sup>11</sup> Bıçakçı has also pointed out the necessity of further investigations (1998: 144). In Davis's article, "c/lr" is considered as an independent subphase (Davis 1998: 258).

<sup>12</sup> See the explanation in Özdoğan 1995: 81. Although Bıçakçı has accepted their problematical positions, he mentions a probable change in the character of the settlement between PPNA and PPNB (Bıçakçı 1998: 140 and footnote 28 and "bp" also marked as "subphase 3 ?" in fig. 2 on p. 149). But the features of the PPNB can be recognized in the last stages of the Grill Building Subphase. In Davis's article, "bp" is still marked as an independent subphase (Davis 1998: 258), also in Van Zeist-De Roller 1994: 68 table 2.

<sup>13</sup> Davis mentioned that they were rubbish pits in his field notes in 1970.

<sup>14</sup> The subphases of the Pottery mound are abbreviated with "P" referring to the word "pottery" but the subphases could not be established because the area exposed is smaller not as large as of the PPN.

<sup>15</sup> Although the term "PPNC" is still under debate, many late PPN sites, including Çayönü, have "transitional" levels between the PPN and PN periods.

<sup>16</sup> GrN 10358: 9180±80 (7230±80 BC) (RB), GrN 10361: 9290±110 (7340±110 BC) (RA), GrN 10360: 9300±140 (7350±140 BC). See the explanation for these dates in Bıçakçı 1998: 138.

by changes in the lithic industry, by the styles of decorated and ornamental objects, by diet, or by burial practices, generally by a combination of all. While the *stratigraphical division* of the subphases is characterized by the changes in the basic plan and/or features of the buildings, the major *evolutionary stages* of the site are mainly distinguished in terms of change in artifactual assemblages (and apparent patterns in their utilization), as well as in the pattern of animal exploitation and vegetal diet. Here we particularly want to emphasize that there is no sharp break between the stages; rather there is a regular shifting and/or development -as in the architecture- from the very beginning of the settlement onwards. Three evolutionary stages were determined in 1995. These are chiefly dependent on changes in the artifactual assemblages (excluding that of the lithic industry):

#### 1. PPNA tradition

The first and the longest stage, covering the Round Building (huts) Subphase (r1-4) and continuing through a major part of the Grill Building Subphase (g1-4).

#### 2. PPNB tradition, the most remarkable period of the settlement

Beginning with the last quarter of the Grill Building Subphase, and continuing through the first half of the third layer of the Cell Building Subphase (c3a).

#### 3. PPNC "tradition", the decline of the "PPN way of living"

Beginning with the second half of the third layer of the Cell Building Subphase (c3) and continuing through the end of the Large Room Building Subphase (Özdoğan 1995: 82).

Further detailed studies on the lithic assemblages suggested a slight revision of this subdivision and the new the evolutionary stages of the PPN period of Çayönü is as follows:

#### 1. PPNA tradition within the northern Zagros cultural zone

Covering the Round Building (huts) Subphase (r1-4) and continuing up to the last quarter of the Grill Building Subphase (g1-4).

#### 2. PPNB tradition within the Upper Euphrates cultural zone

Beginning with the last quarter of the Grill Building Subphase (g5-7), and lasting till the end of the Channelled Building Subphase (ch1-3).

#### 3. PPNB tradition demonstrating the first contacts with the Middle Euphrates Culture

Beginning with the Cobble-paved Building Subphase (cp1-3), and lasting till the first half of third layer of the Cell Building Subphase (c1-3a).

#### 4. PPNC "tradition", the decline of the "PPN way of life".

Beginning with the second half of the third layer of the Cell Building Subphase (c3b) and lasting till the end of Large Room Building Subphase (lr1-6).

#### First Stage

*A hunter-gatherer community founds a village in a fertile plain....*

#### *Settlement Pattern, Architecture and Space Organization*

The first Çayönü settlement was founded on the rich alluvial deposits of an almost completely silted up Pleistocene lake in the contact zone between the steppe-like plateau on the southern flanks of the SE Taurus Range and the high plateau of E Anatolia. The settlement was located near a small lake which was fed by wide streams from the mountains; it was surrounded by swamps and marshy areas bordered by outcrops of limestone. The earliest occupation might have been only a little village (Figs. 6, 7)<sup>17</sup> of small round/oval semi-

subterranean huts constructed of reed bundles (Fig.8) and then wattle-and-daub. The huts became more ovoid in time<sup>18</sup>; plastered floors and stone "foundations", apparently totally below the ground level, were introduced in the latest "round" huts<sup>19</sup> (Fig. 9). One of them (RA) even had a red floor. Groups of huts, were arranged around almost circular open spaces<sup>20</sup>.

The ground plan of the earliest Grill buildings, lying directly above the round huts, displayed a nearly rectangular form with their roughly parallel rows of stones, laid out on the ground at wide intervals, and rectangular spaces of different dimensions<sup>21</sup>. A need for living on a raised platform (instead of on subterranean floors) might have been the result of frequent flooding and/or the dampness of the rainy seasons (Fig. 10).

The appearance of the Grill Buildings might also have resulted from a need for larger closed living spaces partitioned for different functions<sup>22</sup>. In contrast to previous structures, the inner space of these buildings (10 x 3.5 m) was arranged in three different sections: in the northern half, a raised living floor over the five or six "beam-like" roughly parallel rows made of pebbles and separated by wide channels; a rectangular central room with roughly rounded corners, a plastered floor and a fireplace in the SE or SW corner; and in the south, small cells, occasionally paved with stone, on either side of a probable entrance. An interior fireplace, first introduced with the Grill Buildings, soon became an important element of those buildings with its carefully laid stone paving and an opening at the back. Outside on the south wall there are small buttresses (Fig. 12).

The ground level of the Grill buildings, made of pebbles, did not function as a support for the superstructure. Rows of postholes lined with pebbles, along the long sides of the buildings (Fig. 13), ca.: 0.70-0.80 m apart, and post-bases in the central room undoubtedly show that the appearance of these buildings must have resembled the "old-fashioned" oval huts that were constructed of reed bundles and/or thin branches vaulted on top and rounded at the "corners" (Özdoğan 1995: 82, Özdoğan 1996: 26)<sup>23</sup>. The well-developed glossies on the flint artifacts are the indicators of constant and long-time use in cutting silicious plants-not only for nutrition, but for the upper structures of the buildings. The abundance of *Scirpus maritimus* remains (Van Zeist-de Roller 1994) fits with the data from the use-wear analyses.

During the Round Buildings (huts) Subphase the open areas between the huts, no larger than 4-5 m in diameter, with many scattered stones, storage pits, knapping areas, small fireplaces<sup>24</sup> and large dump areas containing large amounts of animal bone, must have served for daily activities. There is no evidence for defined work-space either inside or outside the huts.

A similar tradition seems to have continued (Fig. 10), at least as long as the WNW-ESE-oriented (the first three) superimposed grill buildings were in use: the smaller open spaces between the structures were full of oval pits sometimes disturbing the previous architecture, and the occasional abandoned cavity of a wattle-and-daub hut used for storage or garbage<sup>25</sup>. Knapping and butchering activities were performed in the open areas as well as inside the buildings, generally in the southern part.

<sup>18</sup> Central posts for supporting the beams were first seen in the r3 layer.

<sup>19</sup> Bıçakçı (1998: 138) notes that all these buildings were built on stone footings, not considering the earliest ones without them.

<sup>20</sup> Similar arrangements, but larger than those of Çayönü, appeared in Hallan Çemi (Rosenberg *et al.* 1998: 28).

<sup>21</sup> In some articles the intervals between the stone rows were interpreted as "ventilation channels" (Braidwood *et al.* 1974: 568; Çambel *et al.* 1980). For the details of the grill buildings see Sicker-Akman 1998.

<sup>22</sup> Interior areas of the earlier huts were approximately 20-25 m<sup>2</sup>; of the grills, 35-42 m<sup>2</sup>.

<sup>23</sup> Bıçakçı implied that the Grill buildings were the first rectangular buildings (1998: 138); however, despite the rectangular elements in their ground plan, they must not have displayed any perpendicular edges, for the upper structure was oval.

<sup>24</sup> Unlike those at Çayönü, the round buildings of Hallan Çemi had interior fireplaces (Rosenberg *et al.* 1998: 28).

<sup>25</sup> Özdoğan (1995: 83) states "the open spaces between the grill buildings were used as garbage areas for unused animal bones, broken objects and for ash". This situation is accurate only for the later part of the Grill Building Subphase.

<sup>17</sup> The round Building Subphase, exposed only in a limited area -ca. 1100 m<sup>2</sup>- in the eastern sector of the site, was generally disturbed by the later grill- and "monumental" buildings. There are also traces of some huts in the western sector, where we reached the earlier levels in restricted areas. Therefore, it is difficult to estimate the dimensions of the first settlements of Çayönü.



Analyses of the lithic tools and the spacial distribution of the other artifacts in the grill buildings did reflect an organization of space. The back parts of the buildings served for craft activities, a "precursor of the atelier of the Channeled Buildings"; the inventory is comprised of bone, tusk, stone, and a few malachite objects in different stages of completion, together with bone and stone tools for finer work. The flint tools display traces of both longitudinal motion (for cutting, engraving, sawing, shaving) and transverse motion (for scraping and planing); a smaller percentage represented points showing traces of rotation in various kinds of material. Use-wear analyses on the lithic tools show "a certain decrease in the processing of soft materials, including non-woody plants, meat, fat, fresh hide....", towards the end of the stage; instead, a ".....processing of medium hard materials, such as wood or leather for making objects and structures increase" (Caneva *et al.* 1998: 201). Heavy stone implements like handstones, pestles, etc., and bone tools were found mainly in the central room, on the floor or on top of the "foundations", indicating the presence of bench or "niche"-like elements. The small cells in the S were usually empty or contained very few insignificant finds.

#### Mortuary Practices

In the Round Huts Subphase the bodies of the deceased were buried either in pits in the open areas or below the floors, generally lying N-S on their right sides in tightly flexed positions, sometimes surrounded by stones. They had no gifts; occasionally, however, small red ochre pieces had been scattered over and beside the bodies.

The tradition of raising the living floors above ground level in the grill buildings must have had an effect on the burial practices, and the existence of the first "Skull Building" might be the result of this necessity. Isolated primary or secondary burials within the burnt fill of some of the round huts might belong to early grill build-

ings. One of the buried individuals had undergone brain surgery (trepanation) (Özbek 1997).

Primary burials under the "central" rooms, either between the grill "walls" or in the small cellular divisions, first made their appearance in the latest grill buildings of the "Second Stage". Relative to the size of the exposed area and the number of grill buildings, such graves were minimal.

#### Lithic Industry

In this stage, Çayönü is considered within the northern Zagros cultural zone, represented by a tool-kit of end-scrapers, perforators, burins, and points, with truncations and notches. Retouched artifacts are not frequent, but increase to 50% by the end of this stage. Points made of flint are on short blades. El Khiam points and hollow-based points are also present (Caneva *et al.* 1998, Coşkunsu 1999). Blades are always flat and thin, which is very typical for this stage in general. Obsidian is rare, only 11%, present among the slightly retouched pieces<sup>26</sup> (Caneva *et al.* 1998: 202, 204).

#### Diet

Subsistence in this stage was mainly dependent on wild game. The most hunted species were wild boar, red and fallow deer, cattle, wild sheep and wild goat. Among the plants, pulses, especially wild lentil (*Lens*) and wild vetch (*Vicia*), played a predominant role. No botanical evidence for plant cultivation in the earliest levels has been ascertained (Van Zeist and de Roller 1994: 95).

#### Second Stage

*Shifting from the "PPNA life style" to the "PPNB life style", enlarging the village, developing specialization in handicrafts, long distance trade, ritual ceremonies, incipient domestication....*

#### Settlement Pattern, Architecture and Space Organization

The grills which generally indicate 5-6 consecutive rebuildings at slightly different orienta-

tions, were still in use (Fig. 14)<sup>27</sup>. Throughout time, not only did the ground plan evolve from open grills to meandered ones and then to closed ones (Özdoğan and Özdoğan 1990), but the arrangements of the stone rows and the construction techniques of the walls were also improved. Further progress was represented by broader and closer parallel rows separated by narrower spaces partly covered with flat capstones. Accordingly, floors came to resemble "platforms", with neatly placed stones and perpendicular corners in the "reversed or mis-oriented" Grill Buildings transitional to the Channeled Buildings (Figs. 14, 17, 20). These improvements reached a climax during the final layer of the Channeled Building Subphase (ch3), when fully developed, neatly made rectangular stone platforms appeared.

In the ground lay-out of the Grill Buildings there were other minor developments and changes. Earlier grills seem to have no regular plastered floors overlying the "grill-foundations", whereas the later ones had. In one example (GBb) in the western sector of the site, the floor was divided into small cells by double rows of small stones with their edges plastered (Fig. 16, Bıçakçı 1998: 139). Immediately beneath the floor a layer of brown earth, approximately 10 cm thick, overlay the grill walls indicating that the floor was not laid directly on the "walls", but on a thick layer of perishable material. Another grill building (GTc) had a red floor like the round hut RA<sup>28</sup>. Changes in the size and number of the "central" rooms are additional indication of the transition to rectangular buildings with rectangular rooms.

The traditional method of light superstructures made of branches and twigs was employed until the first phase of the Channeled Building Subphase (ch1) -namely the "reversed or mis-oriented Grills". The wooden posts, placed much closer to the walls of the late grill buildings, were now almost integrated to the parallel "platforms". In short, their appearances must now have been that of rectangular buildings with slightly rounded corners.

There is a remarkable change in the construction of the superstructure in the last phase of the Channeled Buildings; the first stone socles with kerpiç walls were raised on wide neatly made platforms with very narrow channels totally closed by flat capstones. The socles, ca. 0.50 m in width and height, were well built of various sized stones designed to carry the kerpiç walls and the roof. The walls on these socles were made of organic-tempered kerpiç which was not formed into bricks;<sup>29</sup> irregular lumps were laid on top of one another and pressed down. Both interior and exterior faces of the socles were covered with kerpiç but not plastered over. The interior separation walls were made in the same technique, leaving door openings to provide circulation within the construction.

The stones and capstones of the platforms were totally sealed under a thick floor of beaten earth, which was similar to the later flooring of the "grill-foundations". Another "first" was the "sidewalks" along the long side of the building. There were no traces of roof construction, but Bıçakçı suggests that "these walls supported a heavy flat earthen roof, like those apparent in the buildings of the succeeding subphases" (1998: 141)<sup>30</sup>. And he espe-

<sup>27</sup> The first four are considered to be in the "First Stage". It is necessary to recall here that not all of the grills have 5-6 superimposed building layers, some of them had been abandoned after 2-3 layers and others, having "late grills" characteristics, were constructed directly above the Round Building Subphase.

<sup>28</sup> We do not know if the floor of GT was identical to that of GB, since it has been exposed only in a very small area.

<sup>29</sup> Differently shaped bricks have already been observed in various settlements in the PPNA period (see Aurenche 1993: 72-76), but in Çayönü there is no evidence of identifiable shaped kerpiç until the Cell Building Subphase.

<sup>30</sup> In this level there is no any indication of thick roofs, as there are no wood impressions in the burnt kerpiç fragments; what remains is numerous charcoal specks. It is highly probable that, at least in this subphase, the roofs were made of lighter material, as they were in the previous phase. The frequent appearance of *Scirpus maritimus* in this subphase is also an indicator of reed roofs. This type of roof construction enables a higher ceiling convenient for hanging hide. See also the restitution of channeled buildings of Nevalı Çori (Hauptmann 1999: 75, fig. 16).

<sup>26</sup> Study on the "bp" material has not yet finished. Some changes in the ratios should be expected.

cially emphasized "the new architectural concepts... which could be defined as substantial architecture with an 'architecturally definable room'" (Bıçakçı 1998: 141).

In the first half of this stage, during the use of the upper Grill Buildings, almost all activities, even flint knapping, took place inside or just in front of the buildings. The open spaces between the buildings were used as refuse areas. The Grill Buildings "buried" after the five or six consecutive building levels with a layer of small pebbles. Although the background of this practice is still in the dark, "to bury the abandoned houses or special buildings by leaving some items (as gifts?)" had become a traditional habit, strictly adhered to, until the second layer of the Large Room Buildings (Özdoğan 1995: 85, for detailed discussion Özdoğan and Özdoğan 1998: 589-591).

In the transition to the Channeled Buildings, there was a complete change in the settlement pattern: the reversed or mis-oriented grills with broader grill-like foundations, already mentioned above, were now oriented almost ENE-WSW except for GBa, which was stood directly over the previous grill building (Fig. 14, 17). The widen of spaces left between the buildings is evidence for the greater importance given to open courtyards during the Channelled Building Subphase (Fig. 19, 20). Especially the western sector of the settlement had developed into an "industrial and residential area" with many workshops constructed of perishable materials surrounding the "home", each specialized in various specific items such as different ornaments of stones, malachite, copper, bone and shell. In one of them, bone implements were worked; in another, small flint drills for the "ornament center" were produced; flint and obsidian cores were knapped into different artifacts under sheltered areas. The tool-kits of the ateliers always yielded different sized flint drills (Fig. 59) and various

obsidian scrapers, bone spatulae, string-hole implements, borers and needles accompanied by small- or middle-sized stone spheres, and sometimes grooved stones.

The only well preserved building in this sector is Dİ, which must have functioned as "leather atelier" besides being a home. Use-wear analyses with high and low power magnification of the retouched and unretouched flint and obsidian artifacts from the building hint at distinct phases of hide preparation and manufacture.

The eastern sector, after ch1<sup>31</sup>, seems to be totally free from any residences; instead, a large open area, ca 1000 m<sup>2</sup>, served for communal use. Many roasting pits (a total of 46) of various dimensions were dug into the ground, occasionally -accidentally- into the abandoned grill buildings. The only structures were the "unique buildings" the SE, the Flagstone (FA) and Skull (BM1) Buildings. The structure under the Terrazzo Floor Building, 18 m long and 6.5 m wide, having features identical to the reversed or mis-oriented grills, was probably one of the distinctive buildings of the earliest part this stage.

Although living on a raised floor had since the second half of the First Stage, the community had retained the subterranean construction technique in the earliest unique buildings. The *Flagstone Building*, neatly paved with broad flagstones was rectangular with rounded corners (Fig. 18), whereas the *Skull Building*, which remained oval in plan throughout this stage, was renewed at least three times with burial pits sealed by earthen floors. Both of the buildings have sturdy stone walls, revetted by buttresses on the north side. The Flagstone Building has three monumental standing stones (steles without decoration), two in the middle, and the third in front of the east wall; it this implies that Skull Building also had steles<sup>32</sup>. The stele had been broken and laid on its

<sup>31</sup> There might be some houses in the northernmost part under the PN settlements.

<sup>32</sup> The broken standing stones which were located in the south wall of BM2c might originally have belonged to the earliest phase of the building, reused during BM2c.

side, and then the building had been "buried" with a fill of clean earth. The southern part of the Flagstone Building had been destroyed by the Boğazçay and/or EBA terracing. The oval Skull Building (BM1) had been "disturbed" by its rectangular successor BM2 (Fig. 21).

Common features can be observed among the unique buildings of the early PPNB Period: their isolated location within the settlements - Beidha, Çayönü, Nevalı Çori, Qermez Dere (?)-, subterranean stone architecture, the retention of traditional plans -oval to rectangular with rounded corners- particular attention to the floors, carved or plain "monumental" steles and shallow basins, as well as intentional disturbances before "burial". During the "funeral" ceremony, the buildings must first have been cleaned, some objects left as gifts, and then filled with virgin soil or "sieved earth". The construction of the subsequent special building in the same place and in the fill of the previous structure seems to be another tradition observed both in the Skull Building and elsewhere at sites such as Qermez Dere, Beidha and Abu Hureyra.

#### *Mortuary Practices*

In primary burials, either single or multiple, the dead lay on their right sides in tightly flexed positions, face downwards, accompanied by red ochre pieces, ground stone objects<sup>33</sup> or personal ornaments such as strings of beads as gifts, under the central room or in between the grill "walls" of the later, Grill Buildings. Those found in the courtyard lay NE-SW whereas those between the grill walls lay E-W. The orientation of the latter however, was most probably determined by the layouts of the walls. In the GBb building, under the plaster floor between the grill "walls", a dog

burial<sup>34</sup> and a boar skull had been placed very close to a male burial.

During the use of the reversed or mis-oriented grills in the western sector, some of the circular stone features in the courtyards contained human bones -evidence for secondary burials. Isolated skull and jaw fragments in the courtyard deposits of the Channelled Building Subphase suggest that some of the skulls might have been kept inside the huts of the workshops.

The two shallow pits in the Skull Building (BM1) contained primary (and secondary) burials, all without any "specific order" (Fig. 22). Those in the larger pit were accompanied by some aurochs skulls and horns but without any identifiable association<sup>35</sup>; all were sealed under a properly made earth floor. The small pit contained secondary burials of fifteen individuals<sup>36</sup>. In the burnt fill above the floor of BM1a, there were also many individuals accompanied by various objects, including a necklace, some isolated beads and a flint knife (Fig. 23).

#### *Lithic Industry*

In this stage during the latest grills, end scrapers, burins and continuously retouched pieces decrease in number; the major change, however is in the morphology of the tools. Byblos points and the highly standardized double-backed obsidian blades appear. Points less standardized in character increase (Fig. 59), as well as continuous retouch on non-formal tools; this seems to define the beginning of a trend towards a less formal definition of the artifacts. Flint is common in the lithic production, not particularly selected, with better quality used only to obtain thin, flat blades (Caneva *et al.* 1998: 202). The most important innovations are the pressure flaking technique

<sup>33</sup> Ground stone objects as funeral gifts were also found in Nemrik (Borkowski 1992: 36).

<sup>34</sup> A dog burial also existed in Demirköy, but whether or not there is any association with human burial(s), is not yet clear (see Rosenberg and Peasall 1999: 200, fig. 9).

<sup>35</sup> Animals buried with the humans seems to have been a common habit in PPN, as demonstrated by the excavations of Kfar HaHoresh (Gorring-Morris *et al.* 1998).

<sup>36</sup> This group was researched by taphonomical methods. Some cut marks and defleshing activities were detected by Le Mort (private communication).

and the tool-specific use of obsidian. The distribution of Çayönü-tools (Fig. 58) would indicate connections with the Zagros sites like Jarmo, M'Lefaat, Magzalia rather than with the Euphrates sites. Caneva also emphasized the appearance of such tools at sites in E and SE Anatolia with various similarities in architecture, such as Cafer, Gritille and Nevalı Çori (Caneva *et al.* 1998: 203-204).

#### Diet

Although the diet still depended mainly on wild game, some pigs might have been kept in the settlement as early as the beginning of the stage, certainly during the Channelled Building Subphase (Hongo-Meadow 1999). During the late Grill Building Subphase small amounts of wild emmer (*Triticum dicoccoides*) and einkorn (*Triticum boeoticum*) entered the "kitchen". Wild einkorn wheat weedy in character was intensively collected by the end of the Grill Building Subphase (Van Zeist and de Roller 1994: 78). Pulses were still predominant.

Gathering of linseeds/flax (*Linum bienne*) seems to have taken place by the first half of the Stage, not only for oil consumption but also for textile. The appearance of "shaft strainers" with multiple narrow, shallow grooves (Özdoğan 1995: 84, pl. 3) and "loom weights" may be indicators of weaving.

#### Third Stage

*Social differentiation, organization of the settlement, strict ritual ceremonies, "of the dead" cult ....*

In this stage there were some major innovations both in the architecture and in the settlement pattern. The arrangement and function of the open spaces displayed new concepts of deliberately controlled organization. Caneva has emphasized the first contacts of the region with the Middle Euphrates Cultures (Caneva *et al.* 1998: 204).

#### Settlement Pattern, Buildings and Space Organization

The most significant change in the Cobble-paved Building Subphase was that the complex insulation system of the previous subphases was now achieved by kerpiç walls erected on stone socles directly on the ground (Fig. 28)<sup>37</sup>. The floors, usually stone paved or sometimes plastered, were supported on these. Small buttresses, which were usually just inside the short walls, might have helped support the flat roof. Both the size of the buildings and the proportions of the long and the short sides changed (Bıçakçı 1998: 142)<sup>38</sup>, as did the number of rooms. The buildings had three rooms connected to each other. The door was usually on the short wall in the SE corner. "Sidewalks" now surrounded the buildings. By the end of the Cobble-paved Buildings Subphase the rooms in some of the structures had become smaller, almost identical to those of the early Cell Buildings. The buttresses were elongated into performing walls.

The ground lay-out of the Cell Buildings, not only represented a "developed" method of raising the living floors, but also provided "extra" inner space for various functions such as storage, graves, etc. The high stone socles with kerpiç walls were erected directly on the ground as in the Cobble-paved Buildings. The interior division of the "basements" were sometimes on the cross-, and sometimes on the long axes (Bıçakçı 1998: 143) Thick earthen floors, constructed similarly to the roofs, covered the basement (Fig. 37). The arrangement of the living floors are yet unknown but a few elongated kerpiç blocks indicate separation walls. Mats must have been utilized (Fig. 38), probably not only on the floors but also as division walls. Living quarters were reached by stone steps constructed on the east side of the buildings, at the edge of the sidewalk

<sup>37</sup> See the explanation for this change in Bıçakçı 1998: 142 footnote 36.

<sup>38</sup> Bıçakçı suggested that this change might be the result of functional changes in the buildings, such as the interior spaces of the grills and channelled buildings being used for storage purposes (Bıçakçı 1998: 142, footnote 40), but research and analyses on their inventories attest various activities.

along the structures (Fig. 36). Evidence for beams on burnt kerpiç fragments, as well as in the "house models" attest to heavy flat earthen roofs<sup>39</sup>.

During the Cell Building Subphase kerpiç shaped into long blocks became the preferred building material. In the second layer of the subphase (c2) (Fig. 32), some kerpiç structures were constructed without stone socles. One of the buildings in the western section of this layer, (DE) (Fig. 33), revealed extraordinary features: a single room with a sunken floor level, and no substantial divisions, containing large plastered bin-like containers and a clay bench -"an immobile coffin"- for a flexed burnt burial wrapped in a mat and accompanied by a tool-kit (Fig. 34) (Çambel *et al.* 1989: 70, fig.12-13, Özdoğan and Özdoğan 1993: 93).

The ground plan of the earliest cell buildings had standard norms whereas the latest cell structures displayed dissimilarities not only in the dimensions of the cells and the rooms, but also the number of the inner spaces. Some of them displayed a series of long cells without any connections and with a long room in the N, others some had identical rooms with passages.

In the first half of the stage N-S or NNE-SSW oriented superimposed Cobble-paved Buildings were constructed in the western sector; these lay close to each other, roughly encircling large N-S oriented open areas (in contrast to previous subphase where the open areas had been oriented E-W) (Fig. 27, 29, 30). Especially in this section of the settlement, there was a tendency to enclose the open spaces which would develop into "closed courtyards" between the buildings by the last layer of the Cell Building Subphase. The function of the western courtyards was similar to those of the Channelled Buildings.

During the early cells (c1) a significant change in the settlement pattern occurred in west. The

buildings were constructed along two (three?) low parallel terraces running ENE-WSW, with nearly identical intervals between them<sup>40</sup> (Fig. 31). A similar pattern seems to have existed in the northern part of the eastern sector as well. Eventually, during the use of the early cells a flood (or floods) threatened the northern part of the settlement. The northern terraces of the succeeding cell buildings were reinforced with heavy walls similar to those of the later Pottery Neolithic Period. This area was not reoccupied until the first Large-Room Buildings used it as "backyards" and garbage dumps.

The late cell settlement (c3) in the western sector was situated mainly to the south of a heavy terrace wall similar to that in the east. It was composed of a closely compacted series of generally E-W oriented buildings retaining a central "closed courtyard". The main "industrial area" shifted towards further west, where houses were scattered. The houses in this part remained oriented ENE-WSW as were the early cell buildings (Fig. 35).

The "closed courtyard" of the early cell buildings was quite rich in animal bones, mainly of cattle, deer and goat; sheep was rare, and no boar bones were found. There were numerous animal bones inside the houses, too, particularly in some of the cells. Lawrence pointed out striking differences between the species recovered in the courtyards and those inside the buildings (Lawrence 1982: 187-188). Many broken tools and discarded pieces of bone, a few broken bracelets and a number of small beads that seem to have belonged to a single string, were scattered all over the area. There is no evidence of production of any kind of ornamental objects. The abundance of stone balls broken handstone fragments, and flakes of flint and obsidian as well as used glossy pieces are worth mentioning. It is suggested that this area served for butchering and the production of bone tools. A similar pattern

<sup>39</sup> For detailed information and drawings see Bıçakçı 1995 and Broman-Morales 1990: 69-70.

<sup>40</sup> The terracing activity had partly destroyed the last layer of Cobble-paved Buildings (cp3).

could also be observed during the late cells, but rather poorer in respect to artifacts. A small area near one of the houses might have been used as an area for working malachite.

The practice of burying buildings still maintained, it is better evidenced in the earlier cell buildings (c1); blocking the doors, leaving mainly ground stone objects, animal bones and some edible plants<sup>41</sup>, and removing all personal ornaments<sup>42</sup>. This pattern was also demonstrated in the eastern section of the site, where a large area was covered with cobbles and then levelled, resulting in a large open pebble-covered area, namely the first "Pebbled Plaza" of the site. The area was used for daily activities without any specific organization. This pebbled plaza also provided a served foundation for the following "Earth Plaza". Moreover, a large part of the eastern section was prepared as a new plaza, 60 x 20 m, during the Cell Building Subphase. Its floor was neatly laid of burnt kerpiç remains and/or dung-burning *in situ* (Factor *et al.* 1992). Its reddish floor was renewed at least three times, carefully cleaned before each renewal (Fig. 40). The earliest Plaza had two rows of standing stones (uncarved steles) that were set into it, and two large grooved limestone slabs lay close to each other in the SE (Fig. 41). During the second renewal, the steles had intentionally been broken and buried under the next floor, together with the grooved slabs (Özdoğan and Özdoğan 1998: 592) (Fig. 42). These circumstances are indicative of the special function of the area. We may suggest that the Earth Plaza is an open-air equivalent to of the "unique buildings" on a grander scale (Özdoğan 1995: 87).

A new rectangular Skull Building (BM2) was built in the fill of the oval BM1 (Fig. 21). The building, renewed three times on the same location with a layout identical save for minor changes, remained in use during the entire span of Cobble-paved Building Subphase. The building consisted of two main sections, three interconnecting rooms in the north (four in the earliest) and a large area, a "courtyard" with plastered floor in the south. A rectangular stone was placed near the west wall. The presence of a southern wall is debatable, since that part was totally destroyed by EBA terracing. The rooms were been separated from the courtyard by a kerpiç bench that two standing stones from the earliest BM1 had been buried in. There was a thin layer of dark reddish substance observed between the steles<sup>43</sup>. The limestone "altar" had been destroyed in its time and the fragments used as building materials in different parts of the following stage of the building (BM2b).

In BM2b, with three rooms, a high wall was built on the kerpiç bench to separate the rooms from the courtyard. The earliest clay vessel of Çayönü, a plate with a shallow rim and a ring base, painted with red ochre, was found lying upside down on the floor<sup>44</sup> here as if, as Y. Dede (restorer) explained, "it had been thrown from a higher elevation on to the ground" (Özdoğan 1994: 57 and personal communications). It might be interpreted as "an offering of a cult item to the abandoned cult building".

The final Skull Building (BM2a) also had high walls as well as a well-polished reddish "altar" in front of the west wall. Its rooms

were neatly paved with pebbles (Fig. 25). After the intentional burning and "burying" of the Skull Building under a thick layer of pebbles, the new unique building -Terrazzo Building- was constructed at the edge of the area, much closer to the domestic buildings. The "Terrazzo"<sup>45</sup> is a rectangular building with a floor of a pinkish limestone that had been brought from a source behind Zülküf Dağ (Şaroğlu 1989). The only object found on the floor was the fragment of a shallow basin with a carved human face (Fig. 43). This can be compared to the reliefs of Nevalı Çori.

Accordingly, not only the open areas within the settlements, but also the limits of the site in the second half of this stage became smaller, suggesting that domestic activities took place either within the houses, as in the Grill Building Subphase, or on the roofs. Large quantities of assorted artifacts for various activities (grinding, pounding, cutting etc.) and stocks of raw material (bones, flint, and obsidian) were recovered from the floors of the cells, where as small objects, of daily use were generally found in the upper living space.

#### Mortuary Practices

Numerous burial practices were detected in this stage. In the first half of the stage (during the Cobble-paved Building Subphase) the Skull Building, which functioned as a "House of the Dead", displayed different burial practices that hint at a certain "status" in the society. A side from the Skull Building, pits full of human bones or isolated secondary burials, mainly infants or children, were by no means rare in the open areas.

The first phase of the Skull Building (BM2c) displayed a different type of mortuary practice, burials inside crypts. The western crypt

had many skulls arranged to face in different directions, and long bones ordered in consecutive piles, subsequently disturbed by two or three primary burials (Fig. 26)<sup>46</sup>. Some isolated stone and malachite beads and a fossil shell pendant were found among the bones. The neighboring one crypt contained a decapitated female buried with a new born infant and a child. The third one contained many bones, seemingly dumped as scrap. A skillfully worked copper bead was recovered within this fill (Fig. 65). It seems that in this level of the building western room (crypt) had priority.

BM2b contained, with one exception, secondary burials without skull, accompanied by gifts such as a fancy boar tusk, stone beads, etc. The only decapitated primary burial lay under the pavement of the western room of BM2a. In the final building phase a total of 49 burnt skulls were recovered. More than half of them were concentrated in the east room together with some animal bones. All of them were found fallen onto the floor from "shelves" and smashed under the heavy debris of burnt kerpiç. No artifacts were found in these cells. It is interesting to note here that "special priority" had been transferred from west to east; whether accidentally or deliberately remains totally in the dark.

In the social life of Çayönü, BM seems to have played a significant role which evolved gradually. Clearly, at the beginning, BM1 might have been only a "unique" building for the burials. In the following second phases (certainly in BM 2) some of the dead must have been transferred with each renewal of the building. Some skeletal parts, especially the skulls and sometimes the long bones, were shown a special respect (?)<sup>47</sup>. Another possi-

<sup>41</sup> Compare with the funeral gifts of humans.

<sup>42</sup> For details see Özdoğan and Özdoğan 1998: 590.

<sup>43</sup> A comparable substance, defined as on "iron compound" by Kirkbride, was found under the stone pavements of the unique buildings T3 and T1 in Beidha (Kirkbride 1968: 95-96).

<sup>44</sup> According to mineralogical and petrographical analysis this vessel (BM 2-57/5) is "composed of a tempered calcareous clay with large amounts of calcite. The material is very porous and brittle and no signs of firing could be identified, neither the presence of burnt limestone fragments nor decarbonated line. ....shows X-ray diffraction spectrum, in which the peaks of the clay minerals could be identified, indicating that the material has not been strongly effected by the firing process. Although the inorganic temper is similar to the other ceramic samples from the site.....this is the only one that contains bone fragments." As a result, "it cannot be classified as *vaisselle blanche*.....and unburnt" (Affonso 1997).

<sup>45</sup> A detailed description of the Terazzo has already been published by Çambel and Braidwood 1980, Schirmer 1983, Özdoğan 1990.

<sup>46</sup> This crypt yielded numerous bones from different individuals of different sex and ages. The first preliminary study on the skulls and burials was published by M. Özbek, but taphonomical researches still continue under Le Mort and her team.

<sup>47</sup> The "cult of the dead" still exists in some traditional groups where the dead are still regarded as the members of the family. The best ethnographical example are the *famadihana* ceremonies of the Merina and Betsileo tribes in Madagascar: graves are opened at certain times with ceremonies, all the bones are collected, sometimes washed, then wrapped with clean clothes and reburied. A specific kind of animal is sacrificed. (Atay 1998: 64-73).



bility is that the building was related to preparing the dead for secondary burial; this is suggested by the presence of the huge slab, "altar" and large quantity of scrap bone swept into the crypts and pits. The presence of an aurochs skull with horns (Fig. 24) on the wall facing the courtyard is the indication of a "bull cult" related to the "cult of the dead". Tradition of hanging an aurochs skull on the walls of "unique or important buildings" has also been documented at Hallan Çemi (Rosenberg 1994: fig. 10).

After the "burial" of the Skull Building, the basement floors of the cell buildings were used as graves. In a way the basements of the cell houses and the basements of the Skull Building may be conceptually compared. Almost all the early cell buildings (c1) yielded graves. The dead were buried predominantly under floors of the NW cells or NW rooms as primary burials, either single or in groups close to each other, sometimes even in successive layers. A division of the cells with single rows of stone into smaller partitions for the dead was sometimes attested. Burials, either tightly or semi-flexed, lay on their right or left in a NE-SW or SW-NE orientation, sometimes with rich, but generally with moderate gifts. Funerary offerings of food, meat and/or edible plants were common. One building in each sector of the settlement, CA (West) and CX (East), displayed distinct burial practices: The number of dead is greater than in the other cell buildings, and they had been buried with personal ornaments and/or artifacts made of different materials (Fig. 44). A boar's lower jaw with the tusks still in it had been carefully placed onto the clean earth over two burials in one cell of CX (Fig. 45).

In the second layer of the subphase (c2) the only burial recovered was one in a bench (Fig. 34). No significant change in the mortuary practices were noticeable in the final last layer (c3), but the number of burials decrease in number as do

the types of gifts. A male burial, placed inside the W wall of a cell building (CR) represented an exception. It cannot be determined whether isolated burials in the courtyards belonged to the destroyed buildings or not.

In conclusion we can speculate that, during the Channelled, particularly in the Cobble-paved Building Subphases, the "cult of the dead" must have been much stronger in the spiritual life of Çayönü. The burying of BM might imply radical changes in the beliefs and *tabus* of the settlers. With the beginning of the Cell Building Subphase new concepts arose within the daily and spiritual life that would also affect the organization of the community.

#### Lithic Industry

Caneva described the lithic-features of this stage as "...fossiles directeurs of PPNB, a blade industry, with an intensive use of obsidian, Byblos points and Çayönü double-backed blades among the retouched artifacts and the use of bipolar naviform cores" (1998: 203). The dominant tool set of this stage began during the use of the Cobble-paved Buildings and become highly standard in the second half, when reserve stocks were kept in the Cell Buildings<sup>48</sup>. The ratio of obsidian to flint is equal but the flake: blade ratio is reversed in favor of blades.

#### Diet

The recent studies on animal bones demonstrate an "increasing reliance on domestic animals....sheep and goat by the Cell Buildings" (Hongo-Meadow 1999). According to Van Zeist "Morphologically defined wild emmer wheat in the early stages (Channelled Buildings).... was most probably cultivated." (Van Zeist and de Roller 1994: 95). The abundance of grinding slabs, sickles and "V"-shaped artifact indicate that cereals had started to play a more dominant role in the subsistence diet, especially during the Cell Buildings Subphase.

<sup>48</sup> For a preliminary description of the raw materials stockpiled here, see Davis 1998: 260-261, fig. 6-8.

#### Fourth Stage

*Decline of the "PPN way of life", new concepts,*

In this stage, particularly in the second half, strict rules of conservatism seem to fade and there is no longer much homogeneity throughout the settlement in building technique, plan or orientation. The rather sudden appearance of clay figurines, of sheep and goat, and a remarkable increase in the number of differently shaped and sized tokens (small cones, and "bulla"-like objects made of clay) might be taken as indicative of a conceptual change at Çayönü from "communal ownership" to "personal ownership". Highly standard lithic tool types, especially the "Çayönü tools", and masses of non-formal tools form the tool-kit of this stage. Naviform cores disappear and the flake: blade ratio is reversed (Caneva *et al.* 1998: 203-204). Other tool types that had been utilized over long periods either disappeared or continued in relatively small quantities. All these data show a trend from "...a local development toward a pastoral model." (Caneva *et al.* 1998: 204).

#### Settlement Pattern, Buildings and Space Organization

Buildings related to "cult practices" seem to have lost their significance during the second half of the c3 layer of the Cell Building Subphase, as especially well documented in the western sector of the settlement, which took on a domestic character. The buildings had been part of a ritual concept; in certain circumstances they were not allowed to be reused. It is suggested that this *tabu* gradually disappeared; buildings were now in continuous use with renovations and annexes. Sometimes a successive structure would partly utilize the walls of the previous construction. In the eastern section, rather a more privileged in character, this *tabu* seems to have existed until the second layer of the Large-Room Building Subphase

(lr1-2)<sup>49</sup>. Special buildings here, without specific "remarkable" features, still appear to have been given special attention.

The main representative of this stage is the new building type with a single large room (Fig. 46-47). The walls of these domestic structures, occasionally preserved to 0.45-0.50 m high, were built of medium sized stones, less carefully constructed than the walls of the previous stage. Their interior corners were slightly curved<sup>50</sup>. Another significant change was in the construction technique; the foundations of the walls (or socles ?) were partly below the outer living surface (Fig. 48). The earlier Large Room Buildings had sunken floors. Deep bench-like constructions inside the buildings lined the long walls at the height of the walls or sometimes even higher. It has been suggested that these benches had served as thresholds because none of the buildings had any entrances. The buildings with broader foundations had kerpiç superstructures, but there were no traces of upper structures for the later buildings with thinner walls. The buildings, particularly the earlier ones, yielded many large animal bones accompanied by various objects of ground stone.

The tradition of special buildings was still maintained, it less significantly<sup>51</sup> in the first half of the stage with the series of consecutive buildings DK, EA and DT, constructed in between the two cell buildings DS and CT (Fig. 49). Their location demonstrates the transition from "isolated location" to "integrated position". All of them had rectangular plans. DK had two rooms. The southern and better preserved room was divided down the middle by a passage covered with a single row of flat stones which continued on to the Plaza; it had a neatly made stone pavement. The northern badly preserved room was larger. EA was a single roomed building with three large piers in the middle, semicircular mangers against

<sup>49</sup> Buildings BF, EF, DK and EA were left intact.

<sup>50</sup> For the interpretation of the features of the Large-Room Buildings, see Bıçakçı 1998: 144.

<sup>51</sup> The inventories of these buildings do not display any significant aspects but their construction techniques and locations do.



the long stone walls and an uneven earth floor. DT, not very well preserved, had thick raised floors supported by the socles. The inventory was not sufficient to indicate their function.

The Large Room Building Subphase was only preserved in the eastern sector. With the exception of some isolated walls and deposit on the last layer of the cell buildings, there was no evidence for large-room building in the western sector (Figs. 47, 50, 51). Whether is due to heavy erosion in the western part or whether the settlement mainly developed in the east, and expanded more towards the north, is not yet clear.

The Plaza, which played an important role in the previous stage, continued in use and was renewed in the first half of this stage; it served mainly for daily usage and was not kept clean, which indicates a degeneration on of communal values. A decline is also apparent in the architecture when one considers that Çayönü had previously been a very organized settlement with strict rules, without any tolerance for structural alterations. During these last phases even the buildings were constructed in the "occupation" area N of the Plaza, exhibit no more regularity (Fig. 51). The last buildings seems to be have abandoned as they were. The open area to the N of the buildings was used more intensively than in the previous stage.

#### Mortuary Practices

Considering the large size of the excavated area, the absence of human remains both inside and outside the Large Room Buildings indicates either that *extramural* cemeteries had been established, or as pure speculation, that there was another "Skull Building" not yet discovered. A similar tradition seems to continue in the following Pottery Neolithic Period.

#### Diet

Fully domesticated sheep and goat, whether brought to the settlement from elsewhere or

domesticated within the settlement, indicate that the diet depended not only on game, but on domesticated animals as well.

### ARTIFACTURAL FINDS

#### Copper tools

Çayönü still holds a record in metal finds, not only because of the great abundance comprising a large typological variety, but more significantly because the only site where the development of metallurgy -from simple cold hammering to incipient pyrotechnology- can be followed over the millennia<sup>52</sup>. The earliest copper find recorded from Çayönü comes from the end of the First Stage, but a few worked and unworked malachite pieces were also found among the deposits of the Round Building Subphase<sup>53</sup>. Copper was shaped into pins, hooks and reamers as well as ornaments such as beads and rings (Fig. 52). Copper needles without eyes are a tool type characteristic of the earlier subphases except that of the Round Buildings. Although we have no examples, they were probably hafted in wood for use in leatherwork.

#### Bone Tools

Most of the implements that became elements of the main tool-kit characteristic of Çayönü have their roots at the very beginning of the settlement. Çayönü displays typologically extensive bone artifacts, generally more functional than decorative (Efe 1998: 294). The decorated pieces, not frequent, are usually artifacts from the earlier levels.

Among the bone artifacts, *needles* of different sizes must have played a "significant role" in daily life at Çayönü. Oval-eyed examples (Efe 1998: 293, fig. 5: 57-60, 64-65) were produced for a longer period. Round-eyed needles (Efe 1998: 293, fig. 5: 61-63, 66-67) first appeared during the Channelled Building Subphase (Fig. 53). Both types lost their importance after the second half of the Fourth Stage.

*Piercing tools* of different types (Efe 1986: 37-43, 1998: 293, fig. 5: 44-56) were also quite frequent in the First Stage, especially the slender articulated ulna-fibula, with flat awls becoming predominant during later stages and splinter-awls seen mainly in the tool kit of the Cell and Large Room Building Subphases. The antler awls that are typical for Cell Building Subphase first appeared in the Channelled Building Subphase. The distribution of borers and punches are similar to that of the other piercing tools; they were extensively used until the first half of the Third Stage, and totally disappeared during the large room phase (after Ir1).

*Knives, thin-bladed spatulae/knives* and *blunt-edged spatulae/polishers*, generally made of ribs, were probably the most frequent types utilized in leather working (Efe 1986: 34-36, Efe 1998: 293, fig. 4: 35-43) from the very beginning of the settlement onward. Knives proper were mainly restricted to use in the Channelled and Cobble-paved Buildings, whereas the thin-bladed spatulae/knives were characteristic of all stages. Blunt-edged spatulae/polishers increased in the Cell Buildings Subphase. All of these flat tools decreased in use during the Large Room Buildings Subphase.

*Chisels*, made either of bone or antler (Efe 1998: 292, fig. 28-34) represent a type of bone artifact utilized throughout the span of the settlement. Those with narrow cutting edges were the earliest type; then those with wide cutting edges and as well as antler chisels became widespread. These tools might have been used in the knapping of flint and obsidian.

*String-hole implements*, showing a high quality of craftsmanship, are an other typical element of the Çayönü bone artifact inventory (Efe 1998: 291-292, fig. 1: 10-13, 2: 14-15). These were first seen during the third layer (r3) of Round Huts, became more common in the Channelled Building Subphase and were extensively used during the Cell Buildings of the "Third Stage" before going "out-of fashion" after the early Large-Room Buildings.

*Handles* of bone and antler were not as common as the other bone tools. Short and long socketed hafts, tubular bone hafts, chisel hafts, sickles and hafts for knives are the different shapes (Efe 1998: 292, fig. 2: 16-24, 3: 25-27). The knife-haft, scarcely found in the settlement was the earliest type, did not appear after the First Stage (Efe 1998, fig. 3: 27). Similar tools have also been found in the D and E levels of Ganj Dareh (Stordeur 1993: fig. 10.2). The earliest short-socketed and tubular bone hafts were found in the second half of the First Stage, whereas the long socketed hafts were not known until the Channelled Buildings (ch3), becoming significant in the Third Stage. Chisel hafts of antler were common in the Cell and Large Room Buildings.

*Sickles* made of antlers, not very frequent, existed only during the second half of Third Stage (Cell Buildings). They had very shallow "V"-shaped grooves without any traces of adhesive materials. One of them had remains of good quality weaving (domesticated flax) clinging its handle (Vogelsang-Eastwood, 1993) (Fig. 54). Together with the sickles, certain "V"-shaped bone artifacts fashioned from shoulder blades and assumed to be for collecting wheat (Stordeur 1993: 260-264, fig. 16-20) indicate that the cereals started to play a more dominant role in subsistence diet during the Cell Buildings Subphase.

Other bone tools were less frequent in the inventory. *Hammers* made of antler were found in the workshops of the western sector of the settlement during the Channelled and Cobble-paved Buildings Subphases (Fig. 55). *Digging tools*, also of antler, were represented only by two examples from the Channelled Building Subphase (Efe 1998, fig. 6: 69). *Notched "tally sticks"* have been interpreted as musical instruments, but there is not enough evidence to support this theory (Efe 1998: 294, fig. 6: 79). Among these types, needles, blunt-edged spatulae/polishers and string-hole implements occasionally served as burial gifts.

<sup>52</sup> For detailed information see Maddin *et al.* 1991, Stech 1998 and Esin 1995: 67.

<sup>53</sup> Copper ore was also found in Hallan Çemi (Rosenberg *et al.* 1998: 31).

### Ground Stone Artifacts

Çayönü is also extremely rich in ground stone objects. Classified into different categories, these have already been published in detail<sup>54</sup>. Most of these had already been established by the earliest settlement.

In the round buildings small and medium-sized handstones were preferred to pestles; the pestles developed in shape during the Grill Building subphase and became widespread in the Third Stage, especially in the Cell Buildings. In the mean time, the pestles became larger in size. In comparison to the number of pestles recovered from different parts of the settlement, mortars are surprisingly rare. That might be because "grinding slabs" with shallow depressions functioned as mortars, or, as Davis suggests, because mortar-like depressions on the table rocks of the Hilar also served the same purpose (Davis 1982: 86).

Special pestles with articulated handles (bilateral barbs) seem to have fulfilled a symbolic purpose rather than daily use. Only four examples were found in Çayönü three of which were broken (Fig. 60). Their distribution gives little evidence as to their origin or their role in the settlement (Davis 1982: fig. 3.4.2, pl. 3.III.6). Similar, but more ornamental sculptured examples were found in at Hallan Çemi (Rosenberg and Davis 1992: fig. 9.1, 2, 4, Rosenberg 1994: fig. 12.1-2, Rosenberg 1995: fig. 9, Rosenberg *et al.* 1998: 29), in Nemrik 9 (Kempisty and Kozlowski 1990: fig. 64-68), and at Tell Magzalia.

The handstones, the largest group of ground stone objects, have been classified into 17 types according to their size and shape (Davis 1982: 87-96)<sup>55</sup>. "Large turtle-shaped", "medium low domed", "medium low vaulted" and "small semirectangular" are the most common. Almost all the types are represented in every subphase.

Basalt grinding slabs also display different shapes and profiles, but a detailed typological classification has not been developed yet (Davis 1982: 97, fig. 3.6.15-21, fig. 3.7, Çambel and Braidwood 1980: fig. 45.20). As a general observation, the oval and more roundish ones with shallow depressions and convex bottoms were characteristic of the First and Second Stages. Their shapes are more suggestive of pounding meat than grinding grain (Özdoğan 1995: 84). The flat-bottomed and more rectangular shapes more suitable for grinding were used in the Third and first half of the Fourth Stages (Fig. 56). In the second half of the final Stage there was a striking decrease in grinding slabs. Most of them were not preserved intact but as fragments. Finds in the grills usually came from walls, which can be interpreted as secondary usage as a building material, or as a sacrifice (comparable to the celts), mostly found as fragments. In the Channelled and Cobble-paved Buildings they appeared mainly in the courtyards, whereas in the Cell and Large Room Buildings they were generally part of the household inventory; very few fragments were found on the Plaza.

Celts are the richest and second most predominant group at Çayönü (Davis 1982: 99-104, fig. 3.8, 3.9, 3.10.1,4, pl. 3.I.1-2, pl. 3.2.4-5). In the earliest levels medium sized celts were more common. They were typologically evinced during the grill buildings. The presence of the celts in the "walls" of the Grill Buildings deserves special attention<sup>56</sup>, (Özdoğan 1995: 84; Özdoğan and Özdoğan 1998: 591). Small-sized celts became widespread during the Channelled Building Subphase alongside the ornamental crafts. They were also an important element in the Cell Buildings' household inventory. Reshaping broken celts into pestles or ornamental objects became common practice.

Spheres, made of different kinds of soft and hard stone appeared in various sizes and with differing quality of finish (Davis 1982: 114-116, pl. 3.III.9). Well polished and irregularly finished balls have been found in almost identical numbers, usually inside the buildings rather than outside, in every subphase.

Rectilinear or elongated oval shaped grooved stones, usually made of a steatite-like material, display single or double "U"- or "V"- shaped grooves on either side. Some of these have boast incised decoration, generally on the backs (Davis 1982: 110, fig. 3.12.1-21, 3.13.1-4, pl. 3.III.1; Özdoğan *et al.* 1991: fig.15c, Çambel *et al.* 1986: fig. 10f). They are usually referred to as shaft-straighteners although new interpretations associate them with hunting rites, possibly a symbol representation of the female reproductive cycle (Hermansen 1997: 6). Their intersettlement distribution is similar to that of the spheres. The ones with multiple narrow and shallower grooves were finds from the First Stage<sup>57</sup>.

The earliest chipped discs (Davis 1982: 118-119, fig. 3.13.12-13), which subsequently became the predominant artifact, "the symbol" of the Fourth Stage, were first found in a very small quantity in the first half of the Second Stage. Another interesting type is the so-called "digging tools" (Davis 1982: 108-109, figs. 3.8.12, 3.10.10-12, pl. 3.II: 6) that were notably found in the Third Stage. These might also be indicators of incipient agriculture. Only one example was found in one of the earliest large-room buildings.

Objects with large drill holes considering as "maceheads" (Davis 1982: 112-113 res. 3.13.8-9), one hafted celt (Davis 1982: fig. 3.13.10) and two hafted hammers (Davis 1982: fig. 3.13.11) are among the scarcer finds between the subphases of the late grills and the early large room buildings. Similar spherical maceheads also existed at other PPN sites like Hallan

Çemi (Rosenberg 1994: fig. 12.3, 4, 5) and Nemrik 9 (Mazurkowski 1990a: fig. 54). They are characterized by their high polished and the bilaterally drilled holes. Many small artifacts especially designed to be used in the "workshops" include chisels, borers and "screw driver"-like tools of soft stone.

### Ornaments

Çayönü people must have been particularly specialized on "ornamental industry". Beads extremely rich in shape and variety of raw materials seem not only to have functioned as jewelry but also for decorating clothing. Different kinds of stones, mainly soft or medium-soft, although serpentine, quartz and obsidian as well, were used. All were plain, well polished and drilled from either end. Figurative beads were quite rare (Figs. 62-63, 71).

The typical ornament of the First Stage, especially of the Round Building Subphase, are the beads made from shells of freshwater gastropods (*Theodoxus Jordani* and *Melanopsis praemonsa*) (Bar-Yosef 1993). Simple round stone beads and pear-shaped stone pendants with a single or double piercing were also very common, and an equivalent of the latter made from long tusks and mammal teeth were widespread during the Grill Building Subphase. Oval and rhomboid beads, as well as the spacer beads with double holes, were new shapes to appear in stone towards the end of the First Stage; these continued popular throughout the Third Stage, but were rarely seen in the first half of the Fourth Stage. Spacer beads with single, double or multiple holes, cylindrical, barrel-shaped, oval and rhomboid beads are the typical forms of the Second Stage. The multiple-pierced spacer beads, which were totally out-of-fashion by the beginning of the Third Stage, were especially characteristic of the Channelled Building Subphase. Simple round beads and some elongated pendants of stone comprised the adornments of the Fourth

<sup>54</sup> See Davis 1982 and 1998.

<sup>55</sup> In the publication there are 16 types, the seventeenth one has only recently been added.

<sup>56</sup> Whole or partly broken celts were found on the parallel "walls" of these Grill Buildings: GA, GBb, GG, GHa, c-e, Gka-b, GN, GR and GT.

<sup>57</sup> Fragments of limestone with multiple parallel grooves were also recovered at the MPPNB site of Kfar HaHoresh (Goring-Morris *et al.* 1998: 4).

Stage. Strings of simple round beads of different colored stones were recovered as the burial gifts in the early cells (c1).

*Bone beads*, shaped primarily from the long bones of the small mammals were common towards the end of the Second Stage. Plain small ones were the earliest forms; the large ones with deep grooves at either ends represent a later types. Freshwater bivalves (*Unio*) were preferred to gastropods for ornaments in the Second and Third Stages. They were also shaped into buttons and probably used for inlays, as well as beads (Fig. 64). Sea shells were first used in the second half of the First Stage, becoming more common (especially the bivalves) during the Third Stage.

Malachite was worked as much as stone, not only for making different forms of beads but also for inlays. It might also have been used as dye. *Malachite beads*, predominantly simple round or small barrel shaped ones demonstrate a random pattern through out the site. The pear-shaped beads of malachite and copper that imitate stone beads were the forms of the late grills. There is no significant association with the burial except for those found in the Skull Building. Copper were beads usually formed by rolling up well-beaten flat sheets (Fig. 66). Similar beads have also been recovered at Aşıklı Höyük (Esin 1995). Malachite and copper beads, widely used during the Second and Third Stages were rather rare in the Fourth Stage.

*Large Stone rings* were made from limestone generally white but occasionally dark grey, black or red. Simple plain rings with four piercings might have been sewn on clothings as decorative items whereas the larger ones without holes (round, oval, rectangular and pentagonal in section), sometimes grooved or carinated, were worn as bracelets. All of those recovered have been fragments. The simple plain ones were widely used and increased in number throughout the entire span of the PPN and PN periods. The fancier ones appeared during the Channelled Building Subphase and increased in number during the first level of the Cell Building Subphase, rare again in

Large Room Building Subphase. Such stone rings are found at almost all the PPN sites, but the best analogies come from Cafer Höyük (Maréchal 1985: fig. 1-2). The plain rings that were found in the walls of the two late Cobble-paved buildings deserve special attention.

*Bone "belt" hooks* (Efe 1998: fig. 6: 74) were found in small quantities from the beginning of the earliest settlement till the first half of the Fourth Stage, but it seems that they were most characteristic of the first two stages (Özdoğan 1995: 144). Similar, but fancier ones, have been found at Aşıklı Höyük (Esin *et al.* 1991: 134, 194 pl. 10, Esin 1995: fig. 6).

#### *Decorative Items*

Besides beads and rings, one of the major ornamental items were inlays of various materials in different forms (Fig. 67). Black or blackish green, red and rarely white stones, malachite and sometimes freshwater bivalves were fashioned into rectangular, round or irregularly shaped inlays. Stone inlays display a polished finish on the upper surfaces, whereas their reverse surface were left uneven; sometimes there are traces of a kind of blackish residue. Rectangular stone inlays were produced over longer period, but round ones as well as special "socketed inlays" (inlays within inlays) appeared sporadically scattered, mainly during the late Round and the Grill Building Subphases (Fig. 68). Malachite inlays were characteristic of the Channelled and Cobble-paved Buildings Subphases, as were the beads of the same material (Fig. 69). Two shells of Mediterranean origin with traces of inserted malachite indicate the skillfulness developed in this craft (Fig. 70).

#### *Clay Objects*

The compact and rather clayey character of the soil at Çayönü, is by no means ideal for the preservation of unbaked or partly baked clay objects. The number of items recovered during excavation does not seem to be representative of the actual number of modeled clay objects that actually existed in the site. Nevertheless, they give some idea of the changing custom and imagination of the Çayönü people.

Clay was first modeled into unusual objects, such as studs (Broman-Morales 1990: 65, fig. 25m,n), which might be interpreted as ornamental objects during the early grills. These can be compared to similar objects in Nemrik (Kozłowski and Mazurowski 1990: fig. 60.1, Kozłowski 1992: fig. 64.4).

*Female figurines* of clay (Fig. 74) made their first appearance in the second half of the First Stage and became more frequent in time, but the *animal figurines* (Fig. 72) did not show up until the second half of the Second Stage (Channelled Buildings). Most interesting is the absence of pig figurines in the Round and the Grill Buildings Subphases, when the pig was one of the dominant animals in the surroundings and in the diet. The sudden appearance of sheep and goat figurines in the last stage seems to fit properly with the faunal remains. None of the figurines or any of the clay objects can be associated with the "cult buildings".

*Tokens* of various shape and size appeared no earlier than the last phase of the Second Stage but there was a noticeable increase in the last stage. Their distribution is identical to that of the sheep and goat figurines; almost all of them were found in the eastern sector. *Applique*, the earliest of which has been found in the Channelled Building Subphase, became increasingly common. This might have been either be a decorative element or a kind of "bulla".

#### *Vessels (clay and stone)*

The existence of rough clay containers in the PPNA level of Demirköy (Rosenberg and Peasnell 1999: fig. 6) represents the earliest known usage of clay for modeling mobile containers. The earliest clay vessel at Çayönü is a miniature bowl from the early grill buildings. Larger examples are from the late cells except for those found in the Skull Building. Made of

chaff tempered clay similar to building material, they shaped either into shallow flat bottomed round or rectangular basins with rims (Fig. 39) (Broman-Morales 1990: 71, fig. 29, Özdoğan and Özdoğan 1993) or into deep vessels with traces of reed baskets on their outer surfaces. One with a high cylindrical base is a unique example (Özdoğan and Özdoğan 1993).

The *stone bowls* can be divided into two groups: coarse bowls and well-made bowls either plain or decorated. The coarse ones, called "limestone containers" or "palettes" were made of limestone or sandstone and, rarely, basalt or granite (Davis 1982: 86-87, 125, fig. 3.10.2-3, 6-9, pl. 3.II.2). Generally thick-rimmed and flat-bottomed, of shallow or deep bowls scattered and fragmentary from the beginning to the early levels of the Cell Buildings. Well-made ones were in the form of shallow plates or very deep bowls or with short rims either made of limestone or marble (Özdoğan and Özdoğan 1993: 91-92, fig. 1). The plain ones were made of always light- whereas the decorated ones were of dark colored stones, usually outer and inner surfaces well polished and displayed the high quality of craftsmanship (Fig. 61). Although they have been found in small numbers in the earliest stages, their number increased during the third stage, and the majority were in the last stage. As a general observation, there had been a striking development in time and the presence of the majority in the Eastern sector of the settlement implied their speciality<sup>58</sup>. Regarding to morphology and raw material similarities are found in many PPN sites like Hallan Çemi (Rosenberg and Davis 1992, plain ones figs. 7.1-5, 9 decorated ones figs. 8.1, 13), Demirköy (Rosenberg and Peasnell 1998: fig. 3.2), Cafer (Cauvin and Aurenche 1986, fancy ones figs. 6-7, rough one fig. 8), Beidha (Kirkbride 1966: 32-34, figs. 7.5, 8, 9, 11, 12), Nemrik 9 (Mazurowski 1992), Abu Hureyra (Moore 1975: fig. 5).

<sup>58</sup> Rosenberg has emphasized the status of owning valued possessions such as bowls and fancy pestles; their functions are not even known. What is interesting in this case is the time period: These were found in Hallan Çemi in a PPNA context, whereas at Çayönü most of the bowl fragments, especially the decorated ones and three of the four fancy pestles were from the last stage, the PPNB/PPNC. It is suggested here that these "special objects" had been kept for generations as heirlooms and then "broken intentionally" or "left in the abandoned building" or "buried in a pit" when their "specific role" had played out.

## CONCLUSION

There are many ongoing studies on the PPN, which is one of the earliest and most extensively investigated periods in the Near East. Investigations on this period in Anatolia, started in the 1960's, have played an important role in elucidating the PPN of SW and Central Anatolia.

Regarding the similarities in the PPN assemblage of SW Asia, settlements having different environmental settings and technological background, developed particular models. Settlements believed to be in the "periphery" also played specific and active roles in this period. Çayönü on the piedmont of the SE mountainous range in between the Euphrates and Tigris rivers; Hallan Çemi and Demirköy on tributaries of the Tigris; Cafer, Boytepe and Çınar in the mountainous area of the

Euphrates; and Nevalı Çori and Göbekli on the plateaus all bear witness to the high level of PPN culture developed in totally different environmental conditions. Excavations at Aşıklı, Musular, Can Hasan III, Çatalhöyük and Suberde in Central Anatolia have revealed still different models having similar attributes in this same period.

Contacts between Anatolian and the Middle Euphrates cultures is well demonstrated not only by the lithics (Caneva 1998:203-4), but also by a sudden increase of Mediterranean bivalves in the settlement (Bar-Yosef 1993).

The developing use of clay might be another indicator of this contact as was the special attention shown to the skulls as well as with subsequent changes in daily and spiritual life that would have attracted in the organization of the whole community.

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## The Urfa Region

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**KEYWORDS:** *Urfa, Nevalı Çori, Göbekli Tepe, Gürcütepe, Neolithic, Art, Cult, Cult Buildings.*

**ANAHTAR KELİMELEER:** *Urfa, Nevalı Çori, Göbekli Tepe, Gürcütepe, Neolitik, Sanat, Kült, Kutsal Yapı.*

### ÖZET

Yakın Doğu’da Neolitik kültürlerin oluşum süreci ile ilgili olarak, Yukarı Mezopotamya olarak adlandırılan, Fırat ile Dicle nehirlerinin Toros Dağlık bölgesinin eşiği boyunca uzanan kesimleri, yakın zamana kadar göz ardı edilmişti. Aynı durum İstanbul ve Şikago Üniversiteleri Güneydoğu Anadolu Karma Projesi tarafından 1960’lı yıllarda elde edilen sonuçlara karşın, Urfa bölgesi için de söz konusuydu; “Neolitik oluşumun çekirdek bölgesi” Doğu Akdeniz-Levant ile sınırlı tutulmuş, Urfa ve yöresi bu oluşumun taşrası olarak görülmüştü. Göbekli Tepe, Gürcütepe ile Nevalı Çori kazıları, daha önceleri yalnızca Çayönü ile bilinen Güneydoğu Anadolu Neolitik kültürlerine yeni bir boyut kazandırmış, bu kültürlerin sanıldığından çok daha karmaşık bir yapıya sahip olduklarını göstermiştir. Bu yerleşmelerdeki kazılar avcı-toplayıcı bir yaşamdan besin üretimine dayalı yerleşik düzene geçiş sürecinde sınıflanmış bir toplumsal dokunun bulunduğunu da ortaya koymuştur. Bu döneme tarihlenen kült yapılarının içindeki, üzerleri kabartma heykellerle bezeli anıtsal sütunlar, MÖ 9. bin yılda, Yakın Doğu’daki İlk Neolitik kültürlerin erişmiş olduğu doruk noktasını simgelemektedir. Epi-Paleolitik döneme ait Biris Mezarlığı gibi kazı yerlerinin de gösterdiği gibi, bu kültürün kökleri Bereketli Hilalin kuzeyinde, dağların eşik bölgesinin içindedir.

### ABSTRACT

The role of Upper Mesopotamia, the region of the Taurus piedmont around Euphrates and Tigris, in the process of the Neolithization in the Near East has been underestimated for a long time. Even in spite of the result obtained by Istanbul and Chicago Universities Joint Prehistoric Research Project in Southeastern Anatolia since the sixties the region around Urfa too had always been regarded as the periphery of the so-called nucleus zone in the Levant. The excavations at Göbekli Tepe, Gürcütepe and Nevalı Çori have changed and precised the complex picture of the Upper Mesopotamian Early Neolithic, which was known mainly from Çayönü. These settlements represent the change from the stage of hunting and gathering to the formation of permanent agricultural villages, which show clearly differentiated societies. Cult building with monumental carved pillars and sculpture characterize this Early Neolithic of the 9th millenium BC. as the first acme in the development of human history in the Near East. The roots of this culture seem to have been in the northern fringes of the fertile crescent itself, as can be assumed from epipaleolithic sites like Biris Mezarlığı.

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## GEOGRAPHICAL SETTING

Due to its significant geographical location and with its varied landscapes, the region of the Urfa Province in Southeastern Turkey has been the meeting point of routes that connected Syro-Mesopotamian lowlands with the Anatolian highlands. The region is bounded on the north and west by the upper course of the Middle Euphrates, which -after cutting through the extremity of the Eastern Taurus range from Kömürhan near Malatya to Gerger- flows in a wide arc across the foothills of the plateau<sup>1</sup>. Known as the "Steppes of the South Taurus," or the "Southeastern Anatolian Plateau," the land here falls away to the south, constituting a transition zone to semi-arid Syro-Mesopotamian plain<sup>2</sup>. Situated at the northern fringes of the Arabian plateau, thus forming a part of Upper Mesopotamia<sup>3</sup>, the region is drained by the two rivers, the Tigris and the Euphrates, and their tributaries. The scenery of this tableland alternates between extensively vegetated inter-mountain plain and hilly areas of barren limestone, partially covered with layers of young volcanic basalt.

In this vast diverse environment, besides the extensive plains of Suruç, Urfa-Harran and of Viranşehir, the rather narrow alluvial bands along the Euphrates, mainly Samsat-Arapkantara-Lidar in the north and Halfeti-Birecik in the west, were the most favoured habitats of the ancient settlers. These plains are partially cut off from one another by high ranges such as the Arat Mountains along the Euphrates valley in the west and the volcanic massive Karacadağ soaring to 1957 m and forming the border with Diyarbakır Province. The Urfa-Harran plain is bordered on the north by the ranges of the 801 m high Tektek

Dağları, which meet and form a chain with the 817 m Susuz Dağları and the 750 m Şebeke Dağları further west<sup>4</sup>. The fertile farmland in the east is cut off by the 800 m high Germuş Dağları, which taper off eastward to Viranşehir in the south and in the west form a continuation of the deeply fissured Nemrut Dağları. To the south the open depression with 400 m drops to the semi-arid steppes of Northern Syria and the rather desert-like zone. Apart from the Euphrates and a few tributaries fed by springs, such as the Kantara and the Hortum Çay or İncesu, there are very few perennial streams in the Urfa region. There is the Direklisuyu northwest of Urfa and -of course- near Edene south of Kabahaydar, the Cülap Çayı, which bursts forth into a pool<sup>5</sup>. It flows southward across the Harran plain and converges with the Euphrates as the *Baliv* river in Syria. The Karakoyun stream which flows around the old city of Urfa on the north and east, is fed by 25 karstic springs. The *Skirtos* of antiquity and the *Dailân* of the ancient Syrians, it is one of the tributaries of the Cülap<sup>6</sup>. Springs and pools in the karstic limestone are characteristic of the region and prompted the earliest settlers to locate close by. The most famous, known in antiquity as *Kallirhoe*, are the two pools in Urfa that spring from the karst under the citadel rock and then flow through the city to join the Cülap -the *Belichos*. The tract around the 150 x 30 m pond so rich in fish, Halil-ur-rahman, and the smaller pond 50 x 30 m, Ayn-i-Seliha, were considered sacred from the earliest times onward and became entwined in legends like those of the city founder Nimrod<sup>7</sup>. It is no coincidence, therefore, that this spot on the "beautiful flowing [waters]" has been a favorite for settle-

ment since Early Neolithic times. Other spring-fed ponds, such as the Büyük and the Küçük Göl, 20 km northeast of Urfa and 2 km southwest of Bozova, obviously offered particularly advantageous environments for early settlements.

From the beginnings of the Holocene the southern piedmont of the Taurus presented a climatically superior habitat in which man found an environment ideal for a Neolithic way of life. The semi-arid climate is continental, marked by very hot, dry summers and relatively mild, wet winters. An average of over 480 mm precipitation per year is recorded for the Urfa region, where deviations between dry (323.9 mm) and very wet (786.9 mm) are not the rule<sup>8</sup>. The typical winter rains, which bring 92 % of the annual precipitation, make dry farming possible<sup>9</sup>. Pollen profiles -from Gölbaşı in the province of Adıyaman, from Bozova and from the *Baliv* area in Syria- indicate that the environment has also suffered at the hands of mankind, becoming less beneficial<sup>10</sup>.

During the Late Chalcolithic period and the Early Bronze Age extensive forestation has been attested; oak, elm, ash, cypress, juniper and olive were spread throughout the highlands and upland terraces. In the valleys the banks of the Euphrates were lined with woods of poplar, willow and tamarisk<sup>11</sup>. At that time, too, the wild fauna harmonious with the landscape was still plentiful. From the beginning of the Early Bronze Age, a period characterized by progressively increasing settlement with intensive agriculture and husbandry, clearing of the land thinned out the virgin

forests; the extent of open steppe increased and erosion was in evidence. A similar regression in forested areas since the Early Bronze Age has also been demonstrated in the Upper Euphrates<sup>12</sup>. The gradual change in vegetation that has led to today's landscape with steppe flora, open woods, and marshes in the Euphrates basin and around the spring-fed ponds, and only small clusters of forest on the elevations, must have begun in this period. The climatic change initiated around 13.000 BP would have improved the growing conditions for the wild grasses<sup>13</sup>, and thus provided ideal conditions for early cereal cultivation. The transitional zones between virgin forest and the steppe generated an increase in those species ideal for the hunt as well as those adaptable to domestication. There were wild sheep and goats, gazelles and aurochs or wild cattle in the dry grasslands of the steppe, and wild boars in the woods. Animals of the wide-open spaces, such as the red roe and fallow deer along with wide ranging wild goats, were to be found in areas bordering the higher forests<sup>14</sup>.

As in other areas of the northern "hilly flanks" of the Fertile Crescent, the land of the Urfa region, lying at the foot of the Taurus Mountains and watered by the Euphrates, offered a natural environment favorable not only to the Late Paleolithic hunter and gatherer, but also to the Neolithic way of life. A further advantage of this region was the abundance of raw materials needed for the production of tools; in this respect the rich resources of the Taurus range and the flint deposits exposed along the limestone foothills should

<sup>8</sup> For the climate diagram of Urfa see Godfrey 1942 (vol. 1): 212, 217, 400-419, Bengisu 1968: 71, Christiansen-Weniger 1970: 57 f., 183, fig. 20a, Sayın 1973: 34, Güldalı 1979: 20, and most recently Bağış 1989: 26-30.

<sup>9</sup> On the designation of the region's climate as dry (Köppen's B climate) see Christiansen-Weniger 1970: 57 and 177 with fig. 47.

<sup>10</sup> Van Zeist *et al.* 1968: 35-37, fig. 5 (Bozova).

<sup>11</sup> According to scientific investigations at Hassek, Lidar and Kurban Höyük. See Gregor in: Behm-Blancke 1992: 48 f.

<sup>12</sup> Wilcox 1974.

<sup>13</sup> Van Zeist *et al.* 1968, Van Zeist-Woldring 1980.

<sup>14</sup> Hillman 1996, Smith 1995: 50-67.

<sup>15</sup> On flint sources near Birecik and Bozova see Kökten 1952: 174 with map 1. Cf. Balkan-Athi 1994: 37. On sources along the Euphrates see Masch-Weiner 1992: 26 f., fig. 2.

<sup>1</sup> Ritter 1843: 689. The term Middle Euphrates was defined and accepted during the First Geography Congress in Ankara in 1941. Louis 1941. Cf. Güldalı 1979: 174, Godfrey 1942 (vol. 1): 169-171.

<sup>2</sup> Banse 1915: 264-267, Güldalı 1979: 172-176, Erol 1983: 157-159.

<sup>3</sup> For the concept of Upper Mesopotamia see Uhlig 1917: 47 f., Louis 1985: 206.

<sup>4</sup> Bengisu 1968, Tanışık 1974: 12 f., Erol 1983: 158 f., Louis 1985: 208 f.

<sup>5</sup> Bengisu 1968: 39-52, Sayın 1973: 32 f., Tanışık 1974: 13.

<sup>6</sup> Gabriel 1940: 277 f., fig. 202.

<sup>7</sup> Meyer 1905, Segall 1970, Sinclair 1990: 1-28, Honigmann 1994.

be noted<sup>15</sup>. Obsidian sources lay just across the mountain passes in the Eastern Taurus range<sup>16</sup>. Not least in importance for the exchange of raw material, technology and new ideas, was the geographical situation of the region on a point of intersection of the main Syro-Mesopotamian-Anatolian trade routes, such as the Euphrates crossings at Birecik-Belkis, Rumkale and Samsat-Samosata mentioned in the literature of later times<sup>17</sup>.

### SETTINGS OF STAGE

Many open-air sites of Early and Middle Paleolithic existed on this land at the foot of the Taurus; these have been known since İ.K. Kökten's surveys in the Urfa region<sup>18</sup>. It is therefore no surprise that J.E. Gautier had recovered the first handaxe in the area of Birecik as early as 1894<sup>19</sup>. More than 130 sites have been mapped along the Euphrates valley, in the area of the Atatürk Dam and reservoir with the adjoining valleys, as well as on the terrace landscape of the Bozova region<sup>20</sup>. The finds include not only handaxes of the Acheulian and Micoque types, but also transverse scrapers with La Quina retouch and Mousterian points, as well as tools of the Levalloisian technique. No evidence from the Late Paleolithic, however, has yet appeared anywhere in the region<sup>21</sup>.

An *Epipaleolithic* period, or "Mesolithic" such as that represented in the Kebarian (Period O) and Natufian (Period 1) of the Levant, as well

as materials reflecting the "Mesolithic" industries of Belbaşı, Beldibi and Öküzini in Antalya, also appear to be missing in the Province of Urfa<sup>22</sup>. In the Lycian coastal region the seemingly ever-present problematic gaps between the Late Paleolithic and the Ceramic Neolithic have now been closed, most particularly by the new stratigraphy of Öküzini<sup>23</sup>. Epipaleolithic industries are meanwhile appearing in other parts of Anatolia as well, such as those known as Epi-Gravettian along the Pontic coast<sup>24</sup>. It is very possible that the long-awaited analysis of the finds from the Epipaleolithic settlements near Bozova could also substantiate a continuous development into the Aceramic Neolithic within Upper Mesopotamia quite independent of that of the Levant. In the foothills of the Eastern Taurus M. Özdoğan has pointed out a concentration of Early Neolithic sites, which -like Hallan Çemi, Demirköy and Çayönü- have roots deep into the early Aceramic Neolithic (PPNA)<sup>25</sup>. On the south flanks of the Jebel Sinjar in the region of the upper Tigris, "the Eastern Wing of the Fertile Crescent," there is still another group demonstrating a development independent from that of the Levant, the Nemrikian<sup>26</sup>.

### The Bozova Sites

Two settlement mounds 2 km southwest of Bozova in the area of the two spring-fed ponds Küçük and Büyük Gölbaşı may help elucidate the Epipaleolithic development leading up to the emergence of the large Aceramic Neolithic settlements.

*Biris Mezarlığı*, southwest of Küçük Gölbaşı, is a low settlement mound of at least 120 x 25 m<sup>27</sup>. Two trial trenches opened by B. Howe in 1964, 8 x 5 and 8 x 2.3 m, revealed no building remains in cultural levels 0.4 and 1.8 m deep respectively. Although the majority of the 2.532 artifacts collected are of silex, M. Özdoğan reports that nearly 200 are of obsidian, demonstrating that even in this early period the route across the İncesu and then across the Euphrates at Şaşkan-Samsat to the nearest source of obsidian -in the East Taurus at a distance of 250 km- was already in use<sup>28</sup>. The predominantly flint blade industry displays a high proportion of microliths, and among them, geometric tools. Kebarian elements are obvious in the silex industry<sup>29</sup>.

*Söğüt Tarlası* lies 1 km to the north of Biris Mezarlığı<sup>30</sup>. The low mound, 2 - 3 m high, measures 50 x 90 m, and was also investigated by B. Howe in 1964. A 5 x 5-m sondage here revealed a 2.5 m deep stratigraphy. Beneath Late Chalcolithic strata of Uruk culture, a 1.5 m deposit revealing a silex industry comparable to that of Biris Mezarlığı was encountered. Only a few pieces of obsidian were found. Whether or not the Epipaleolithic occupation endured into the Aceramic Neolithic (PPNB) as certain projectile tips (pointed pieces) suggest, should be clear from the final evaluation of the finds.

In this area lying before the rises of the Taurus range, these two settlement sites today represent the only definite proof for an extended period of Epipaleolithic progress, development precedent to the earliest known Aceramic Neolithic settlements such as Nevalı Çori,

Göbekli Tepe and Gürcütepe II. Further evidence for this previously evasive Epipaleolithic (14.000 - 10.200 BC) consists of microlithic tools discovered on the virgin soil at Nevalı Çori<sup>31</sup>. Among these there is one artifact of obsidian, which -like those of Biris Mezarlığı- demonstrates contact with the Taurus region during the Kebarian. The finds in hand, as well as the pre-Neolithic settlements in the eastern part of Upper Mesopotamia and in Sinjar, would postulate, notwithstanding certain local traits and specific characteristics, independent Early Neolithic development throughout this large cultural area. Interpreting it as a derivative of a "nuclear zone" located in the Palestinian-Levant, as others including J. Cauvin in particular, have done, is no longer acceptable<sup>32</sup>. Cauvin would like to see the Neolithization of the Taurus -and the Upper Mesopotamian region lying before it- as a *néolithisation secondaire*, the result of influence which passed northward through a "Levantine Corridor" along the Middle Euphrates to reach as far as the highlands of Anatolia<sup>33</sup>.

### THE NEOLITHIC

None of the excavations in the Urfa region has yet unveiled any settlements that would correspond to Çayönü Sub-phase 1, Demirköy, or the comparable phase of the round buildings at Hallan Çemi (PPNA)<sup>34</sup>. All the settlements explored to date should, to the best of our knowledge, be contemporary with the Palestinian sites defined as Aceramic Neolithic B (PPNB) at the earliest, even though tool types belonging to the PPNA do appear in the deepest strata<sup>35</sup>.

<sup>16</sup> Cauvin, M.-C. 1991, Cauvin M.-C. 1996. A map of the obsidian deposits is given in Schmidt 1996a: 18, fig. 7.

<sup>17</sup> Davidovic 1989: 3, Gawlikowski 1996: 123-128.

<sup>18</sup> Summarized in Günay-Whallon Jr., 97 f.

<sup>19</sup> Chantre 1898: 131 f., fig. 100. For sites in the Birecik area see Harmankaya and Tanındı 1996.

<sup>20</sup> Özdoğan 1997: pp. 163, 180, 185, 187, 189, 191, pl. 11. The Paleolithic finds of the Bozova region will be published by K. Schmidt. For a catalogue of sites see Harmankaya and Tanındı 1996.

<sup>21</sup> M. Özdoğan offers a possible date for the site of Uluk Mevkii at Sam (Eskin) near the power station of the Atatürk Dam: Upper Paleolithic and probably Mesolithic: Özdoğan 1977: 185 f. Cf. Harmankaya and Tanındı 1996.

<sup>22</sup> Hours *et al.* 1994, Aurenche *et al.* 1987: 25 f.

<sup>23</sup> Albrecht 1994, Albrecht *et al.* 1992: 133-138.

<sup>24</sup> Özdoğan 1994: 33-35.

<sup>25</sup> Özdoğan 1994: 38-41., Özdoğan 1995: 13.

<sup>26</sup> Kozłowski 1994: 143-171, Watkins 1992: 64.

<sup>27</sup> As the site is cut on its western side by a modern cemetery, it is not possible to estimate its actual dimensions: Çambel 1974: 372, Benedict 1980: 178-180 (U 51/1), Balkan-Atlı 1994: pp. 49, 99f., fig. 79: 1-3, Harmankaya and Tanındı 1996.

<sup>28</sup> Özdoğan 1994: 43.

<sup>29</sup> The publication is being prepared by B. Howe.

<sup>30</sup> Çambel 1974: 372, Benedict 1980: pp. 136, 180 f. (U 51/2), Balkan-Atlı 1994: pp. 49, 99, Hours *et al.* 1994: 323, Harmankaya and Tanındı 1996.

<sup>31</sup> Schmidt 1994: 250 f., fig. 12.

<sup>32</sup> Cauvin 1988: 77, Cauvin 1989: 83-85. For a more detailed discussion see Özdoğan 1995: 12.

<sup>33</sup> Bar-Yosef 1989: 58.

<sup>34</sup> Çayönü: Özdoğan and Özdoğan 1989: 66-68. Hallan Çemi: Rosenberg 1994, Rosenberg 1995, Rosenberg and Davis 1992.

<sup>35</sup> Özdoğan and Özdoğan 1989: 68 f.

### Nevalı Çori

The prehistoric site of *Nevalı Çori* is in the Hilvan District of the Province of Şanlıurfa, on the lower reaches of Kantara (Gülüşağı) village, on either side of the Kantara Çay, a small perennial stream that cuts the site into an eastern and western section. It is located at an altitude of 490 m above sea level, some 3 km southward (37°35' N, 38°39' E) of the Euphrates<sup>36</sup>. Because part of the western settlement Nevalı Çori IV has been obliterated, probably due to erosion, in the eastern section Nevalı Çori I the Early Neolithic architecture is better preserved. This part of the settlement lay below the limestone rise of Yangintepe on the right bank of the Kantara Çay on a 90 x 40 m terrace bordered by dry ravines. Excavations of the University of Heidelberg in cooperation with the Archaeological Museum of Şanlıurfa took place in seven campaigns during the years of 1983, 1985-1987 and 1989-1991. Since 1992 it has been inundated under the lake behind the Atatürk Dam.

Nevalı Çori I consists of a 2-m deep deposit from five Early Neolithic building levels (I - V), only two of which were represented on the left bank. In addition to two larger structures, a total of 29 houses were recovered. The basic plan of the houses was that of a freestanding rectangle with consistent interior division. The walls were of limestone bonded by a thick mortar of mud. The width of the external walls varied from 0.30 to 0.60 m. A further distinction, also seen in the houses at Çayönü, is a direct sequence of the individual structures throughout Levels I - IV. When a new house was erected, the foundation platforms of the previous house were used again after demolition and leveling; thus the NNW/ SSO orientation of the structures were generally preserved. The only exception to this system is represented by House 1 in the most recent

building level. Most of the houses were lined up side by side with intervals between them. The narrow entrance facades faced SW or SE toward the Kantara valley.

#### Level I

Level I, directly on the virgin soil, revealed five houses (Houses 14, 21 A, the unexcavated House 27, 25, 22 B, 24); two of these were fully exposed (Fig. 1). *House 21 A* was 11.30 m long and 4.50 m wide; it demonstrates the typical division into two units separated from one another by a joint<sup>37</sup>. The smaller front unit, 3 x 4.40 m, consisted of two compartments, while the main unit at the back of 8.20 x 4.50 m was divided first into two tiers by a longitudinal partition, and then by two cross-walls into six rectangular compartments unequal in size. A variation on the later scheme of the Channel Buildings, under the flooring the structure had two longitudinal channels of 0.30 m width left open between the large stones of the foundation platform. These ran the length of the two tiers. Into the foundation platform six burials were found sunk beneath the clay flooring, two of which were inhumations in the fetal position. Five skulls and several long bones were recovered from a pit; directly under one skull, in the region of the palate, lay a long silex blade, a dagger that may have been the instrument of death.

*House 25* was oriented north-south. Despite disturbance from a higher building level, it was possible to trace the remains over a preserved length of 13.25 m and a width of 5.40 m. It displays a front room in the south oriented crosswise and a main section divided lengthwise into halves, and then separated into at least four rectangular compartments. There may well have been another crosswall at the back, bringing the number of divisions to six. Crosswise to the longitudinal axis only one channel was to be found. Along the west-

ern exterior, at a distance of ca. 1.10 m from the outer wall, was a series of three stone settings for posts to support the roof. Two burials had been sunk beneath the house floor; one skeleton, in contracted position, was missing the skull.

Several large pits had been dug into the virgin soil, presumably to extract mud for use in construction. Characteristic of the open areas were small pits lined with pebbles from the river, some cracked and broken open by heat. Forty-five such "roasting pits," known also at Cafer Höyük<sup>38</sup> and at Çayönü, where they were called "basal pits," were encountered in Level I alone. Oval or 'U'-shaped fire-pits, on the other hand, are represented by only two examples<sup>39</sup>.

#### Level II

Level II presents three houses of the two-tier channel type (Nos. 12, 21 B, 26) in the southeast, separated from the other structures in the west by a ravine running down the slope of Yangintepe (Fig. 2). *House 12*, with the platform and remnants of the walls preserved, measures 12 x 5.3 m. There is again a front room with the main portion of the house behind; how many rooms the latter was divided into is not clear. Six channels perpendicular to the long axis had been left open across the platform; in this particular instance each two crosswise channels were joined by a lengthwise channel. Along the longitudinal side walls eleven stone settings (7 and 4 preserved alternatively) were found sunk into the ground as sockets to support the posts carrying the roof construction. These were in line at a distance of ca. 1 m from the house walls.

*House 21 B* represents the immediate replacement of House 21 A. This bipartite house measured 12.70 x 4.64 m. and featured a front unit larger (4.46 x 4.70) than that of the Level I

structure and divided into four compartments. A post had been set at the center of the joint between the front unit and the main unit, which was divided into six chambers. The two tiers of back rooms were connected to one another by doorways. The two channels under the back unit ran crosswise as usual. Four burials were found sunk into the floor, including that of a 25-30 year-old woman interred on her right in the fetal position<sup>40</sup>.

The more meticulously constructed *House 26*, 18.20 x 6.20 m, is one of the best examples of this house type<sup>41</sup>. The 16.10 m long main unit consisted of eight chambers and was closed off from the front unit (now largely destroyed) by a joint. The exterior walls are 0.50 m thick, the interior 0.40. The five building phases of this house demonstrate a particularly clear sequence of its construction. The foundation platform consists of six strips built of large blocks. The thirty-centimeter wide intervals left within the platform were covered with stone slabs to form channels under the floor. The exterior walls, as well as the interior partitions, were then erected upon the platform. The floor was leveled with a layer of rubble and then covered with a thick coat of plaster which continued up the interior of the walls and was applied to the exterior as well. The plastering of the exterior walls, up to 10 cm thick in places, was applied so as to leave the ends of the five channels under the floor open, thus allowing ventilation and cooling or drainage of the structure. Several stone settings to hold posts supporting the overhanging roof were again encountered.

Adjoining at the northwest are curving walls (RH 2), the function of which is unclear; they might have limited the area from the ravine plunging steeply downhill. More houses existed here (H 22), divided from the slope above by a NW-SE wall. On the upper settlement ter-

<sup>36</sup> Gebel 1984: 240 (nos. 3 and 7), Yakar 1991: 65-68, Yakar 1994: 13-21, Hours *et al.* 1994: 259, Harmankaya *et al.* 1997. For the excavations see Hauptmann 1988, 1992, 1993, 1997 and Hauptmann 1999 (*in press*).

<sup>37</sup> Hauptmann 1992: 20, fig. 13.

<sup>38</sup> Molist's *Röstbetten* or *cuvette creusée*: Molist 1985: 38 f.

<sup>39</sup> Molist's *fosse-foyer*: Molist 1985: 39.

<sup>40</sup> Hauptmann 1993: 57, fig. 18.

<sup>41</sup> Hauptmann 1992: 22, fig. 14.



race House 23 with a N-S orientation has been recovered. The Cult Building II (H 13 B) in the northwestern part of the settlement terrace was set apart from the other structures. In this level, too, a dozen "roasting pits" as well as two fire-pits were recorded.

### Level III

The development and distribution of structures within the settlement is best seen in *Level III A* (Fig. 3). In the southeastern section there are four houses in a row, nearly parallel to one another, all facing the valley (H 3, 2, 6, 7). Set apart from these, there are other buildings of mixed orientation and construction (Buildings 10, 16, 15). As in Level II, this area is again cut off from the slope by an enclosure wall that joins the Cult Building at the northwestern end.

*House 3* with the typical plan of the two-tier channel house is preserved to a length of 8.10 m and a width of 5.40 m. The original extent is not known because the southeast portion had been washed away by the course of an earlier stream bed. Under the floor are attested three channels and one burial.

*House 2* is the best-preserved example of a three-tier channel house<sup>42</sup>. The length preserved is 15.60 m, the width 6.15. The longitudinal division into three tiers was followed by a lateral division into halves, resulting in a front and a back half further divided into cells of unequal dimensions. In the northeastern half, two narrow lengthwise chambers (7 x 1.7 m) flanked a central compartment divided into two cells. In this unit, the rooms are joined by doorways 0.50 m wide. The southwestern half had obviously been divided into six chambers of equal dimension, though only the upper row of rooms was fully preserved. Seven channels run through the foundation platform. They are connected to gutters which encircle the house on the sides preserved.

Lined by two rows of upright limestone slabs and covered with slabs, it gives the impression of a bordering podium. Postholes for roof support were again in evidence along the sides of the house. Under the floor in the foundation platform were twelve burials containing skulls and long bones. In one, a skeleton on the right in fetal position, a large round stone has obviously been laid in position to represent the missing skull.

*House 6* is distinct from the other channel houses in both plan and furnishings<sup>43</sup>; it clearly functioned both as residence and workshop (atelier). The house, divided into two, probably originally had a front unit. Divisions within the main unit are irregular, evidently to create rooms of varying dimension and increase mobility. There are also two hearths and a carefully constructed stone "roasting pit". The inventory of finds from one room represents that of an atelier: a limestone mortar and pestle, a pounding stone and an antler shaft. Two cores and an antler hammer suggest the production of stone tools. In contrast to the usual examples of the channel buildings with regular ground plans and up to ten channels, this structure had only four channels. Remnants of burials were found at three locations within the platform.

It would seem that this area, even after the abandonment of *House 6*, remained a special purpose zone within the settlement. In two pits sunk from Level III B into separate rooms here, there was limestone waste, as well as several small sculptures and a pillar with a T'-capital, indicating that the area later became the workshop of a stone mason and sculptor.

*House 7*, 14.30 x 6 m, presents the same regular foundations as *House 2*: a platform of eleven rectangular strips interrupted by ten channels running under the floor<sup>44</sup>. The two-partite house consisted of a front unit with two rooms

house consisted of a front unit with two rooms perpendicular to the length of the house, and a main unit with three tiers, divided by cross-walls into nine chambers. Four burials consisted of groups of bones found in pits in the podium.

*House 10* represents a diversion from the standard house plan. This 'M'-shaped two-room house, 4.10 x 3.80 m, also faced the valley.

*House 16* lies directly in front of the terrace wall and differs from the general house orientation in its north-south alignment. Preserved to a length of 9 m and a width of 6.10, this structure illustrates the characteristic plan with a rectangular outline. Room division could not be made out. The foundation platform was cut through by four channels and protected by a gutter along the upper edge. The positions for six posts to support the roof were located at a distance of about one meter from the long wall.

*House 15* also varies from the typical plan in layout and orientation. This long narrow row of rooms, built above the older remains of *House 22*, seems to have had a direct connection with the cult complex (H 13) at the northwestern extremity of the settlement terrace. The number of "roasting pits" encountered receded again in this level; only nine were found in addition to four fire pits.

### Level III B

Level III B represents more recent building development within the phase; the free-standing houses were retained and new structures built only in the middle of the settlement (Fig. 3). These differ in plan and orientation from the buildings in the southeastern part. Stone clusters and several postholes which define a nearly round interior, must have belonged to a structure which might well have had wooden roofing. "Round House 1" was built over *House 10*, but demonstrates no relationship

whatever to it. This type of construction, however, is not comparable to the round houses of subphases 1-4 of Çayönü I or those of Hallan Çemi. It is represented also by *House 8* (only the northeastern corner of which is preserved), situated above the earlier Houses 15 and 16. With exterior walls noticeably thicker (0.85 m across) than those of the other houses, this presumably bipartite channel-house must have been one of the largest structures in Nevalı Çori. In the scant remnants alone, four channels are apparent.

### Level IV

Belonging to Level IV, but represented only by scattered remnants of walls, were several parallel structures in a row (Fig. 4). With these were found four "roasting pits". Only *House 4*, 8 m wide and preserved to a length of 12 m, is identifiable as a typical channel house<sup>45</sup>; the plan must have resembled that of *House 2* or *7* of Level III. Conspicuous, however, is the buttress-like feature along the walls of the northeastern rooms. Three cross-wise channels were inserted in the foundation platform. In the latter were found here remains of several burials as well.

### Level V

Level V reflects a break in the settlement sequence. *House 1* represents the only architectural evidence<sup>46</sup>. Although diverging from the normal orientation scheme, its orientation towards the east does reflect that of *House 8* in Level III B. In dimensions (10 x 6 m) as well as interior division, it differs from the typical channel-type house. The foundation platform was constructed on the same basic principles, but without any channels under the floor. One innovation is the bench along the exterior facade; the buttresses within the rooms had been foreshadowed by those in *House 4* of Level IV and *House 25* of Level I. Its division into a cross-wise front unit and a two-tiered main unit followed the old tradition. Several

<sup>42</sup> Hauptmann 1988: 101 f., pls. 3, 5, figs. 2-4, Hauptmann 1992: 24, figs. 16-17.

<sup>43</sup> Hauptmann 1992: 24, fig. 18, Hauptmann 1993: 39, fig. 2.

<sup>44</sup> Hauptmann 1988: 99f., pl. 6, Hauptmann 1993: 39-41, fig. 3: a-c.

<sup>45</sup> Hauptmann 1988: 100 f., pl. 4, figs. 3, 5.

<sup>46</sup> Hauptmann 1988: 102, fig. 1. Because of the room division and the banquettes, *House 1* has been likened to Buildings CM and CZ of Çayönü Sub-phase 5: Özdoğan 1989: 69, Bıçakçı 1998: 141 f., fig. 2.



The basic type of the channel-house with a smaller front unit and entrance and a larger, regularly divided main unit combined two functions: residence in the front unit and storage in small separate chambers kept cool and dry by the channels under the floor in the main unit. In addition to these residence-depots we have also an example of a house designed with more spacious rooms (H 6) to combine residence and work area. A great part of daily life would have been spent just outside the houses, as is clear most especially from the "roasting" and fire-pits found in the open areas. For reconstruction of the residence-depots two structural features are significant. From the fallen mud-bonded stone masonry, we can estimate that the superstructure had stood to a height of at least 2 m<sup>47</sup>. There is also evidence for openings in the walls for light and ventilation. The location of the postholes outside the long outer walls demonstrates that there was an overhanging roof construction dependent on external supports. Whether the roof, consisting of wood, rush and clay, was flat or gabled we have yet to learn (Fig. 6a-b). The clay house model from Çayönü would certainly suggest a flat roof<sup>48</sup> if we are willing to assume that the house models of such early times really did reflect architecture in miniature.

#### *Cult Buildings*

From Level II onward, a structure nearly square in plan stood at the northwestern end of the terrace. Its plan and its more elaborate construction and decor set it apart from the rectangular houses. Remnants of wall suggest that it may well have had a predecessor in Level I. The back wall of the building was set about three meters into the slope behind it.

*Cult Building II* (H 13 B) was nearly square in plan, 13.90 x 13.50 m, thus covering 188 m<sup>2</sup>

(Figs. 7, 9)<sup>49</sup>. The walls of the perimeter, with a maximum width of 0.90, were preserved in places up to 2.80 m. The interior was plastered and coated with a layer of white washed clay which bore traces of painting in black and red. A bench of quarry-stone bonded with clay encircled the interior. One meter deep, the bench was covered with large stone slabs set between 13 monolithic pillars with 'T'-capitals. The entrance was in the southwest; from here two steps led downward into the interior. The floor was of terrazzo, and we can assume that there had been two pillars in the center, as was the case of its successor, Cult Building III. The 2.30 m bench along the southeast wall is interrupted for a stretch of 1.85 m and set back, forming a niche out of sight of the entrance. A podium consisting of an orthostate fragment could only have been the pedestal for a cult statue. Several pieces of limestone sculpture were apparently buried into the bench and the back wall, originated from the predecessor of this cult building. In a later renovation, a rectangular podium was set upon the stone bench in the east corner with two pillars, one with a 'T', the other with a 'T'-capital<sup>50</sup>. The large sculpture of a bird was buried into the podium (Fig. 15).

The later *Cult Building III* (H 13 C) was set directly inside the still standing walls of its predecessor, so that the area was shrunk to 155 m<sup>2</sup> (Figs. 8, 9 b)<sup>51</sup>. The measurements were now 12.10 x 12.80 m. The perimeter walls were again encircled on the interior by a bench covered with stone slabs; as in its predecessor there were built-in pillars with 'T'-capitals: ten in the benches and two additional ones flanking the steps at the entrance. At the center of the room two pillars with relief decoration were placed so that the small niche in the northeast wall opposite was visible from the

were placed so that the small niche in the northeast wall opposite was visible from the entrance. In low relief on the wider faces of the pillars were two bent arms which joined hands under a ridge cut into the narrow face<sup>52</sup>.

The earlier terrazzo floor in the inner room continued in use, repaved. Again, in the walls there were scattered pieces of reused stone which may well have been spoil from the predecessor II (H 13 B). The limestone head with a snake (Fig. 10) had been built into the back wall of the niche. As a remnant from an earlier Cult Building, it appears to have shed its original magic and ritual spell onto this reconstruction as well.

On the slope above Cult Building III (H 13 C) lay the remains of a U-shaped structure erected directly on the bedrock. Its massive construction and eminent position would seem to indicate that it represented another structure belonging to the sacred district of the settlement.

Both monumental buildings II and III (H 13 B and H 13 C), can be interpreted as constructions for ritual ceremonies, not only due to their eminent location and extravagant construction, but most especially because of the monumental sculpture with which they were adorned. With their character as the cultic, hierarchic and economic pivot of the settlement, they might well be considered as forerunners of the early Mesopotamian temples<sup>53</sup>.

At Çayönü as well there are one-room structures, "special buildings" belonging to this

monumental class<sup>54</sup>. The central pillars in the "Flagstone building" of Sub-phase 4<sup>55</sup>, the menhir-like monoliths on the so-called Plaza<sup>56</sup>, the stone benches of the "Bench building" and the "Skull building" of Sub-phase 5<sup>57</sup>, as well as the striking floor in the "Terrazzo building" of Sub-phase 6<sup>58</sup>, are all basic architectural features also found in the buildings at Nevalı Çori. The "special buildings" at Çayönü must therefore also be included within the group of structures to be designated as the earliest exclusively sacral architecture in the Near East. Precedents can be cited in the round structures of Nemrik 9 and Qermez Dere, which displayed a special configuration with two pillars<sup>59</sup> suggesting ritual ceremony although otherwise retaining domestic function. More definite attributes distinguishing them as cult buildings, as for example the special layout of the floor at Hallan Çemi, are not forthcoming<sup>60</sup>.

#### *Sculptures and Reliefs*

The monumental sculpture is integrally related to the cult buildings<sup>61</sup>. Even if one considers the anthropomorphic pillars as supporting elements of a flat roofing, there remain 11 sculptures in soft limestone to vouch for the special significance of the buildings. With only one exception from the podium in House 3 (Fig. 13), all the sculptures were found in secondary context, quite properly "interred" in the later Cult Building II - III.

A head larger than life-size (h. 0.37 m) with jug

<sup>47</sup> The pillars are of a hard limestone that may well have come from Bedirdikmen Dağ some 4 km away: Marzolf 1994.

<sup>48</sup> Hauptmann 1999 (*in press*).

<sup>49</sup> Çambel and Braidwood 1983: 160-162, 166. Schirmer's "unusual structures": Schirmer 1983. See also Schirmer 1990: 378-385, Özdoğan and Özdoğan 1998.

<sup>50</sup> Schirmer 1983: 472-475, figs. 8-10. Because the south wall of the flagstone building is not preserved, it would be possible to reconstruct a more nearly square groundplan. For the latest dating see Bıçakçı 1998: 141, Özdoğan and Özdoğan 1998: 583 f.

<sup>51</sup> Çambel and Braidwood 1983: 162, Özdoğan and Özdoğan 1998: 586 f., figs. 1b - 2a, 7a.

<sup>52</sup> Schirmer 1983: 467-472, figs. 5-7, Bıçakçı 1998: 142, Özdoğan and Özdoğan 1998: 584. In this last source the earliest phase of Building BM 1c is reckoned to belong to Sub-phase 1.

<sup>53</sup> Schirmer 1983: 464-469, figs. 2-4. For dating see Bıçakçı 1998: 143.

<sup>54</sup> Kozłowski and Kempisty 1990: 352-358, figs. 4-6, Kozłowski 1992: 33, fig. 16, Kozłowski 1990: 45-53, fig. 15, Watkins 1990: 340 f., fig. 4.

<sup>55</sup> Rosenberg 1994: 124 f., figs. 7-11. See also Özdoğan and Özdoğan 1998: 585.

<sup>56</sup> For details see Hauptmann 1993: 57-67.

<sup>47</sup> Hauptmann 1988: 100 f.; Bıçakçı 1998: 140 f.

<sup>48</sup> Bıçakçı 1995: pls. 1, 6.

<sup>49</sup> For details see Hauptmann 1993: 42-48, figs. 4-8.

<sup>50</sup> Hauptmann 1993: 47 f., fig. 7.

<sup>51</sup> Hauptmann 1993: 48 f., figs. 9-16.

ears and the face broken away, preserves a snake curled up -as if into a bun- on the back of its bald head (Fig. 10). This must have belonged to a large cult statue that might have originally placed in the niche of Cult Building II (H 13 B)<sup>62</sup>.

A small torso with the head, arms and lower part broken away displays a collar-like ridge across the front, above which there is a nose-like projection that would look better completed with a bird's head than with that of a human (Fig. 11). The fully rendered back, on the other hand, looks human. It may have been a hybrid creature combining the attributes of man and bird.

One statuette has the shape of a bird with the head of a man with strongly stylized features (Fig. 12).

The front of a pillar displays a large, presumably female head apparently in the clutches of a bird's talons (Fig. 13). This motif is also known in sculpture from Göbekli Tepe.

Four sculpted fragments can be restored as a composition forming the upper part of a pillar decorated rather like a totem-pole (Fig. 14)<sup>63</sup>. Two symmetrical figures are represented crouching back to back. Their hair, obviously gathered into a net, falls over their shoulders; their rounded bellies and articulated sexual organs designate them as women. The theme is probably that of birth. The column was crowned by the figure of a bird that must have been perched upon one of the women's heads. The bird perched upon a human head may have represented the soul of a human or a connection between this world and the beyond.

Another pillar fragment portrays two birds

opposite one another. A vulture-like bird, also sculpted in the round, might have belonged to such a composite piece although the pegs on its tail suggest that it might even have been fastened to a wall of the Cult Building (Fig. 15). Neither is there any further interpretation yet in hand for the frog-like creature in high relief<sup>64</sup>.

A frieze in relief on a limestone basin (Fig. 16) depicts two human figures of different size with masque-like faces. Shown from the front, the figures are seemingly bald, but their swollen bellies indicate pregnancy. They frame a smaller round-bellied figure, the pointed head of which identifies it as a Euphrates tortoise. The raised arms and wide-spread legs suggest they are dancing, a motif possibly portrayed in a scene incised on a limestone plate (Fig. 17). Here three stylized figures with mouths wide open are portrayed in running flight. This scene so full of motion might also represent part of a hunting episode.

#### *Artifactual Assemblage*

In the lithic industry the arrowheads, with a count of 2,240, form the second largest group<sup>65</sup>. Among these it is the Byblos points which form the representative group most significant for synchronization with the north Syrian PPNB. Noteworthy among the variants are the oval points. Ugarit and Amuq 1/2 types typical of the LPPNB have not been recovered, indicating that habitation at Nevalı Çori had ceased before the end of the PPNB. At the other end of the scale, Helwan points (representative of the PPNA in the Levant) from Nevalı Çori demonstrate that settlement here had probably already begun before the PPNB period. The largest tool group is that of

the sickle blades, classed as harvesting implements on account of their gloss or "sicklesheen"<sup>66</sup>. Less well represented are scrapers, borers, blades and flakes. The rich sources of flint in the surroundings turned production within the settlement of Nevalı Çori into an industry supplying an enlarged area. This explains in part why the number of obsidian tools can be seen to drop, reaching a percentage of less than 0.01.

Among the ground stone artifacts, there is a total of 44 polished axes, all to be attributed to the two most recent levels, IV and V<sup>67</sup>. Maceheads appear from Level III onward. Balls of flint, often interpreted as bola or round sling-stones; decorated arrow-shaft straighteners as known from Cafer Höyük, Çayönü and Mureybet III; and mortars and bowls, as well as grinding-slabs of flint, are present in the inventory. Beads comprise another important Early Neolithic group of small finds; included here are "butterfly beads" of the Abu Hureyra type, which appear in all levels. Flat beads with multiple piercing-as at Çayönü-were popular, too, especially in Level III; a total of 99 were recovered<sup>68</sup>. Thirty-nine fragments of polished marble rings were found, all in the upper levels<sup>69</sup>. A winged bead of copper demonstrates the developed technology of the PPNB times; it was made not of beaten native copper, but from ore properly reduced. Thus the number of known sites in Anatolia with early copper metallurgy has increased<sup>70</sup>.

The *figurines* in stone are so far unique among Early Neolithic finds, which must reflect upon their relationship with the full-scale sculpture. The subjects are strikingly different from those of the clay figurines; they include human

heads with both naturalistic (Fig. 18) and strongly stylized faces. Their restriction to basic themes reflects that of the larger sculptures; one might assume, therefore, that they served as models for the latter. This impression is strengthened by several miniature pillars which repeat in all detail the same motifs as are seen in the anthropomorphic pillars of the Cult Building. One miniature mask recalls the large-scale stone masks of the PPNB in the Hebron region (Fig. 19)<sup>71</sup>. The occasional theriomorphic figurine was found as well; lions, panthers, wild boars, wild horses, bears and vultures were represented, often only the heads but sometimes the entire bodies. Among the some 700 clay figurines, around 670 were anthropomorphic; only 30 or so were zoomorphic<sup>72</sup>. The 179 male figurines were represented in a standing position, occasionally wearing a wrap (Fig. 21). Of the females, on the other hand, 159 were naked and seated. The mother and child motif is seen in two examples; pregnancy is indicated in eight. In workmanship, the miniature figures of clay do not approach the quality of the small stone sculptures. Significant is that the findspots of the clay figurines do not link them with the ritual ceremonies in the sacred precinct. They might well be interpreted as reflecting certain rites performed in daily life. As at other Early Neolithic sites, no pottery was found. Among the many sun-dried and baked objects of clay are, however, examples of a variety of forms, including at least 37 miniature vessels which obviously imitate limestone originals. In contrast to the inventories of Çayönü and Aşıklı, implements of bone, on the other hand, are surprisingly underrepresented.

#### *Subsistence*

<sup>62</sup> Cf. Hauptmann 1999.

<sup>63</sup> Thanks go to K. Schmidt for a preliminary reconstruction on the basis of casts: Schmidt 1997a: 74. Cf. Hauptmann 1993: 66, figs. 24-25.

<sup>64</sup> Hauptmann 1993: 67, fig. 26.

<sup>65</sup> Schmidt 1988, 1994, 1998, Schmidt - Beile-Bohn 1996. K. Schmidt is preparing "Die lithische Industrie" for the Nevalı Çori publications.

<sup>66</sup> Beile-Bohn 1997.

<sup>67</sup> In preparation for publication by M. Morsch. Meanwhile see Schmidt 1988: 178 f., fig. 17.

<sup>68</sup> Schmidt 1988: 175, fig. 16: 1-12.

<sup>69</sup> Schmidt 1988: 175 f., fig. 16: 16-20.

<sup>70</sup> Hauptmann *et al.* 1993: 543 f., Esin 1995: 62 f.

<sup>71</sup> Cauvin 1994: 154-155, pl. 7: 14-15.

<sup>72</sup> Morsch 1997, Hauptmann 1992: 31, fig. 27.

The botanical and zoological remains give us clues to the economy in practice at the time. Among cultivated plants<sup>73</sup>, Einkorn (*Triticum boeoticum*, *Triticum monococcum*) is the most frequent, followed by two-grained wheat (*Triticum dicoccoides*, *Triticum dicoccum*). Barley (*Hordeum distichon/spontaneum*) has only been attested in its wild form. Legumes are represented by lentils (*Lens culinaris*), peas (*Pisum sativum*), vetch, (*Vicia ervilia*) and other pulses (*Lathyrus "sativus"*) as well as broad beans (*Vicia faba*). The diet would have been supplemented by the gathering of pistachios, almonds and grapes, as well as other wild grasses and spelt (*Aegilops squarosa* or *speltoides*). Thus the inhabitants of Nevalı Çori had an already developed agriculture with cereals and legumes. The role of hunting in their diet, however, should not be underestimated, as is clear from the high percentage of hunting weapons present in the chipped stone inventory alone. Most common among the animal bones<sup>74</sup> are the gazelles (decreasing from 60% in Levels I/II to 40% in Levels IV/V): the true gazelle (*gazella gazella*) and the Persian gazelle (*gazella subgutturosa*). Aurochs (*bos primigenius*), wild boar (*sus scrofa*), red and fallow deer (*cervidae*), wild sheep (*ovis orientalis*) and goats (*capra aegagrus*), as well as wild donkey (*equus africanus* and *hemionus*) were also hunted. The early Holocene steppes were still a favorite haunt of the greater bustard (*otis tarda*), while other birds like the gray crane (*grus grus*) inhabited the watery environments of Büyük and Küçük Gölü and the meadows along the Euphrates. Sheep and goats were

definitely kept as domesticates; their percentage among all the animal bones increases from 10% in Levels I/II to 17% in Levels IV/V. As at other PPNB sites, the picture here illustrates interest in the hunt beginning to dwindle with an increase in husbandry<sup>75</sup>.

#### Dating

A comparison of the discoveries at Nevalı Çori with the architectural development at Çayönü would place the beginning of Nevalı Çori Level I within Çayönü Sub-phase 2 (the Grill-plan building sp); it would then have continued until the end of Çayönü Sub-phase 5 (the Cobble-paved building sp). The flint industry, which finds its best parallels in the north Syrian PPNB, does not preclude an origin of the settlement within the PPNA period. Nevalı Çori V, then, seems to have been deserted at some time in the LPPNB. Three radiocarbon samples giving dates between 8,400 and 8,100 BC for Levels I/II correspond well with the early dates for Çayönü, so that settlement at Nevalı Çori may well have begun within the PPNA (Mureybet IV A)<sup>76</sup>.

#### Göbekli Tepe

The settlement mound *Göbekli Tepe*, as the highest elevation on the 800 m Germeş range, stands above the Harran Plain spreading out to the south. Just 15 km northeast of Urfa and 2.5 km from Karaharabe (Örencik), it has been known since 1963 as an Aceramic Neolithic site, Tepe Ziyaret<sup>77</sup> (37°13' N, 38° 55' E). The large settlement mound 300 m in diameter is surrounded by bare flat-topped limestone

ridges. Springs are accessible to the south at the foot of the ridge. Excavations of the German Archaeological Institute in Istanbul and the Şanlıurfa Archaeological Museum have been in progress since 1995<sup>78</sup>.

In Neolithic times the surrounding rocky plateau served as a quarry, as many structures cut into the rock (some of them round), now show. At the site of one quarrying operation lie two pillars with 'T'-capitals, one of which is megalithic: 6.7 m long and nearly 3 m across at the top. Probably intended to accompany it is an unfinished base 3 x 3 m.

On the western plateau a round structure was sunk into the bedrock<sup>79</sup>. On the polished floor of the interior there are two podiums with recesses for pillars; a low bench runs around the circumference. North of this construction lie two cistern-like oval depressions two meters deep; steps lead down into one (Fig. 32).

On a plane towards the south of the mound, two general building levels have been encountered so far. In the most recent there was a structure with six rectangular rooms, the "Doppelpfeilergebäude," of a type not yet recognizable. The walls, still standing to the height of a meter, were constructed of small stones; the floors were formed of terrazzo-like layers. In several rooms there were pairs of small pillars.

In the lower level there appeared a large complex of a size and plan never before encountered, encompassing several monolithic architectural features. One room is accentuated by two central pillars, 3.1 m high, with 'T'-capitals. In a later phase these were incorporated into a curving wall, diminishing the size of the room. Both pillars were framed by a bench of stone slabs. Three of the total of five pillars boasted

relief decoration. Pillar 1 is decorated with a "tapestry" of interwoven snakes and scattered individual snakes in low relief<sup>80</sup>; depicted below is a ram (Fig. 34). On one narrow face of Pillar 2 there is a bucranium; on one of the wide faces, three animals arranged one above the other: a bovine, a canine and a bird possibly representing a crane (Fig. 22)<sup>81</sup>. Another pillar (Fig. 30), not yet fully exposed, shows the relief of a fox in the same style like pillar 2 and probably being the part of a similar narrative scene. The "Schlangenfleilergebäude" of Göbekli Tepe and the cult building of Nevalı Çori are very much alike both in monumentality and in the placement of pillars.

On top of the southeastern hill yet another big construction, measuring 6.5 x 4.4 m, was recovered. Even though the excavation of this structure has not yet been completed, the northern wall of room 2 was found to be standing to the height of 2 m, up to the level of its ceiling construction. Here, on the upper course of the wall, sockets of the horizontal beams that must have supported the roof were still detectable (Fig. 23). The 4 T-shaped pillars were evidently the supports for the wooden beams or stone-slabs of the roof. The upper part of the two T-shaped pillars that are in the eastern part, are adorned with lions in attacking position shown in low relief (Fig. 24). A stone bench was installed between Pillar 2 and the northeast corner of the room. This "Löwenpfeilergebäude" reportedly also has a terrazzo floor.

Many pieces of sculpture came to light, both from the rooms and among the surface material, so that the sculptural inventory known from Nevalı Çori has been complemented and enlarged (Fig. 25-31, 33-35). The form of the 'T'-capitals is common to both sites. Whereas

<sup>73</sup> In preparation for publication by R. Pasternak.

<sup>74</sup> In preparation for publication by A. von den Driesch.

<sup>75</sup> Summarized in Smith 1995: 50-67.

<sup>76</sup> We thank B. Kromer of the Institut für Umweltphysik der Universität Heidelberg for the following dates.

Level I/II	Hd-16783-769: 9212 ± 76 bp	8085-8340 cal BC*
	Hd-16782-351: 9243 ± 55 bp	8095-8345 cal BC
	Hd-16781-835: 9261 ± 181 bp	8080-8470 cal BC
Pit 277	Hd-16784-768: 9882 ± 224	8950-9775 cal BC

\*All four dates are calibrated by B. Kromer with CALIB 3 (Stuiver and Reimer 1993). 1s, Method A.

<sup>77</sup> Site V 52/1 in Benedict 1980. Benedict 1980: pp. 179, 181 f., Balkan-Athl 1994: 98 f., Hours *et al.* 1994: 144, Harmankaya *et al.* 1992.

<sup>78</sup> Field direction under K. Schmidt and A. Misir through 1996, since 1997 under E. Bucak. See Schmidt 1997a and 1997b, Beile-Bohn *et al.* 1998, Schmidt 1999, and annual reports: Jahresbericht 1995, 1996 and 1997.

<sup>79</sup> On the grounds of layout and monumental size, Schmidt compares it to the Cult Building of Level III at Nevalı Çori. See Beile-Bohn *et al.* 1998, Jahresbericht 1995: 606, fig. 3.

<sup>80</sup> Jahresbericht 1996: 552 f., figs. 2.

<sup>81</sup> Schmidt 1997b: fig. 1, Jahresbericht 1997 (*in press*).

in Nevalı Çori they are strongly stylized but obviously anthropomorphic representations, at Göbekli Tepe they form a background for animal reliefs. Only the ridge cutting across the narrow faces is common to both sites. Among the Göbekli Tepe sculptures one pillar is crowned by an animal, sculptured in the round: a lion or perhaps, a bear. Between its paws it holds what is quite obviously a human head (Fig. 25).

Large-scale sculpture<sup>82</sup> includes the head of a predacious beast and a human head in the clutches of a bird. The latter resembles the Nevalı Çori depiction of a woman's head with a bird (Fig. 13). Conspicuous among the anthropomorphic representations -generally roughly stylized- are the ithyphallic male figures (Fig. 26, 33) that seem to characterize the "Nevalı Çori Culture"<sup>83</sup>. One relief presented as a face might better be taken as a phallus<sup>84</sup>.

The motif of a female is found only in a drawing carved into a stone slab on the floor of the *Löwenpfeilerggebäude*. The naked woman is depicted in a sitting position with straddled legs, obviously representing a sexual scene (Fig. 35). Schmidt sees similarities to figures known as "djenoun" in the rock art of North Africa<sup>84a</sup>.

Portrayed from above in high relief are wild animals resembling reptiles; their bared fangs, however, suggest rather that they be interpreted as panthers or lions (Fig. 27, 29, 31)<sup>85</sup>.

A dating of the architectural remains is first of all possible through the close cultural ties with nearby Nevalı Çori. The flint industry, with many arrowheads of the Byblos type as known at Nevalı Çori as well, confirms assignation of the site to the early and middle PPNB (EPPNB and MPPNB). The existence of Nemrik, Helwan and Aswad points, however,

demonstrates that settlement here began in a horizon earlier than the PPNB period<sup>86</sup>. The great wealth of bipolar, naviform and tabular cores underscores the importance of the site as a production center for flint tools. Two radiocarbon samples from the "Schlangenpfeilerggebäude", which belong to an earlier phase than the "Löwenpfeilerggebäude" are presenting dates around 9.200 BP, confirming the archaeological assignation to EPPNB.

The subsistence of the inhabitants was mainly dependent on hunting and gathering. Indeed, investigations so far have recovered no proof of agriculture. Among the botanical remains only the wild species of cereal grains native to Karacadağ have been identified<sup>87</sup>.

The site of Göbekli Tepe being located in between the steppic grasslands of the Harran plain on its south, and the open-forest land by the southern foothills of the Taurus range, had an access to large populations of a great variety of wild animals. The most dominant species among the game animals is gazelle, which is followed by aurochs (*bos primigenius*), boar (*sus scrofa*), wild goat (*ovis orientalis* / *ovis vignei*), onager, and still in lesser amounts red deer (*cervus elaphus*) and fox. On the other hand in Gürcütepe, aurochs is more common than the gazelle and the wild boar, which are followed by onager. It seems that for the farmers of Gürcütepe, hunting is complementary to their subsistence, as they already possessed domestic ovis-capra.

### Gürcütepe

The site of Gürcütepe consists of six flat mounds that rise only minimally above the alluvial plain of Harran near Gürcütepe Köyü, some 4 km southeast of Urfa. Four of these mounds (Gürcütepe I - IV) form a chain of early neolithic sites running east-west along

the banks of the Sirrin and Karakoyun Deresi fed by the karstic springs in Urfa.

The largest of the four is Gürcütepe II, about 8 m high and 200 m in diameter, disturbed on the summit by a waterworks facility<sup>88</sup>. Joint excavations of the German Archaeological Institute and the Şanlıurfa Archaeological Museum began in 1995<sup>89</sup>, concentrating on the north slope of the mound. A cultural deposit of more than 4 m has thus far revealed two occupation levels with a total of six rectangular houses, characteristically of pisé on stone foundations. Houses 1, 3, 4 and 5 belong to the more recent level, Houses 2, 6 and 7 to the earlier. The two houses 5 and 6 display an interior arrangement comparable to one of the structures known at Jarmo. House 3, with exterior walls 1.4 m wide and stone slabs set like orthostates, reminds one of the "special building" at Çayönü. Fireplaces were located in the open areas.

On the basis of lithics, both phases correspond to Çayönü Sub-phase 6 (the Large-room buildings sp) and possibly part of 5 (the Cell-plan buildings sp), and are therefore to be ascribed to a late phase of PPNB. Most conspicuous are Çayönü-type implements of obsidian and flint. Among the Byblos type arrowheads, a new variant of the "Palmyra point" could be distinguished<sup>90</sup>. An outstanding find was a 33 cm long "harvesting knife" found above House 6. It was a composite tool with eight flint blades set into bitumen. Among the other small finds were many ground stone implements and vessels of polished stone.

### Other Neolithic Sites in Urfa Region

Apart from the excavated sites, there are many

other Aceramic Neolithic sites in the Urfa region, indicating a relatively dense population for PPNB times. On the basis of undoubtedly PPN lithic artifacts, Lidar Höyük -one of the Early Neolithic mounds in the Euphrates valley, like Hayaz and Gritille- should be included in this group. Within the Harran Plain, the huge settlement mound "Yeni Mahalle Mevkii" situated above the sacred lakes -directly under the old city of Urfa- must have held a central position. In the slope opposite the former St. John the Baptist basilica a 1.5 m layer of cultural deposit that can be dated to the PPNB on the basis of the flint tools has been discovered; here there are segments of wall and layer upon layer of terrazzo floors<sup>91</sup>. Early Neolithic sites have also been attested in the region stretching away towards Karadağ as well as in the plain watered by the Cem and Hatun Çay. Worthy of mention among the latter is Garoz Tepe west of Hilvan, where PPNB Byblos points and sickle blades have been found<sup>92</sup>.

### CONCLUSIVE REMARKS

At none of the sites investigated has it been possible to discover a direct link from the Aceramic into phases of the Ceramic (Pottery) Neolithic as was possible in Sub-phase 7 at Çayönü. The sites of Nevalı Çori and Göbekli Tepe had even been deserted before the end of the PPNB. Gürcütepe in the Harran Plain illustrates yet another disposition. Gürcütepe II ends with a phase parallel to Çayönü Sub-phase 6, while the neighboring mound Gürcütepe I bears evidence of the earliest phase of the Pottery Neolithic and thus offers the long-sought connection, as does Çayönü<sup>93</sup>.

<sup>82</sup> Schmidt 1997a: figs. 4-6, Schmidt 1997b: fig. 1: a-c, Schmidt 1999: figs. 7, 9.11, Jahresbericht 1996: figs. 3-4.

<sup>83</sup> Schmidt 1997b: fig. 1c, Schmidt 1999: figs. 7.

<sup>84</sup> Schmidt 1997b: fig. 1.

<sup>84a</sup> Schmidt 1999: 166 f. fig. 19.

<sup>85</sup> Schmidt 1997a: figs. 4-5, Jahresbericht 1995: fig. 2.

<sup>86</sup> This is the opinion of K. Schmidt.

<sup>87</sup> Information from R. Neef (Berlin). For archaeozoological studies see: Von den Driesch - Peters (*in press*).

<sup>88</sup> This is possibly identical with Benedict's site V 52/4: Benedict 1980: 179. Thanks go to H.T. Wright for his reference to the site. See Gerber 1996, Harmankaya *et al.* 1997.

<sup>89</sup> Field direction under K. Schmidt. Preliminary reports in Schmidt 1995, 9, Schmidt 1996b: 2 f., Schmidt 1997a: 75, Schmidt and Beile-Bohn 1996: 9-11, Beile-Bohn *et al.* 1996, Beile-Bohn *et al.* 1998, Schmidt 1998, as well as in: Jahresbericht 1995, 1996 and 1997.

<sup>90</sup> Schmidt and Beile-Bohn 1996.

<sup>91</sup> Information from B. Çelik.

<sup>92</sup> Lidar surface survey of 1979: no. 126.

<sup>93</sup> Gerber 1996.

<sup>94</sup> Roodenberg *et al.* 1984.

<sup>95</sup> Stein 1992.



The largely pale wares recall the pottery from Kumartepe<sup>94</sup> and Sürük Mevkii<sup>95</sup>.

As early as the Early Neolithic, Upper Mesopotamia in the Southern Taurus represents a densely inhabited area with settlements in which societies functioning on different economic bases were living. Göbekli Tepe and Nevalı Çori, with their developed organization of the settlement into separate areas for tool production, sculpture and sanctuaries of perhaps supra-regional significance, represent a unique model of Early Neolithic culture. They clearly demonstrate steps developmental to a central organization in which the trade or barter of an elite class was restricted to sites with cult facilities. As is the case with Çayönü,

these sites can be regarded as having developed within their own mold. The Nevalı Çori Culture<sup>96</sup> had no direct forerunner in Upper Mesopotamia. It is the evidence of the round buildings in Nemrik and Hallan Çemi which provide the first hints -through their furnishing and the finds of small stone sculpture of ritual purpose<sup>97</sup>- that local Proto-Neolithic roots may yet be expected in the Urfa region itself. An ancestry for the tradition of Early Neolithic sculpture (which need not blush when compared with the art of the Franco-Cantabrian cave painting) does not seem to have existed in the Mureybet tradition<sup>98</sup>. Places like Gürücütepe and sites in the Euphrates valley, on the other hand, demonstrate a settlement type which -because of its

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<sup>96</sup> Schmidt's "Nevalıçorien": Schmidt 1997a: 78.

<sup>97</sup> Kozłowski 1990: 155-161, figs. 64-68, Kozłowski 1997, Rosenberg and Davis 1992: 5, fig. 9: 1, Rosenberg 1994: 127, fig. 12: 1-2.

<sup>98</sup> Most recently mentioned in Cauvin 1998: 212.

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## The Pre-Pottery Site of Cafer Höyük

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KEYWORDS: Cafer Höyük, East Anatolia, Taurus, PPNB, Neolithic.

ANAHTAR KELİMELEER: Cafer Höyük, Doğu Anadolu, Toroslar, Çanak Çömleksiz Neolitik Dönem, Neolitik.

### ÖZET

Cafer Höyük doğu Torosların eteklerinde, Fırat nehrinin sağ yakasında deniz seviyesinden 750 m yükseklikte kurulmuş bir çanak çömleksiz neolitik yerleşmesidir. Bugün Karakaya Baraj suları altında bulunan höyükte kurtarma kazıları J. Cauvin ve O. Aurenche başkanlığında 1979-1986 yılları arasında yapılmıştır.

Yerleşmenin stratigrafisi 6 m kalınlık oluşturan 13 yaşam tabakasından oluşmaktadır. Yerleşim süreklilik göstermesine karşın mimari ve buluntu evrimi açısından 3 evreye ayrılmıştır: İlk evre (XIII-IX tabakaları), orta evre (VIII-V tabakaları) ve son evre (IV-I tabakaları).

İlk evre mimarisi (XII. ve X. tabakalar) uzun odalı, odalar arası geçişin odanın uzun duvarından yapıldığı dörtgen bir mimari sergilemektedir. Duvarlar taş temel üzerine kerpiçten yapılmıştır. XIII., XI. ve IX. tabakalar ocakların bulunduğu dış alanlar sergilemektedir. Diğer bir deyişle her evin kullanım süreci sonunda ev yıkılıp düzlenmekte, ve alan avlu niteliği almaktadır. Bu evrede iki iskelet bulunmuştur: bir büyük ve bir küçük iskelet. İskeletler tüm olmalarına karşın kafatasları alınmıştır. Her iki gömütte ev dışındadır. İlk evrenin yontma taş endüstrisinde hammadde olarak çakmaktaşı yoğunudur, ancak X. tabakadan itibaren obsidien çakmaktaşı oranla daha yoğun olarak kullanılmıştır. Baskı tekniği ve bu teknikle elde edilmiş dilgicikler gözlenmektedir. Bu evrede mikrolit aletler yoğunluktadır. Kazıyıcılar, orak dilgiler ve kalemler yaygın alet tipleridir. Okuçları az, Çayönü aletleri ise hiç yoktur. Diğer buluntular kemik iğneler, cilalı taş baltalar, cilalı bir taş kap parçası, çeşitli öğütme taşları, kuş kemiğinden boncuklar içermektedir. Bu evre 9000 BP'nin son yüzyıllarına tarihlenmektedir.

Orta evre hücre yapılı bir mimari sergilemektedir. Taş temel üzerine kalıp kerpiçle yapılmış evler altı ufak katmanlı odalar içermektedir. Bunlar büyük olasılıkla bir üst yapıyı taşımaktadırlar (VIII. ve VI. tabakalar) VII. ve V.

tabakalar ise ocak ve fırınların bulunduğu dış mekânlar durumundadırlar. Yontma taş endüstrisinde çift vurma düzlemli ve naviform çekirdekler ve ilk Çayönü aletler görülmekte, çakmaktaşı ve mikrolitler azalmaktadır. Byblos okuçları ve kazıyıcıların oranları değişmemekte, ancak orak-dilgiler ve kalemlerde yüksek bir azalma gözlenmektedir. Kemik iğneler ve bızlar, çeşitli cilalı taş kaplar, figürinler, mermer bilezikler diğer buluntuları oluşturmaktadır. Bu evre 9000-8500 BP'ye tarihlenmektedir.

Son evre (IV-I. tabakalar) daha büyük, farklı planları olan çok odalı bir mimariye sahiptir. Farklı boyut ve sayıda odaları olan yapılar zamandaş olarak görülmektedir. Teknik olarak taş sadece duvar altlarında değil tüm yapının subasmanını oluşturmaktadır. Bu evreye ait tek gömüt ise bir oda içinde bulunmuştur. Erkek bir çocuğa ait iskelet beyaz kireçle kaplanmıştır. Yontma taş endüstrisinde baskı ve doğrudan vurma tekniği devam etmektedir ve obisidien yoğunluktadır. Mikrolitler azalmalarına rağmen devam etmektedirler, okuçlarının ve kazıyıcıların oranları aynı kalmakta, Çayönü aletlerinin sayıları ise artmaktadır. Orak-dilgilerin sayısı ise azalmaya devam etmektedir. Kemik endüstrisi daha zengin çeşitler sergilemektedir: İğneler, bızlar, kesikler, kancalar ve çeşitli kesilmiş nesneler. Cilalı nesnelerin yanı sıra bezekli bileme taşları, çeşitli taş ve mermer bilezikler, çeşitli boncuklar ve bir kuş figürini bu evrenin buluntuları arasındadır. Bu evre tarihlenmesi kesin olmamakla birlikte 8500 BP'nin kesintisiz devamı olarak yorumlanmaktadır.

Cafer Höyük'ün ekonomisi tarıma ve avcılığa dayanmaktadır. Einkorn ve emmer buğdayları ve mercimek köyün ilk kuruluşundan beri ekilmektedir. Son evrede sebzeler azalırken arpa ortaya çıkmaktadır. Avcılık stratejilerinde iki evre görülüyor: XIII.-VII. tabakalarını kapsayan evrede koyun, keçi, yaban öküzü, yaban sığırtısı ve yoğun tavşan avlanırken ikinci evrede (VI.-I. tabakalar) tavşan avı bitiyor, keçi koyuna oranla daha fazla avlanıyor, yoğunluğu ise yaban öküz ve sığırtısı meydana getiriyor. Diğer bir deyişle ufak hayvan avının yerini büyük hayvan avı alıyor.

Cafer Höyük kazıları gerek yerel Anadolu geleneğinin gerekse güney kültürel öğelerinin oluşturduğu "Toros PPNB"sini anlamak açısından aydınlatıcı bir kazı niteliğini taşımaktadır.

## ABSTRACT

The excavations at Cafer Höyük have illuminated understanding of the "Taurus PPNB", in regard to its original elements which belong to prehistoric Anatolian tradition, as well as to the cultural contributions from the south which modified the local culture at the end of the 9th millennium BC. The first occupation phases of the site provide evidence of an indigenous culture, particularly clear in the chipped stone industry and the marble working. This culture is modified by a group of cultural features imported from the south, such as a different technology of chipped stone, bone industry, antropomorphic figurines. The architectural tradition seems to derive from the south since the beginning of the site. Moreover Cafer Höyük confirms the important role of eastern Anatolia in the development of the first agriculture.

## INTRODUCTION

The site of Cafer Höyük, discovered in 1976 by the University of Istanbul during surveys carried out before the construction of the Karakaya dam (Özdoğan 1977: ref. of site P51/52), is situated in the foothills of the eastern Taurus, at 750 m on the right bank of the Euphrates, at its confluence with a seasonal tributary, the Değirmendere. There the Euphrates valley is already wide, between two canyons, in a high fertile plain (Fig. 1) where the city of Malatya is located, 40 km SW of Cafer Höyük. On the surface of the site, M. Özdoğan found Early Bronze pottery, while the recovered lithic material appeared to be Neolithic.

In 1976 the mound appeared as an elongated hill oriented E-W, 150 metres long and 28 m wide (Fig. 2, Fig. 3); its sides having been cut into by earth quarrying, it would originally have been wider. The rescue areas were carried out by J. Cauvin and O. Aurenche in the course of six campaigns, between 1979 and 1986. The extreme west of the site, somewhat higher and rich in sherds of historical periods, was untouched; two excavations were opened, one of 50 m<sup>2</sup> in the east zone, intended to reach virgin soil, the other, more extensive (175 m<sup>2</sup>), in the western half of the site, uncovered only the latest prehistoric phase. A connecting trench 40 m long enabled a stratigraphic linking of the two excavations (Fig. 4). The Neolithic appeared over all the excavated surface, disturbed only in the east zone as well as in the west zone by a medieval cemetery of the 13th century, which has been published separately (J. Cauvin *et al.* 1985).

The stratigraphy of the site consists of 13 levels of occupation in a total depth of 6 m. Although this occupation was continuous, it has been divided into three phases on the basis of the evolution of the architecture and that of the objects; the early phase (levels 13-9) and the middle phase (9-5) only concern the east zone; the late phase (4-1) was found in the west and the east zones. As is normal in a continuous occupation, the development of food

strategies does not exactly follow this division into three stages; the archaeobotanical and archaeozoological analyses will thus be presented separately, after the archaeological description.

## 1 - THE EARLY PHASE (LEVELS XIII-IX)

This phase consists of levels XIII-IX (only levels XII and X have actual construction). We add level IX arbitrarily, distinctive for its occupation floor but without any clear architecture, and with very little material of any importance.

### Architectural features

*Level XIII* has no construction on the surface excavated. It is an occupation level set directly upon the fluvial terrace made up of small pebbles. The only discovered structure is a hearth dug into these pebbles.

Levels XII and X have habitations with a plan or floor formed by long rectangular rooms set together the length of their longest sides (J. Cauvin 1989, M. Molist and J. Cauvin 1991). The plan of the house in *level XII* contains two rooms which communicate by a central opening (Fig. 5, Fig. 6). The walls are preserved only in their stone foundations, 0.20 to 0.30 cm high. Three exterior buttresses consolidate the northern facade, on the sloping side. The floors are tamped clay, without any elements of preparation. The northern room contains a corner hearth constructed in a horseshoe shape, the southern room a partly destroyed clay oven with corbelled vault (Molist 1988: 117-118). The bricks or brick fragments used in these combustion structures indicate that the entire house, above its stone foundation, would have been constructed with bricks.

*Level XI*, which has no construction at this location, consists of a simple floor of tamped brown earth, dug into by two little bowl-shaped hearths filled with broken pebbles and ashes, and by a burial (*cf. infra*).

The house in *level X* (Fig. 8: n°1) is of similar orientation to that of level XII, but the plan is

tripartite here. The construction technique is also different. Large mud bricks form the walls, preserved only in one course on the northern side, in three courses on the southern side. These bricks are held together with mortar and are superimposed with their joins out of line in order to ensure the homogeneity of the whole. They rest directly on the clay floor, which spreads over a rectangular platform extending beyond the edge of the house by 0.20 to 0.50 m. The platform is a mixture of clay and pebbles, which are larger and denser on the northern side (the sloping side) (Fig. 8: n°2, Fig. 7). The three rooms have interior communication through narrow openings of which only one is central. Two bovine scapulae were found, apart from any cooking remains, on the floor of the southern room.

Level IX contains, with some large stones aligned along 3 metres, only three bowl-shaped pit-hearths filled with ashes and charcoal, and a burial (cf. following).

Two striking facts emerge from these early levels: the first is that only the lowest construction (level XII) presents architecture with a stone base which is comparable to that of the "grill plan" and "intermediate" phases of Çayönü; the technique disappears afterward. The second fact is the unexpected early date for the use of large moulded mud bricks, used whole or fragmented. Curiously, bricks of this size (90 x 25 cm) are found not only in the middle phase at Cafer (cf. *infra*), but in PPNB constructions which are both further afield and later in date, such as the late PPNB of the El Kowm oasis in Syria (Stordeur *in press*). It is as though an exact unit of measure was in continuous use through space and time in the cultural domain of the PPNB.

### Burials

Two burials were found in the early phase. One is in the floor of level XI which contains no architecture; it is an adult inhumation, the

skeleton being complete except for the skull, which is missing. The other is also a burial in a grave dug in the fill of level X and belonging to level IX, also without architecture; it contains the skeleton of a child lying in a foetal position on its left side, also without its skull and completely covered by a large flat stone.

In both cases it is notable that the tombs are outside the constructed spaces, and that the skeletons are missing their skulls; it may be inferred by default that there existed a kind of "skull cult" at Cafer Höyük, if the skulls were removed to be preserved separately.

The skeletal remains are being studied by M. Özbek.

### Lithic tools

A detailed study of the tools of the early phase has been published elsewhere<sup>1</sup> (M.-C. Cauvin 1991).

Obsidian and flint were raw materials which were used from the beginning for knapped tools, but flint is preponderant in level XIII at the base (2/3 of the whole). Then, both materials become balanced quantitatively in levels XII and XI, and obsidian begins to dominate from level X onwards at Cafer: they were knapped on the spot. Pressure debitage of bladelets is in evidence from level XIII (*bullet-cores*).

Being only 131 in number, the retouched pieces typologically do not permit a systematic study level by level. The material appears *a priori* to be homogenous, whether it comes from the interior of the habitations or from the exterior. The microliths, which are present in all the sequence at Cafer, are particularly numerous (35%) in the early phase. These are mostly bladelets with total (Fig. 10: n°3) or partial (n°2) backs, sometimes truncated, or truncated bladelets (n°4). There is also a scalene triangle on blade in obsidian from level X (n°4).

The projectile points are few (4%) and often broken. They appear to be mainly of "Byblos point" type, mostly in flint. A large oval point in flint which is typically "PPNB" in its retouch technique (called "Abou Gosh" retouch) was found in level XIII (n°13). Two little pedunculated points in obsidian with complete or partial backs (n°5-6) come from level XIII and level XII respectively. This type, which is not known in the PPNB of the Levant and which we have called "Cafer point", is only present here in the earliest phase of the sequence.

The scrapers (11%) are made more often on flakes than on blades (n°9, 12), in flint or obsidian; even on blades, they remain quite short, the blanks having been deliberately broken. The glossed blades (sickle-blades) (15%) and the burins (7%), the latter being usually of transverse type, are in flint only.

The "Çayönü tool" is entirely absent from the early phase. It is only found in the succeeding phase.

### Bone tools

The early phase already contains, according to Stordeur (1988), numerous needles with incised eyes of which other examples are found in the following phases, and awls.

An axe sleeve of cervid antler was found with a hatchet in polished stone fixed in place (Fig. 10: n°3).

### Various stone objects

Polished axes in green stone are present from the base (Fig. 9: n°2) of the sequence onwards. A polished chisel (n°1) and a fragment of a polished vase come from level XII. From level X there is a polished grey limestone "stopper", in conical form with a groove running around the wider part, probably intended to hold a strap (n°5). Several little sandstone balls fashioned by hammering (n°4) come from the base (levels XIII-XII).

Numerous querns, landstones and pebbles with striations were recovered (being studied by M.-C. Nierlé-Falkowitz).

### Ornaments

The relatively rare ornaments are described by C. Marechal (pers. com.) as disc-shaped objects in green or red stone and fragments of broken rings. In addition there are beads made from bird bones.

### Baked clay

Baked clay is present in level XII in the form of a tiny ball.

### Dating

Three C<sup>14</sup> dates are from the early phase :

- The first (Ly-2182) was provided by the charcoal removed before excavation at the extreme east of the tell, at the foot of an artificial cut left by a quarry. The date is 8990±160 BP and should correspond to level XII of the east zone excavation.

- The second (Ly-4436) comes from level XII, and is 9560±190 BP.

- The third (LY-4437) dates a hearth of level XI to 8950±80 BP.

We conclude that the early phase dates to the last centuries of the 9th millennium BP (8th millennium BC).

## II - THE MIDDLE PHASE (LEVELS VIII-V)

The early phase is defined architecturally by its elongated rooms. The middle phase corresponds to regularly arranged small almost square « rooms » (*cell plan*) and to any modifications in the tool-kit.

### Architecture

Level VIII presents a rectangular pluricellular structure (7.10 x 4.80 m) where six cells are arranged two by two ; the four situated farthest to the south are almost square, while the two at the north are somewhat longer (Fig. 11: n°1). There are two consecutive states ; in the oldest (VIIIa), three cells contain interior corner structures in a quarter of a circle obviously intended for storage. These "silos" are sometimes preserved only in their insulating paving made up of small pebbles, whose edge

<sup>1</sup> However, the tools from level IX without architecture, which consist of some ten retouched pieces which are not significant, are included in the present study.



is curvilinear (*cf.* the two from cell 85 and one of the three from cell 89), and sometimes also in their floors and the bases of their curvilinear walls in clay tempered by straw (*cf.* two silos in cell 89 and the three in cell 113). This difference in preservation seems to indicate the destruction and reconstruction of storage areas during the same period.

The walls of the house, built with the same large bricks and the same technique of setting the joins out of line as in the early phase, have buttresses which are interior in this instance; each cell thus has two of its walls reinforced by a projection in the middle. These thick constructions are not justified by the needs of the roof, so exiguous and divided are the spaces to be covered (less than 2 m); the only explanation is the existence of a storey to be supported (Fig. 11: n°2), which must have been the actual habitation space, the ground floor serving as a thermic insulator and for storage. If we admit that each group of two cells « supports » one elongated room, one obtains in the upper floor the same system of three parallel rooms, as in the house of level X (Aurenche and Calley 1988).

The exterior of the house is also interesting; to the south the somewhat differently oriented vestigial wall beginnings suggest the secondary addition of cellular elements constructed this time in crude pisé, not in bricks. To the north a band of stones runs along the façade, perhaps to reinforce the floor on the sloping side. To the east, two post holes and a few stones could have belonged to an exterior stair ascending to the first storey, as exists in the intermediate phase at Çayönü (Özdoğan and Özdoğan 1989). But the existence of a lean-to in front of the east façade cannot be excluded.

In the latest period of the house (VIIIb), the storage structures are removed, the low walls which edged them are levelled to a height of 3 to 4 cm (cells 113, 89 *pro parte*), the interior being filled in with earth.

One notes a total absence in level VIII of a stony foundation under the floor of the house,

which is constructed directly on the layers of earth which make up the previous level.

*Level VII* is a space without construction; its floor runs over the walls of the house of level VIII, which was deliberately levelled to a height of 2 to 3 courses of bricks, the interior space being filled. A circular hearth exists at this level (st. 84: d=0.73 m), in bowl form with burnt pebbles.

*Level VI* again contains a pluricellular house with an identical orientation and a plan very close to that of level VIII, but much larger (Fig. 12, Fig. 13). It also has six cells, but the house is cut off at the corners in the east and the west by the edges of the excavation, and to the north by erosion. A vestigial wall beginning on the east side suggests the possibility of an annex constructed there.

The whole was constructed on a foundation of tamped earth, consolidated intermittently with stones. The walls were raised here also in large bricks, with interior buttresses, arranged differently from those in level VIII.

The house in level VI also presents two stages in its interior construction. In the early stage (VIa) the cells to the south (63 and 64) communicate with the middle cells (65 and 66) by narrow passages (Fig. 12: n°1). The interior of cells 63 and 64 on the one hand, and of 69 and 73 on the other, was paved with little stones. Then a floor made of very compact clay mixed with straw was laid down over all, with the construction of "silos" in quarter circles in the two opposite corners of the cell 69. In the late stage (VIb), the silos no longer exist (Fig. 12: n°2). Communication between cells 63 and 66 is closed, larger openings exist between the median cells (66 and 65) and the northern cells (69 and 73). A new pisé floor has been laid, upon which various relatively prestigious objects were found: figurines and a little decorated terra cotta plaque, a shape cut out of bone etc... (*cf. infra*).

*Level V* is divided even more clearly than the preceding levels into two phases. Phase Vb is represented in the northern half by a relatively soft brown sediment with a high accumula-

tion of archaeological material (tools, nuclei and knapping waste) and abundant faunal material; this would indicate an exterior zone for knapping activity, even for refuse. The southern part presents a range of post holes to the east, and a cylindrical pit (str. 42: d=1 m, h=1.20 m) to the centre-west (Molist and J. Cauvin 1991: fig. 2), with a surprising fill: four beds of stone alternate with three layers of sterile earth, and at the very bottom, a concentration of remarkable archaeological material: stone vessels, obsidian blades, balls in stone or terra cotta (*cf. infra*). This is not a rubbish pit but a deliberate, arranged deposit.

The latest phase (Va) presented to the north and centre of the excavation faint traces of a pluricellular construction of uncertain plan; only a few large aligned bricks are preserved, following a voluntary levelling which is more radical than elsewhere, leaving only 2 to 3 cm standing; sometimes these are only perceptible by their imprints (Aurenche *et al.* 1985: fig. 7). It is the presence of these large bricks (90 x 35 cm) which leads us to relate this level to the middle phase of the site. In the southern third of the excavation, a space which is outside all construction contains two combustion structures (Molist 1985): a bowl-shaped hearth with pebbles and a rectangular pit-hearth with vertical walls reddened by heat and a heap of pebbles and stones broken by the fire resting on a base of charcoal (Aurenche *et al.* 1985: fig. 7); the whole is probably an embedded oven. It appears that "level V" is a superimposition of an exterior area (Vb) and a partially constructed space (Va) in a plan which is not clear to us.

The whole of the middle phase of Cafer then presents, like the early phase, an alternation of constructed levels (VIII, VI, Va) and free spaces (VII, Vb) which are probably courtyards. The strict orientation of the walls suggests a persistent continuation over time of a unique unit (house and courtyard), of which

excavation only uncovers a part each time: either the house or the courtyard. We have put forward the hypothesis (J. Cauvin 1989) of a periodic renovation, with voluntary destruction of the existing house, releasing the bricks for re-use in building a new house on the neighbouring space which was previously the courtyard. One of us (J.C.) has noted with D. Stordeur the modern presence of this renovation process in northern Syria near Tell Abyad.

### Lithic tools

The tools consist of 232 retouched artefacts. Their main features as a group are the progressive decrease of flint in favour of obsidian, a development which had already begun in the preceding phase, a decrease in microliths and the appearance from level VI onwards of the first "Çayönü tools".

There are obsidian bladelet cores with opposed knapping platforms (Fig. 14: n°6) and naviform cores for blades. The microliths count for only 20.2% of the whole of the phase, with triangles, micro-borers (n°1) and truncated or simply retouched bladelets. The retouched or truncated (n°2) blades are also numerous (37%), as are the scrapers (12%), which are mainly on flakes (n°9)<sup>2</sup>. The glossed pieces in flint diminish greatly (2.6%) as do the flint burins (1.7%). The projectile points on blade or bladelet, in flint or obsidian, account for 5.6%; these are pedunculated pieces with long flat retouch (Byblos points: n°8). Pit 42 (*cf. supra*) also contains a group of unretouched obsidian blades (Fig. 15).

The "Çayönü tools" (Fig. 14: n°10) are always made from obsidian; they appear in levels VI-V (7% of the total of the middle phase, but 8.3% of the levels concerned here). These pieces are elongated and thick, with a bilateral retouch which is both abrupt and lamellar; this retouch does not usually affect the two extremities of the piece (or only one), which

<sup>2</sup> Scraper n°9 of the Fig. 14, like the projectile point (n°8), the micro-borer (n°1) and the "Çayönü tool" (n°10) are wrongly attributed in Cauvin and Balkan 1985 to level IV, instead of Va.



then appear wider. The long retouch is in general completed by a shorter and more denticulating retouch, but the denticulation is quickly abraded by intense use. Resharpener of the retouched parts is frequent, accentuating little by little their concavity in comparison to the extremities which are left intact. The presence near the edge on the inverse face of non-shiny bands with long fine parallel striations left by usage, as well as the analysis of residues from one example have led to the conclusion (Anderson and Formenti 1996: fig. 2: n°1) that they were used for working stone. The nature of this work is still poorly identified. A few polished axes in green stone complete this tool assemblage (Fig. 16: n°7).

#### Bone tools

According to Stordeur (1988), these are needles with incised eyes (Fig. 16: n°2) and awls. There is also an enigmatic piece found in level VIb which has a « *contour découpé* » (cut out shape) (n°1) with traces of red ochre.

#### Various stone objects

The vessels in stone (marble or limestone) are present in the form of a few fragments but mainly as polished vases, complete though broken, found at the bottom of pit 42 (*cf. supra*). These are a stemmed cup in red marble decorated with horizontal fluting (Fig. 17), a large basin with a serrated rim in white nummulitic Eocene limestone (Fig. 18) and a kind of round brazier in large-grained marble much altered by fire (Fig. 19), also complete but broken in spite of its thickness. These very beautiful objects appear to have been deliberately broken before burial.

The same pit produced a spherical stone ball. Querns, handstones and pestles (one in quartz) are frequent in all levels.

#### Terra cotta objects

Pit 42 of level Vb also produced a little terra cotta ball tempered with straw (Fig. 16: n°4). Particularly striking are the four figurines found together in a concavity in the clay floor of level VIb (Fig. 26 - 28); three are female, one male. From the same level comes a kind of

thick terra cotta plaque, partly broken, with a linear decoration on one face (Fig. 16: n°8). All these objects confirm that terra cotta was known in the "pre-pottery" Neolithic, well before its utilitarian use in ordinary pottery.

#### Ornaments

Here again are elements for threading to produce necklaces: disc-like roundels in green stone or cornelian (Fig. 16: n°6) and a barrel-shaped bead (n°5) appears in obsidian. There are also fragments of bracelets, circular in section, in white (n°3) or red marble from levels Vb; one is from pit 42.

#### Dating

Three radiocarbon dates exist for the middle phase: 8480±140 BP (Ly-3772) and 7900±190 BP (Ly-3773) for level VI, 8920±160 BP for level V (Ly-3090). The second date is doubtful because of lack of sufficient carbon. The middle phase should be between 9000 and 8500 BP (about 8000 and 7500 BC), that is, on the horizon of the middle "PPNB" of the Levant (*cf. infra*).

### III - THE LATE PHASE (LEVELS IV-I)

The late phase was excavated as much in the east sector as in the west sector, a trench of 40 m long joining the two excavations and ensuring the correlation. The stratigraphy (levels IV to I) was established based upon the east sector (Molist and Cauvin 1991). In the west, only the uppermost levels of this phase have been published in preliminary form (Cauvin and Aurenche 1982, Aurenche *et al.* 1985, Cauvin *J.* 1985). The whole of the architecture is still being studied (by O. Aurenche and M.-C. Nierlé-Falkowitz).

The late phase is characterised by the general enlargement of the houses, of which the east excavation, being too small, only partially uncovers. Several types exist side by side: pluricellular habitations, more complex than before, and large monocellular houses. The evolution of the lithic industry is mainly quantitative.

#### Architecture

In the *east sector*, only level IV has actually produced architecture (Aurenche *et al. ibid.*, fig. 4-5). It is a portion of a pluricellular building, but without the regular arrangement of the cells observed in the middle phase. On the other hand, although the walls appear to be also in mud brick, the bricks are difficult to tell apart, and when it is possible to do so, their measurements are apparently different from the old (65 x 36 cm, 40 x 35 x 10 cm etc...).

Level III is a dark layer, dug into by three bowl-shaped pit-hearths (Molist 1985: 36-37 and fig. 1-4) with stones and charcoal, as well as a large waste area with animal bones which are often burnt.

Level II consists of a floor containing eight cylindrical pits, each about one metre in diameter and 0.40 to 0.50 m in depth. Their fill in earth and stones contains no charcoal or archaeological material, and their use is unknown.

Level I produced the remains of large pebbles, which were probably preparation for house floors and are very much altered by the medieval cemetery.

The excavation in the *west sector*, which opened 175 m<sup>2</sup>, was intended to shed light on the collective organisation of space (Fig. 20, Fig. 21). Very much disturbed by the medieval cemetery, the four levels excavated provided only partial but sufficient evidence to reveal changes in the habitations in relation to early or late phase.

The changes are first of all technical: the manner of construction, which was sporadic in the middle phase but became now systematic, involves setting down a cobble bed of large pebbles over the whole surface which is to be built upon, after careful levelling of previous structures. This process, seen in structures 17, 10, 6, 3, 4, and 5, does not help preservation or understanding of earlier remains. The walls and floors in tamped earth were then built upon this cobble bed. The walls were probably in mud brick, although the state of preserva-

tion has only rarely allowed measurement; two sizes are found: the "early" large size (90 x 35 x 10 cm) appears to persist together with a smaller size (45-50 x 10-15 cm) already mentioned in contemporary levels in the east excavation.

Changes are also to be seen in the organisation of inhabited space. Next to the persistent "small cell-plan" houses of the middle phase, one observes the gradual introduction of another system. The small cell-plan houses are still very much present in levels IVb (St. 18), IVc (St. 18 and St. 8) IIIa (St. 3) and IIIb (St. 3 and St. 4). The innovation appears in level IVc in the form of a new floor plan where "small" cell-plans (3.5-5.5 x 1.5-2 m) alternate with "large" cell-plans (3.5-5.5 x 1.5-2 m), an arrangement which is new for the site. The best example, which is unfortunately incomplete, is represented by St. 19; the southern part is occupied by two "large" perpendicular rooms (cells 8 and 11) whose sizes are respectively 5.5 x 2 m and 3.5 x 1.5 m. Five other cells to the north (1, 2, 3, 4, 6) have more modest dimensions. The last two, to the north-east (5 and 7) are incomplete. The total dimensions of the building are 8 m in width and more than 9.5 for the length. The irregular arrangement of the cells contrasts sharply with the symmetrical organisation of the two rows of 3 cells found in the middle phase in the east zone excavation. The state of preservation provides few clues as to the superstructure; the discovery of numerous fragments of charcoal in cell 8 of this house, as well as in cells 2, 3, 4 of structure 8 and especially in cell 1 of structure 18 (Aurenche and Calley 1988: fig. 1) would imply, as in the middle phase, occupation on an upper level, the remains recovered being only a base. The presence of this carbonised wood suggests at least one of the possible reasons for abandoning these houses, destroyed entirely or partially by fires which in this sector seem to have affected structures 8, 18 and 19 (level IVc) at least.

The conditions under which the numerous artefacts were deposited, in the fill and rarely directly on the floor, reinforces this hypothe-

sis. Another argument in favour of occupation on an upper level is the frequent occurrence of walls of double thickness (St. 8, 18, 19), which diminish the space in each cell and which cannot be explained simply by the necessity of supporting the weight of a "ceiling" (Aurenche 1990). This is a variant of the technique of buttresses used in the small cell-plan houses in levels VIII-VI. The other constructions in the sector, in levels III-I, are either badly preserved (St. 17, 10) because of the cobble bed system which completely flattens the lower level, or too incomplete in plan to be interpreted. It seems nevertheless that the system of a lower floor of small cells persists to the end (St. 3-4 of levels III-I) at the same time that monocellular structures appear, such as structure 2 (level II) whose dimensions are 4.50 x 7 m (Aurenche *et al.* 1985).

In spite of bad preservation, it is possible to indicate schematically the development of the whole sector during the late phase. First of all there is the overall orientation of the constructions which is not modified with time. It remains more or less the same in the early and middle phases in the east excavation, and in the late phase in both zones, east and west. However, compared to the east zone, the constructions of the west zone seem more dense, and the way they are disposed differs especially. In the east zone, the constructed surface and the free surface alternate at every level, while in the west zone successive constructions tend to be built one upon the other, keeping to more or less the same circulation spaces. Should this be interpreted as an opposition between a "centre" and a "periphery" (relative to the scale of the site) or rather a gradually developing density of the constructed space? In the west excavation, the four levels of occupation seem to be organised in the following manner.

In *level IVa*, the earliest, architectural remains were found only in the east and west parts of the excavation, in the form of two walls (St. 30) and by an isolated construction (?) of 2.5 x 1 m (St. 9) whose alignments are identical. The central part was not excavated at this level,

nor at the following level, *IVb1*, where in the west there is a construction of a small cell-plan structure (St. 18), which appears only partially in the sector excavated. It is set slightly more to the west in relation to the previous structure 30. Structure 9 remains present in this level, and apparently until the end of level II.

*Level IVb2* contains structure 8 to the south, which also lies mostly outside the excavated perimeter. The sector thus presents the general configuration which it adheres to generally until the end of the occupation: a central constructed space, bordered to the west and the east by exterior spaces or circulation areas, themselves edging other constructed spaces. The circulation space to the west exactly covers structure 30 of level VI.

*Level IVc* coincides with the construction of structure 19 which is built directly, without a common wall, against the north wall of structure 8. The circulation space which separates this new construction from the neighbouring house (St. 18) to the west measures 1.5 m wide. To the east, the constructed space is larger, becoming wider from south to north. The whole of this level appears to have been destroyed by fire.

An important change occurs then at *level III a*. To the west, structure 18 is replaced by structure 3, and in the centre, structure 19 is replaced on the one hand by structure 17, whose cobble-bed covers the west part of structure 19, and on the other hand by structure 21 (3 x 1.5 m), joined on at the east, which seems to partly take over room 11 of structure 19, while room 7, to the north-east, becomes an exterior or covered space (post holes). The relation between structures 17 and 21 is not clear.

A new change occurs at *level III b*; structure 17 is replaced by structure 10, whose cobble-bed is set towards the west, reducing the width of the passage to 0.50 m, and structure 21 is replaced by structure 6, which becomes larger to the west and the east (2.5 x 2.6 m). In this level, structure 8 is in ruins, even if certain walls are still visible and its location serves as

exterior zones for the constructions to the north. At the same level, structure 4 is built against the south wall of structure 3, and is set slightly more to the west, which makes the width of the passage about 1m.

In *level II* structure 10 is replaced by structure 2, which has to the south an exterior zone partly covered by a "portico" (post holes), and to the east uses the ruins of structure 6 to shelter a hearth (Aurenche *et al.* 1985: fig. 24).

In *level I*, construction 5, of which only the cobble-bed is conserved, is built to the south-east; the base of the corner of another construction (structure 12) can be associated with this level. This construction is set farther to the north-east in comparison with the general plan and modifies the circulation system to the east of the sector.

#### Burial

A burial was found in one of the cells of house 3 in the west sector. The skeleton in flexed position is of a boy 8 or 9 years old (Özbek 1991), and was covered with a whitish coating (lime plaster?).

#### Lithic tools

The objects are abundant (Fig. 22) as they come from both excavation sectors and the trench which joins them.

So far obsidian is used much more than flint for the knapped tools. There are naviform cores. A direct or indirect percussion was used for shaping, while pressure debitage served to produce blades from thick flakes (Calley 1985). The retouched tools preserve the same types but their percentages change. The *microliths* diminish: 14% in the east sector, 16% in the west sector. Micro-borers, and bladelets which are variously retouched or truncated continue to be present, but there is no geometric tool. The *projectile points* (5.9% in the east sector, 4.5% in the west sector) are "Byblos points" (N°1, 5-7), almost all in obsidian though sometimes in flint (n° 6), or of oval type in obsidian (n°2, 4) or flint.

The "*Çayönü tools*" (n°3) are fairly abundant:

12.3% in the east, 6.6% in the west. They are also evidence of stone-working, which can be seen in their wear traces as much as in their microscopic residues (analyses of one example, Anderson and Formenti *ibid.* fig. 1: n°1). The *scrapers* remain stable (13.8% in the east, 12.2% in the west): they are mainly on obsidian flakes (Fig. 23: n°3) but also on blades. The *burins*, in flint but sometimes also in obsidian, are somewhat more numerous than before (5.9% in the east, 4.3% in the west). The glossed flint blades continue to diminish (1.9% in the east, 0.4% in the west). There are also large very beautiful unretouched blades in obsidian (n°5-6) and a large blade with a retouched point in flint (n°4).

*Polished tools* are abundant, in green stone or black diabase, consisting of numerous big or little axes (Fig. 23: n°1-2). Depending on the raw material, the technique of shaping before the final polishing, total or partial, can be knapping or hammering or both.

#### Bone tools

The bone tools are abundant (Stordeur *ibid.*). Besides the awls, there are needles with incised eyes (Fig. 24: n°1), chisels in deer bone or antler (n°6-7), a hook in bone (n°5), a pierced and hollowed plaque (n°4), and various cut out shapes (« *contours découpés* »): one (n°2) is long and flat with serrated edges, the other is bored in three places with terminal and lateral indentations (n°3), and presents traces of ochre.

#### Various objects in stone

There is, as in the early phase, a conical "*stopper*", with a device for fixing in place (Fig. 29), consisting this time of two juxtaposed perforations (the second having replaced the first, which was broken) on the wider part of the object. This object was probably utilitarian like the numerous querns, handstones and pestles. There are also fragments of vessels in stone.

Other objects, which are geometrical, seem to have a primarily symbolic value. There are some ten *spherical balls* of various dimensions

and in various materials: limestone, flint, marble (there was an example in terra cotta in the middle phase). One of these balls (Fig. 30), with a hammered and polished surface, has parallel red bands cleverly obtained by revealing natural veins in the marble. There is finally a little polished *cone* in *coral* (Fig. 31); the fact that it is the only one, and perfectly made, indicates that it is a precious object. It would seem that these geometrical pieces are not simply counting instruments as those in terra cotta described by Schmandt-Besserat for later periods.

Finally, there were two *grooved stones* (Fig. 32). One is in limestone, grooved on the two sides, the other in green stone with a geometric decoration.

#### Ornaments

Ornaments are abundant. The most remarkable pieces are the *bracelets*, described by C. Maréchal (1985), generally in white marble or in fine basalt. Three of them, complete (Fig. 34, Fig. 35) or almost complete, were found together in the east, buried in the floor of the house of level IV. They are biconvex in section, the exterior face being more bulbous than the other. Other fragments of this type were found in the east and in the west, as well as fragments which are cylindrical in section already mentioned in preceding phases. What is new in the late phase, mainly in the upper levels III-I, are the fragments of more finely made bracelets, with a ridge along the middle, or with a moulded exterior face with a bulge along the middle, rounded (Fig. 36) or with a more pronounced ridge (Fig. 37). They are in white marble, one only being in red marble (Fig. 36).

Finally here again are elements of necklaces: beads in disc-shaped roundels which are more or less flat, and also a long flat bead in green stone with a double perforation, longitudinal and transverse. To be noted is that at no period did Cafer Höyük provide clues (for example roughouts or waste material) of a local workshop for marble or fine basalt.

#### Figurines

The late phase provided a red figurine in well baked clay representing a bird, of which the short wings were modelled separately and joined to the body (Fig. 33).

#### Dating

The  $C^{14}$  dates are: 8980±150 (Ly-3091) for East level IV, 8150±210 (Ly-3089) for East level III, 8450±160 (Ly-2181) for an uppermost level of a preliminary sounding of 1977. From these somewhat unclear results there seems to emerge a picture of continuous occupation at Cafer after 8500 BP (7500 BC), that is, on the horizon of the Levant late PPNB and the *large room plan* phase of Çayönü. This is not contradicted by the presence here of large monocular houses.

#### IV - THE ARTEFACTS FROM THE THREE PHASES : GENERAL CONSIDERATIONS

The maintenance of a common industrial base, above and beyond the quantitative modifications and typological disappearances and innovations discussed, is one of the signs of the development of a unique community in a particular location. Two other factors come into play, one being the origin of the raw materials, the other being the relation to the other sites of Anatolia and the Levant.

#### Origin of the raw materials

Most of the raw materials are of local origin. The *green stones* for floor preparation and polished axes come from the so-called « Maden formation », cut by the Değirmendere river. This is also true for the *basalts*, the *diorites*, the *gabbros* and the *sandstone* used for the querns and the *diabase* used for the bracelets and certain axes. The marble and the quartz were taken twenty kilometres to the south-west, from the cliff of Pütürge. On the opposite bank of the Euphrates, facing the archaeological site, is a «limestone» quarry. As for the flint, *large-grained flint* is found in part on the neighbouring terraces, the large limestone pebbles found striated and sometimes worked were

certainly washed down by the Euphrates. But the *fine-grained flint* and some of the large-grained flint could not have been recovered in the immediate vicinity.

As for obsidian, it is not present in the immediate environment or even in the Euphrates pebbles. Surveys have been carried out with geologists, not only the person in charge of the geological Malatya's map where Cafer is located (E. Yazgan), but also the person in charge of late volcanic activity (F. Saroğlu); the closest sources for obsidian are in the region of Bingöl 200 km away. Some twenty analyses of artefacts have been carried out by neutron activation at Orléans (Gratuze *et al.* 1993) and by emission spectrometry at Strasbourg (Besnus in Cauvin M.-C. *et al.* 1991) to determine their origins. All the samples from lower levels are calcoalkaline and come from Bingöl; the samples from the upper levels have either the same composition and the same origins, or they are peralkaline and come from another Bingöl source or from Nemrut Dag, near Lake Van. These obsidian sources are all higher than 1500 m in altitude in places unsuitable for permanent settlement; it would have been necessary to seek out the obsidian in a clement season. Bingöl is accessible by following the Euphrates and one of its tributaries, the Murat, upriver.

#### Cultural comparisons

The present authors, all of whom are specialists since 1978 of the pre-pottery Neolithic of the middle Euphrates in Syria, have been struck right away by the affinities of Cafer Höyük with the PPNB (*Pre-Pottery Neolithic B*) of the Levant, and particularly northern Syria (Aurenche and Calley 1988, J. Cauvin 1988, M.C. Cauvin 1988, Stordeur 1988).

In the lithic industry, this is evident in the weapons: the «Byblos point» and «oval point» types being present from the earliest levels, as at Çayönü, with their characteristic long flat retouch. Only the gradual preponderance of obsidian over flint demonstrates for both sites a growing and specifically Anatolian connection. This is usually accompanied by a less

typical industrial context (polished axes, scrapers, burins, etc...). Particularly striking is the presence, for blade debitage, of the bipolar technique on naviform cores which originated on the middle Euphrates at about 9000 BC in the PPNA (Mureybet IIIB) and remained afterward the characteristic technique of the whole PPNB (Abbès 1997).

Among the bone tools (Stordeur *ibid.*), the needles with incised eyes from Cafer are called «Mureybet needles» because their very rare technique of eye perforation appeared on the middle Euphrates in the Khiamian (about 10,000 BC) and continued in the Mureybetian. In the PPNB, it continued (Halula) in Syria and also in Anatolia (Cafer, Çayönü, Can Hasan, Suberde), where it represents a good criterion of cultural diffusion. This same affinity with the south is evident in the axe sleeves made of cervid antlers and the flat tools with serrated edges, also present in the Mureybetian.

Besides the tools, the terra cotta anthropomorphic figurines are completely within the Syrian tradition, as well as the decorated grooved stones which began at Mureybet in the Khiamian and then increased in the Mureybetian (Mureybet, Jerf el Ahmar). In Anatolia they are numerous in the PPNB at Çayönü (Braidwood and Braidwood 1982: fig. 3, n°12-13).

However other features appear which are specifically Anatolian, as they are completely absent in this period in northern Syria. Besides the intensive (and increasing) use of obsidian, there is also the technique of blade debitage by pressure, which appeared very early in the arc of the Taurus-Zagros mountain ranges (Inizan and Lechevallier 1994). Another feature is the late persistence of microliths and of these rare «Cafer points» in obsidian, present in levels XIII-XII, which so far have no earlier points of comparison except with certain Zarzi artefacts or with Caucasian deposits (Kozłowski pers. com.). The conical pestles with bulging bases exist at Çayönü; these are also Anatolian and can be found as far as the Caucasus (*id.* pers.

comm.). Finally, the early refined techniques in marble-working (vessels and bracelets) are found only in the Taurus-Zagros arc (Çayönü; Karim Shahir).

#### EXPLOITATION OF THE NATURAL ENVIRONMENT AT CAFER HÖYÜK

Rainfall in the region of Malatya averages between 350 and 400 mm per year. The climate is continental, the summers being hot and dry and the winters wet and cold. There are three ecological zones: gallery forests with willows and poplars which grow along the rivers, an *Artemesia* steppe with few trees, which covers the plains and hills to either side of the Euphrates, and finally, on the mountain slopes themselves, open forests with oaks. Willow and poplar are strongly dominant among the charcoal analysed (Willcox 1991), the poplar being used for beams and both species as fuel. Present also were plane, ash and maple, also cut near the river, as well as oak in the mountains; hackberry, *Pistachia* and almond provided edible fruits as well as wood.

Cafer Höyük was a village of *agriculturalists* from the time it was first occupied. The study of the seeds (Moulins 1993) revealed the presence from the beginning of cereals (einkorn, emmer) and pulses (especially lentils), all cultivated species. Cereals and pulses are equal in quantity at the beginning, but pulses decrease in favour of cereals in the late phase, when some barley appears.

In relation to the fauna, the occupants of Cafer Höyük were *hunters* (Helmer 1991) but the hunting strategies evolved over time. Two phases may be distinguished in this evolution: the first corresponds to levels XIII-VII, that is the early archaeological phase and a part of the middle phase, when the animals especially hunted were wild goat and sheep, wild boar, cattle, some deer and much hare. In the second phase (levels VI-I), the species hunted are the same except that small game (hare) are hardly hunted at all, while boar and aurochs increase, and of the wild ovicaprids, goat (*Hircus aegagrus*) increases in relation to sheep.

In other words the larger species are chosen, as they provide more meat. The hunting territories concern the mountain zones (goat) as much as the valley itself.

The absence of herding is demonstrated not only by the morphology of domesticable animals but by the absence of their dung on the site itself, indicated by soil analysis (Brochier 1985). In this respect the PPNB of the Taurus is less advanced than the Syro-Palestinian PPNB, where goat herding begins in the middle PPNB.

#### THE PLACE OF CAFER HÖYÜK IN ANATOLIA AND IN THE NEAR EAST

The excavations at Cafer Höyük have illuminated understanding of the "Taurus PPNB", in regard to its original elements which belong to prehistoric Anatolian tradition, as well as to the cultural contributions from the south which were to profoundly modify the local culture at the end of the 9th millennium B.C.

The first occupants of the site, at about 8300 BC, provide evidence of an indigenous culture which is particularly clear in their lithic industry: the importance of obsidian, the presence of pressure-knapping of stone, the persistence of a microlithic industry which is totally different typologically from that of the Levant, as well as other features, such as the "Cafer points", with northern affinities. The working of marble may be added to this list, a tradition which in Anatolia goes back to the Epipalaeolithic.

There are moreover other types of obsidian tools, such as the "Çayönü tools", which first appeared in the Neolithic at Cafer itself in the middle phase at about 8000 BC, as well as in the so-called "cell-plan" phase at Çayönü which corresponds to it more to the east. This evidence indicates that surface sites such as Boy tepe (Balkan 1989) are not earlier than this phase.

The comparison with Çayönü indicates that Cafer begins somewhat later, the early phase of our village corresponding to the "cobble-

paved plan" phase (also called "intermediate phase") at Çayönü, and our middle phase to Çayönü's *cell plan* phase, the occupation probably continuing on both sites until after 7500 BC.

The other group of cultural features were clearly imported from the south (Syrian and probably Turkish Jezirah) and constitute a form of the PPNB of the Levant. The initial importance of flint at Cafer, as at Çayönü, is probably due to this influence, before flint began to diminish in favour of obsidian. Affinities with northern Syria may be seen in the bipolar knapping on naviform cores, in most of the weapons, in certain bone tools and in the anthropomorphic figurines. Moreover, it is possible, as was suggested several years ago (Aurenche 1991), that the habitations of the Taurus PPNB derive from the architectural tradition of northern Syria. The current excavations being carried out by D. Stordeur at Jerf el Ahmar on the Syrian Euphrates indicate the progressive appearance of rectangular habitations from the Mureybetian PPNA onwards (Stordeur 1996, 1998). The recent discovery of a *grill plan* building in the early PPNB at Dja'de (Coqueugniot 1998) which is contemporary to those of Çayönü, although smaller and less massive, points in the same direction.

Cafer Höyük confirms the important role of eastern Anatolia in the development of the first agriculture which appeared in the Near East (cf. Cauvin, J. 1998). Agricultural strategies were probably effective from the Çayönü grill plan phase onwards, in spite of the absence of morphologically "domestic" seeds;

we now know that there existed a long period of "predomestic agriculture", based on criteria other than seed morphology and present in the Levant in the 9th millennium BC (PPNA). It is not yet possible to say whether this was the case in the initial round house phase at Çayönü, which has not yet been studied from this angle. In any case agriculture seems to be present in the grill plan phase at Çayönü, in the form of an intense "predomestic" cultivation of pulses. At Cafer Höyük, which begins just after, at the very end of the 9th millennium, there is domestication of pulses as well as cereals, but it is significant that the former were very important in the early phase; pulses diminish afterward in favour of cereals, exactly as at Çayönü.

Thus agriculture began in Anatolia perhaps as early as in the Levant, but most certainly with pulses rather than with cereals.

Finally, the absence of animal domestication at Cafer Höyük poses a problem. Goat herding begins in the Jezirah (at Halula) in the middle PPNB, at about 8000 BC, and was quickly followed by sheep herding (at about 7700). But wild goats did not exist in the Syrian Euphrates and it would be tempting to attribute the first domestication to Anatolia, if the late date of goat domestication in the Taurus does not dissuade us. It is possible that the zone of origin of the domesticated goat is situated somewhat farther south in the foothills, that is, in the most northern part of the Turkish Jezirah which is still poorly known. Future excavations in this region will perhaps provide confirmation.



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# Early Farmers on the Cilician Coast: Yumuktepe in the Seventh Millennium BC

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**KEYWORDS:** *Yumuktepe, Neolithic, Cilicia, Painted Pottery, Obsidian, Domestication.*

**ANAHTAR KELİMELEK:** *Yumuktepe, Neolitik, Kilikya, Boyalı Çanak Çömlek, Obsiden, Evcilleştirme.*

## ÖZET

MÖ 7000 yıllarında çeşitli kültür bitkileri ile evcil hayvanları olan bir çiftçi topluluğu Yumuktepe'ye gele-  
rek yerleşmiştir. Bu ilk yerleşimi izleyen bin yıl içinde mimaride önemli bir gelişme olmuş, ilk başlarda kul-  
lanılan dal ve sazlardan yapılan basit kulübelerin yerini, subasmanına kadar taş örülü duvarları olan kalıcı  
yapılar almıştır. Yumuktepe'deki gelişim süreci, yeni kazıların yanısıra, Garstang kazılarında ortaya çıkan ve-  
rilerin de yeniden elden geçirilmesi ile değerlendirmektedir. Buna göre gelişim yalnızca mimari ve çanak  
çömlekte değil, yerleşme düzeni ve kullanım alanlarının değişimi ile de izlenmektedir. Yerleşmede herhangi  
bir kesinti görülmemekle birlikte, malzemedeki değişmelere göre bu süreci, üç alt evreye ayırabiliriz.

Doğalcam-obsidyen tüm süreç boyunca, teknoloji ve tipolojik önemli bir başkalaşma olmadan kullanılagelir.  
İzlenebilen ilk önemli değişim Orta Neolitik olarak tanımladığımız dönemle birlikte taş temelli yapıların  
ortaya çıkmasıdır. İkinci değişim ise Son Neolitik olarak tanımladığımız dönem ile birlikte yapıların dağılımı  
ve işlevlerinde görülür. Çanak çömlekteki değişim ise daha yavaş bir süreç içinde Koyu Yüzlü Açıklı Malla-  
nın (DFBW) önce donuk yüzlü turuncu ve daha sonra da boya bezemeli kapların ortaya çıkması ile izlenir. En  
son alt evre düz dipli büyük boy kaplar ile belirlenir.

Yumuktepe kazıları ile ortaya çıkan ilginç sonuçlardan biri de, Çukurova kıyı bölgesi ile İç Anadolu arasın-  
daki ilişkidir. Kökeni Orta Anadolu olan doğalcam (obsidyen) aletlerin sürekli olarak güneye kıyı bölgeleri-  
ne ticaret ile geldiği bilinmektedir; buna karşın iki bölge yerleşme yerleri arasında hemen hemen hiç bir ben-  
zerlik yoktur. Buna karşılık yerleşme, ilk kurulduğu dönemden Uruk çağı başına kadar Suriye-Mezopotam-  
ya ile yakın bir ilişki içinde olmuştur. Bu da bize Çukurova Neolitiğinin kökeninin doğuda aranması gerek-  
tiğini düşündürmektedir ki, MÖ sekizinci bin yıl içinde Yakın Doğu'nun çanak çömlek kullanan topluluk-  
ların yeni yerleşim yerleri arama olgusu ile de uyushmaktadır.

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## ABSTRACT

A farming community using a wide range of domesticated cereals and animals settled at Yumuktepe around 7000 BC. During the following millennium, the architectural features of the settlement developed from wattle and daub flimsy structures to solid stone-sockled buildings. A review of data from both Garstang's old excavations and the recently resumed research at Yumuktepe reveals that changes took place in architecture and pottery, as well as in the organisation of the dwelling and working areas. The main steps of these changes point to the definition of 3 sub-phases in the substantially continuous cultural evolution of the site.

One of the most striking features of Yumuktepe is its cultural isolation from the contemporary sites on the Anatolian plateau, despite the regular contacts suggested by the continuous flow of obsidian objects from Central Anatolia to the southern coast. As a matter of fact, it is with the Syro-Mesopotamian regions that the site maintained its closest relations from its first foundation until the beginning of the Uruk period. It is therefore suggested that the ancestors of the Cilician Neolithic communities were in the eastern regions and that the foundations of the site followed the general re-settlement of the early ceramic bearing communities in the Near East at the end of the eighth millennium BC.

## INTRODUCTION

Yumuktepe is presently included within the suburbs of the city of Mersin, on the southern coast of Cilicia (Fig. 1). The site was occupied almost uninterruptedly from 7000 BC to the 13th century AD, probably owing to its favourable position both as regards its natural resources and trading opportunities and the possibility of politically controlling the area. Although other prehistoric sites developed in the surroundings, Yumuktepe shows the longest Neolithic record in the area.

There are at least three characteristics which might have bestowed special importance on the excavation of this site in the prehistoric archaeology of the Near East. First of all, it was one of the earliest Neolithic settlements discovered in Anatolia and among the few excavated in the Near East before the Second World War. Secondly, it was one of the thickest early Neolithic deposits, with a stratification of about 11 m. Thirdly, it was one of the few excavations in which, among other prominent archaeologists, the "father" of modern archaeology, V. Gordon Childe, was directly involved.

None of these exceptional events, however, led to particularly rich results as regards the

understanding of the site and related cultural problems. In spite of the intensive work carried out by J. Garstang during the four field campaigns on the site in 1936-39 and 1947-48, the Neolithic deposits, the lowermost in the stratigraphy, were the least investigated. The relatively extensive exposures made for the upper levels of the mound were radically reduced towards the base. Few scholars are probably aware that the Neolithic of Mersin is known by only one level (XXVI, about 9 m above the virgin soil, in an exposure which is roughly 8x8 m large), while the underlying 9 m deposits were investigated in a sondage of only 2 sq. m (trench A) (Fig. 2 and 3).

Gordon Childe was in those very years (Childe 1935a, 1935b) making his notable contribution to the classification and interpretation of prehistory, introducing the concept of economy as the basis of social structure and attributing to the start of food-production and the related Neolithic cultures the role which was to result in the most important revolution in human history. This approach gave rise to the wave of both theoretical and field studies which were to characterise the second half of the century and focus on the "Neolithisation" (place and time of origin, prime mover, diffusion, etc.) and, more specifically, on the Near

East, where these events appeared to be earlier and more spectacular than elsewhere. It is surprising, then, that the presence of such a scholar at Mersin did not orient the excavation towards a deeper interest in the earliest Neolithic levels, and particularly towards field techniques aimed at the reconstruction of the economy of these cultures.

New excavations were therefore started at Yumuktepe in 1993 to reconsider those aspects which had for some reason been neglected in the previous investigations (economy, environment, absolute chronology, lithic technology, raw materials, etc.) as well as to replace the Neolithic cultures of Yumuktepe in the new cultural context outlined in the last decades following the large number of discoveries in South-eastern Anatolia and Syria.

The main aim of the new excavations was to continue prehistoric investigations on the previously excavated western side of the mound, in order to relocate the old trenches and to integrate the published architectural documents with new ones: the shape of the mound has been changed radically during the last decades and no clear connections with the old excavation plans were left. Besides the excavation, an attempt was made to review the morphology of the territory in which the site was located and to combine the new information with the archaeozoological and archaeobotanical data for a reconstruction of the past landscape.

## THE LANDSCAPE

The coastal, well-watered plain of Mersin rises towards the Taurus range and inner Anatolia on one side, and opens towards Syria and the Levant on the other side. It is bordered to the north by the hills preceding the Taurus mountain range. Remains of Pistachio, Oak and Pine trees identified in the charred material from the early levels at Yumuktepe show that the area around the site was much more densely forested than in later, post-Neolithic, and particularly modern periods. Findings provide evidence of a humid environment with a con-

sistent vegetal cover as well as the practice of farming activities. The same is suggested by the faunal remains, all belonging to domestic animals, and especially by the remarkable presence of pig. Food plants included, from the beginning, a variety of cultivated cereals and legumes. Linen was also cultivated from the earliest periods and many fruits, such as olives, almonds and figs, were probably collected from the wild trees which grew in the vicinity of the site.

The analysis of a satellite ATSR-2 image highlighted geomorphologic transformations of the territory around Yumuktepe. Changes in the shoreline and the gradual formation of dune-bordered lagoons and swamps have characterised the region, as a result of interacting marine, fluvial and eolic morphogenesis. This phenomenon was probably already in progress in the mid Holocene, during the Neolithic occupation at Yumuktepe, though it probably became more visible in the landscape only after the Bronze Age. Neo-tectonic movements in the region, with both subsiding and rising areas, were also revealed, though their effect appears to have been strongest east of the site, in the gradually rising Adana plain. These movements are likely to have been responsible for an important morphological change in the immediate surroundings of the site: the Efrenk river, which now flows west of the mound, bordering and badly eroding its edge, seems to have changed its course, which was originally on the opposite side. As a result, the site should be now considered from a reversed perspective as regards the relationships between the morphology of the surrounding territory and the access to the ancient villages and urban centres on the mound. In particular, it is necessary to reinterpret the layout of the defensive structures in the various periods - all with a gate on the western side of the mound - which were probably organised according to the natural defensive resources, such as the river to the east, the coast line to the south and the rocky faults to the north.

THE STRATIGRAPHY AND LAYOUT OF THE MOUND

Intensive, often overlapping terracing was practised during the prehistoric periods all along the western slopes of the tell. Such concentrated dwelling activity testifies that this was the side of the mound used to climb up to the village in the various periods, at least until the end of the Chalcolithic. The terraces, in addition, allow to outline the contour of the ancient mound, showing that: a) the now missing portion of the hill, eroded by the river (Fig. 1), was largely of post-Chalcolithic formation and covered the earlier prehistoric core of the deposits on the same side; b) not only the height but also the contour of the prehistoric mound was therefore much smaller than today and c) the size of the tell remained almost unchanged from the early Neolithic to the end of the Chalcolithic, but was enlarged later, as is now proved by new soundings in the southern part of the mound.

The lowest layers reached by Garstang's diggings never hit the virgin soil. In a new sounding, the archaeological deposits were found to continue about one metre below. The total height of the present mound is therefore 23 m above virgin soil. The new sounding showed that aceramic Neolithic groups never settled in Yumuktepe. The first settlement, established on the sandy soil of the alluvial plain, belonged to ceramic-bearing farmers, whose dwelling remains formed the main, uninterrupted part of the prehistoric stratification of the site.

The new operations have largely confirmed Garstang's general outline of the stratigraphy, from the early Neolithic to the end of the Ubaid culture. However, a finer sequencing of levels and a different grouping of levels into phases can now be traced. A first revision of the published stratigraphy was proposed by Catherine Breniquet in a recent study (1994). Breniquet divides these levels in two phases, one including the whole stratification defined as Neolithic by Garstang, and characterised by Dark Faced Burnished Ware, the other includ-

ing levels XXV-XXIII (labelled as Proto-Chalcolithic by Garstang) and characterised by painted pottery. In our opinion, however, at least a third phase can be recognised in between, based on both pottery production and architectural technology and layout. The earliest phase, dated to between 7000 and 6300 BC, can be considered to occupy the lowermost 5 m; the second, corresponding to Garstang's level XXVII-XXVI and now dated to around 6000 BC, the overlying 3 m; the latest, corresponding to levels XXV-XXIII, dated to about 5800 BC, occupies the uppermost 2 m or more, followed by the Halaf and Ubaid sequence.

Different building materials were used in the architecture throughout the Neolithic sequence. Water-worn stones were selected and arranged in wall foundations and sockles, their shape and size varying through time. The layout of the superstructure, for which perishable materials were used, is undocumented until the latest phase, when mud bricks began to be used. The houses from this period, probably owing to frequent fires, lasted about half as long as the mud brick houses of the Halaf and Ubaid sequence, in the upper part of the site. In spite of the thickness of the deposits, the whole Neolithic development did not in fact last long: 11 m accumulated in about 1200 years, i.e. 1 m per 100 years.

The fires resulted in an accumulation of large quantities of charcoal, which provided now a series of C<sup>14</sup> dates: (Table 1)

THE EARLY NEOLITHIC PHASE

Trench A of the old excavations was re-located on the field, cleaned down to the bottom and dug below the limits of the old excavations, while a new sounding was made next to it (Fig. 3). The new deposits were rich in charcoal and animal bones for about 80 cm below the bottom of Garstang's trench, after which the amount of human occupation debris sharply decreased and the sediment became sandier. A new date of 7920±90 BP was obtained from near the bottom, and two others

m	Dates bp	Cultural attribution	Old levels	Calibrated BC
17.50	5360±80	Latest Chalcolithic	XIIB	4328-4046
17.50	5030±60	Latest Chalcolithic	XIIB	3940-3730
13	5940±70	Middle Chalcolithic	XVI	4909-4730
8.50	6980±80	Late Neolithic	XXV	5944-5716
8.50	7030±90	Late Neolithic	XXV	5964-5753
8	7160±80	Middle Neolithic	XXVI	6044-5893
8	7100±70	Middle Neolithic	XXVI	5985-5860
8	7090±70	Middle Neolithic	XXVI	5980-5850
8	7380±80	Middle Neolithic	XXVI	6293-6060
4	7545±75	Early Neolithic	XXX	6463-6192
4	7790±80	Early Neolithic	XXX	6627-6469
4	6675±70	Latest Neolithic	XXIV	5635-5440 (terrace)
0	7920±90	Early Neolithic	XXXIII	7004-6602

Table 1. Radiocarbon dates from the earliest sequence of Yumuktepe.

of 7790±80 and 7545±75 from about 4 and 6 m above, while the end of the phase was dated to 7380±80 BP.

Except for short segments of stone foundations, no dwelling structures were discovered in this small sounding. Fragments of burnt wall plaster bearing imprints of reeds (*Typha* sp.) on the back were found throughout the deposits, pointing to the use of wattle and daub structures on one course stone foundations. Sections of such structures, about 3 m large, were also visible on the erosional profile on the western side of the mound, where burnt mud deposits alternated with thick layers of white ashes (Fig. 4). Although no plastered floor were identified in the sounding, the varying concentrations of seeds vs. charcoal in these layers suggested an alternation between occupation floors scattered with food remains and collapsed walls and roofs with their wooden skeletons. The amount of animal bones and seeds suggests that this was a dwelling area, and was not reserved for animal stables as previously proposed. It is not clear whether these early huts were partially dug out of the soil. In the very early levels, small cobble platforms, in which bone and charcoal fragments were embedded, were probably designed to isolate fireplaces from

humid soil (Fig. 5).

The high frequency and good preservation of animal bones was remarkable in these layers. A preliminary analysis on these remains (Buitenhuis and Caneva *in press*) has provided the first information of this kind on prehistoric Mersin. The majority of the bones are from ovicaprids, followed by cattle and pig. However, if the weight of the bones is considered indicative of the animals' relative importance as meat producers, cattle were the most important source of food. All skeletal parts are equally represented, suggesting that the animals were killed on the site. Sheep, goat, cattle and pig are markedly smaller than those from Aşıklı Höyük, which is indicative of their domestic status. Yumuktepe is, so far, one of the earliest settlements with all four major domesticates present. The general characteristics of the fauna and the presence of pig confirm that the group was totally sedentary and that hunting was no longer practised. Evidence of a mixed farming economy is also provided by the botanical remains, which include domestic cereals (*Triticum dic.* and *Hordeum*), cultivated legumes (above all lentils, but also peas and bitter vetch) and wild fruits (olives, figs, pistachios, etc.) (Hala Barakat, pers. comm.).



The pottery from these levels, accurately described in the previous publication (Garstang 1952), consists of small fragments of Dark Faced Burnished Ware, ranging in colour from buff to dark brown and black. An impressed decoration with series of finger nail or point impressions was observed on a few fragments (Fig. 6), sometimes on extremely thin-walled and well fired black cups (Fig. 7).

The lithic industry includes mainly obsidian artefacts, the most typical retouched tool being a perforator on a bladelet (Fig. 8). Asymmetrical, curved points are common in such perforators. The wear traces on the points, identified through a high power microscope examination, suggest that these were used on a soft material and made grooves or incisions rather than holes. It is also likely that their finely retouched, often asymmetrical point is a result of a specific technique of blade truncation, rather than the tip of an intentionally made perforator. Lithic cores and waste were so rare that it is clear that no knapping activities were practised in this area.

The bone industry included different kinds of perforators and spatulas, which do not appear to have been found with such a frequency in previous investigations.

#### THE MIDDLE NEOLITHIC PHASE

The upper part of the former A trench was so badly eroded that the respective levels (probably XXVIII and XXVII), which would be included in this phase, could not be re-investigated in the new deep sounding. Behind both the old and new soundings, a new trench was opened at an elevation of 9 m above the new zero. This area, which covers about 170 sq. m, was thought to partially overlap the previous exposure in areas A, B and C, at level XXVI. The presently uncovered structures in this area could, therefore, be either contemporaneous with Garstang's level XXVI, thus including the remains of the multi-roomed building described at that level, or slightly earlier. If contemporaneous, the cell structure previously uncovered could be interpreted as annexes

(storage?) to the building uncovered in the new trench (Fig. 9). The importance of this building seems to be emphasised by the presence at the entrance of two huge conglomerate blocks which came from outcrops some distance away and were carried up to the site. Although the superstructure was still made of perishable materials, this phase shows a new general architectural technique, which uses high stone sockles, several courses of which are still preserved, above the foundations. The new building is composed of rectangular rooms connected by a corridor. The stones are rounded or oval and sometimes partially shaped on the outer side to make a more regular alignment. The two monolithic blocks of marine conglomerate, already discovered in a rather strange layout in Garstang's excavations, have been found to have a more logical position in this new plan in what resembles a massive gate on the southern side of the building.

The structure shows traces of several re-buildings, in which the selection of the shape, size, and laying of the stones changes, though the earlier plan is maintained and some of the architectonic elements (such as corners) occasionally reused. The interior showed no particular structures, except for two plastered niches made of flat pebbles which protrude from the walls inside two of the rooms. The carbonised seeds and fruits and other macrobotanical remains found scattered on the floors of the dwellings (Fig. 10) suggest a domestic food processing activity. The building provided several dates ranging between 7380±80 BP (6293-6060 BC) and 7090±70 BP (5980-5850 BC), which show that the complex was used for a long period of time. Another building was found to the south on the same level. It was badly burnt and traces of the wattle and daub superstructure were found in its filling.

The pottery did not differ much from that in the earlier phases, but the most common type became orange unburnished pear-shaped small jars or bowls (Fig. 11). The impressed decorations almost disappeared and new dec-

orative motifs were obtained with finely combined separated burnishing strokes applied to dark grey surfaces. This kind of pattern burnishing was also found in Phase B of the Amuq sequence. A more common decoration technique consisted of a quasi metallic surface burnishing on thin black or red cups (Fig. 12).

No change in the lithic implements is visible in these levels. Retouched tools are limited to small "perforators" on a bladelet, which, according to trace analyses, were used as burins for carving hard materials.

#### THE LATE NEOLITHIC PHASE

The whole area was probably abandoned after the collapse of the buildings of level XXVI. A thick series of fine horizontal ashy layers was deposited before the next building level was laid (cf. Fig. 9). Several grave pits, containing both adult and child burials, were cut out of these deposits. The skeletons, found in a very poor state of preservation, were placed in circular pits, lying on their right side, in a contracted position. Besides necklaces of stone and shell beads (Fig. 13), some of the graves found during the new excavations also contained small pots, consisting of beakers with a flaring neck or small cups, decorated with a very standardised kind of painted "yıldırım" motif in red/brown on an unburnished buff or light orange surface (Fig. 14).

In both recent and previous excavations (Garstang's so-called silo base level), the area has been characterised in these levels by a concentration of graves and stone-paved silo pits, together with long stone walls which appear to be remnants of large enclosures, rather than of living quarters (Fig. 15). A clear break in the house planning between levels XXVI and XXV was already evident in the plans of Garstang's publication, though not pointed out in the text. This break is now underlined by a clear stratigraphic gap, as well as by the combined changes that emerge from the building technique and probable function. Mud bricks were used for the first time. Overlying the buildings of level XXVI and the following heap of ashy

layers were the remains of large walls whose size, orientation and building techniques were completely different from previous ones: boulders were used to make the outer sides of the wall, which was then filled with packed small stones. The base level of one of these walls (probably the southern end of the wall reported in area 289 in Garstang's Fig. 12), which was burnt in a big fire, is now dated to 6980±80 BP, showing that the stratigraphic gap does not correspond to a long chronological interval.

Besides these structural differences, additional changes can be seen in the ceramic repertory. Here, the long development of the Dark Faced Burnished Ware horizon seems to have come to an end, with the appearance of red slipped, burnished (Fig. 16) and painted, unburnished pottery. Various geometric motifs (chevrons, vertical parallel or crossing bands, dots and hooks, etc.) were applied with a dense red or brown colour on a light cream unburnished surface. The simple, repetitive motifs are rationally organised on the surface, separating and underlining the different parts of the vessel body (rim, neck, shoulders, etc.). The motifs were applied using a finger, which made large drops and spots (Fig. 17). The "yıldırım" motif, applied to the body of the vessel, sometimes incised (Fig. 18), is recurrent, while straight bands were applied to the vertical neck (Fig. 19). The new ware is light cream in colour, with a coarse stone temper. A limited variety of pottery types was found in these levels. In both the present excavations and Garstang's catalogue, besides the fine funerary ceramic, the common types consist of unburnished, particularly coarse, big, thick containers, including open buckets or necked jars with flat bases. Both the architectural and pottery characteristics, together with the nature of the sediment, suggest that this part of the site was located on the periphery of the settlement during this period and probably used for farming activities rather than as a living sector. The macrobotanical remains contain few, pure cereal taxa, which is consistent with a food storing function of the area. The

silo features include ring-shaped, stone-walled structures, sometimes lined with a thick layer of mud. The hypothesis that this was a collective storing zone is further supported by the finding of stone and ceramic button seals with geometric incisions (Fig. 20).

## CONCLUSIONS

The one thousand years long Neolithic sequence of Yumuktepe is characterised by elements of continuation, especially in the lithic industry and vessel shapes, combined with gradual changes in other aspects, from highly burnished to unburnished painted pottery, and from wattle and daub to stone and finally mud brick architecture. One of the most significant, global changes in the stratigraphy occurs between levels XXVI and XXV, and not between XXV and XXIV as previously thought. In level XXV, which follows a short break in the occupation, not only mud bricks represent a significant architectural innovation, but the layout of the village is functionally modified and new styles in vessel shapes and decoration are introduced. In addition, the appearance of the first seals from the silo area suggests the existence of a form of collective storing, which is now beginning to be considered peculiar to the pre-Halaf and Halaf societies (Akkermans 1995). These changes are partially paralleled in the Amuq sequence, where pattern burnished and painted pottery similar to that of Yumuktepe appear in phase B, while button seals with the same geometric patterns of crossing lines are already found in phase A (Braidwood and Braidwood 1960). However, the peculiarities of the painted motifs and the large jars found at Yumuktepe point rather to the start of a new local development which is increasingly independent from its areas of origin, whatever they may have been. This phenomenon is consistent with the tendency towards a progressive regional fragmentation which characterised the early ceramic cultures all over the Near East during the first millennium of their development.

No earlier, aceramic cultures have yet been documented in Cilicia; the nearest other evidence of these cultures is to be found either in the Euphrates valley or on the Anatolian plateau, both approximately the same distance away. This poses a problem as to how and why the Cilician Neolithic communities originated from non-local ancestors.

In this sense, the early occupation at Yumuktepe reveals many interesting peculiarities. Besides the simultaneous diffusion of farming villages in a previously deserted neighbouring area, Yumuktepe is characterised by its peculiar role as an intermediary in the obsidian trade to the Near East, by the absence of hunting and by the establishment of a tradition of stone architecture.

The analysis on the obsidian used at Yumuktepe (A. M. Palmieri pers. comm.) and at nearby Gözlükule-Tarsus (B. Magness - Gardiner pers. comm.) indicates that this material came from Central Anatolian sources (Göllü Dağ and Nenezi Dağ). It is possible, however, that tribes acting as intermediaries were in charge of the exchange of obsidian at the edge of the region, as there is no evidence, in archaeological records, of direct contacts between the coastal sites and those on the plateau. By contrast, the pottery, funerary habits, architectural planning and techniques, and the whole repertory of luxury and symbolic objects at Yumuktepe are markedly different from those on the Anatolian plateau. The lack of obsidian debitage at Yumuktepe could be a further indication of the presence of intermediaries, as the material would have been imported as semi-worked products, especially blades and bladelets, and not knapped on the site.

The total absence of wild animals, apart from fish, is another peculiar feature of Neolithic Mersin if compared with other contemporary contexts, where hunting still played a certain role in the economy (Cavallo 1997). The presence of pig from the very beginning confirms that this was a fully sedentary community. Hunting must no longer have been of interest

in such an environment, since the inhabitants of Mersin had access to less interesting and less abundant wild fauna than those of the sites on the Anatolian plateau, such as Çatalhöyük. Fish might have been sufficient to integrate the farming and breeding economy at Yumuktepe. We may therefore presume that also the cultural and ideological world at Yumuktepe was quite different from that at Çatalhöyük. A recent tendency in prehistoric archaeology has been to search for the roots of the dynamics of cultural changes in the cognitive principles rather than in economic or environmental factors. The lack of clear symbolic messages in the objects and architecture at Yumuktepe, if compared with the contemporaneous Çatalhöyük, does not permit such a comparative analysis, but this absence is in itself evidence of great diversity between the two sites.

The economic, architectural and ideological differences between Yumuktepe and the sites on the Anatolian plateau are therefore strong enough to hypothesise that the first settlers of Yumuktepe were not of Anatolian origin. Instead, the pottery characteristics of Yumuktepe fit in well with Braidwood's description of the 7th millennium pottery from the Amuq plain (Braidwood and Braidwood 1960, Caneva pers. observ.) and the neighbouring Qoueiq valley (Mellaart 1981), in northern Syria. Besides Dark Faced Burnished Ware, phase A of the Amuq/Qoueiq included the same variety of impressed/incised decorations, and of coarser wares like those found at Yumuktepe. The same applies to the collection of other objects, such as javelin points, bone tools, ground stone celts and stamp seals. The planimetry of the earliest villages at Yumuktepe, which is still unknown, should provide in the future the information needed to link these coastal sites to a specific northern Levantine tradition.

The pottery traditions of northern Mesopotamia and Syro-Cilicia are basically separate in this early phase. The Amuq plain seems to be the only region in which these two traditions meet. They then separate again,

stretching in almost parallel bands in the Levantine regions in a pattern of cultural transmission probably influenced by the corresponding routes of the obsidian trade. The irregular pattern of cultural transmission reflected in the early ceramic cultures of these regions, however, suggests that these contacts were probably not part of an established trade organisation, but were based on the highly mobile relations of nomadic tribes which characterise the whole Levant in this period.

The transition from aceramic to ceramic cultures still remains one of the most intriguing problems of Near Eastern prehistory. After the long development and diffusion of farming and the remarkable flourishing of the PPNB cultures, nearly all the sites were abandoned and the general territorial occupation changed. Few sites continued to be inhabited into the following period, and even fewer uninterruptedly, while the early pottery traditions were established in new sites, very often in previously unoccupied areas.

In particular, a migration towards the coastal areas of groups of farmers who maintained part of their original cultural traits can be seen all over the Levant in the 7th millennium BC. This phenomenon is of a non-nomadic nature, simply a short-term transfer from one installation to another, as Cauvin describes it (Cauvin 1997: 217). The discontinuity of occupation between the pre-ceramic and the ceramic cultures, however, is so widespread in the Near East (Roodenberg 1989, Stein 1992) that it should probably be analysed from the general functional perspective of the long term evolution of farming and breeding economies in their areas of origin and not with single cases. At any rate, Yumuktepe is one example of such a migratory phenomenon in Cilicia during the 7th millennium, a period in which several similar new sites were established in the plain of Mersin, on the banks of small rivers. Their foundation apparently goes back to the same early Neolithic phase, dated to between 7000 and 6000 BC. Cilicia represents therefore the westernmost area of the expansion of the 8th millennium Levantine farmers towards

coastal regions. In its sequence, Yumuktepe confirms the peculiarity of this expansion, which established a kind of territory, in which some cultural traits continued to be shared.

Although a larger network of relationships with other regions developed, the relations with the Near East were never interrupted and for several millennia, well into the Bronze Age, Yumuktepe maintained its role as westernmost boundary of the Syro-Mesopotamian world.

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## Aşıklı

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**KEYWORDS:** *Aşıklı, Aceramic Neolithic, Stratigraphy, Settlement Pattern, Burial Customs, Subsistence Economy, Industries, Human Activity, Socio-political Setting.*

**ANAHTAR KELİMELEER:** *Aşıklı, Çanak Çömleksiz Neolitik, Tabakalanma, Yerleşme Düzeni, Ölü Gömme, Beslenme Ekonomisi, Teknoloji, Topluluk Uğraşları, Sosyo-kültürel Yapı.*

## ÖZET

Aksaray'ın 25 km güneydoğusunda, Kızılkaya Köyü'ndeki Aşıklı Höyük'te 1989'dan bu yana kurtarma kazıları yapılmaktadır. Kazılarda Melendiz Su'yun kıyısında yer alan höyüğün kuzeybatısındaki derin sondajda şimdilik Akeramik Neolitiğe ait 3 tabaka saptanmıştır. 3. tabakada ancak 3 yapı evresi gün ışığına çıkarılmıştır. 10 yapı evreli 2. tabaka ile 3. tabaka arasında bir sel ve çöplük/işlik dolgusu vardır. Yapılar kerpiçtendir. Kerpiç konutların oluşturduğu mahalleler arasında küçük avlular, dar geçitler yer alır.

Düzeltilmiş radioaktif karbon ölçümlerine göre Aşıklı'nın 2. tabakası M.Ö. 8. binyıla tarihlendirilmektedir. Höyük üzerinde açılan geniş alanlarda 2. tabakanın üst yapı evrelerine ait yerleşme düzeni saptanabilmektedir. Höyük ortalarındaki geniş bir caddenin kuzey ve doğusunda halkın oturduğu mahalleler, mahalleler arasındaki çöplük/işlik olarak kullanılan büyük boş alanlar, güneybatısında ise olasılıkla yönetici ya da yöneten gruba ait müstemilatıyla birlikte iki binadan oluşan bir yapı kompleksi vardır. Bunlardan daha güneybatıdaki bir tapınak, diğeri ise yöneticinin oturduğu yer olarak yorumlanmaktadır. En son evrede yerleşme yeri doğuda bir çevre duvarı ile sınırlandırılmış ve bu kez kuzeydoğuda bu çevre duvarının içinde gelişen alandaki konutlar yöneticiye ya da yönetici sınıfa ayrılmıştır. Ayrıca höyük dışında, güneyde Melendiz kıyısında 3. tabakadan daha eski bir yerleşme parçası bulunmuştur.

Aşıklı'da obsidien dilgi endüstrisi egemendir. Jeokimyasal analizlere göre Aşıklı'ya obsidien blok halinde volkanik Göllüdağ çevresindeki Nenezi ve Kayırlı kaynaklarından getirilmiştir. Aşıklı'ların uğraşları arasında yontmataş, kemik/boynuz, sürtme taş endüstrileri, deri, ağaç, kemik işçiliği, avcılık ve az miktarda tarım yer alır.

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Aşıklı'nın 2. tabakasının üst yapı evrelerinde yoğun avcı ve toplayıcılığın yanında az da olsa *einkorn*, *emmer*, *durum* buğdayı, arpa tarımı başlamıştır. Aşıklı'da avlanan hayvanlar arasında atın bulunuşu son derece önem taşımaktadır. Aşıklı'da en çok yabani koyun/keçi az olarak da sığır, domuz, geyik ve tavşan, kuş ile balık avlanmıştır. Ancak köpek kemiklerinin bulunmayışı dikkat çekmektedir.

Aşıklı'da ölü gömme şimdilik intra-mural olarak adlandırılabilir. Yapılaşmanın yoğunluğuna karşı, bulunan insan bireylerinin sayısının azlığı, höyüğün başka bir tarafında ya da dışında ayrı bir mezarlık alanının bulunduğunu düşündürmektedir. Betimli buluntuların azlığı, Aşıklı insanların dinsel yaşam ya da inançları hakkında yeterli bilgi vermemektedir. Aşıklı'da kadın erkek arasındaki iş bölümü hakkında da daha fazla araştırmaya gereksinim duyulmaktadır. Ancak Aşıklı insan topluluklarının bir yönetici ya da yönetici grubu tarafından kapsamlı bir örgütlenme ile idare edilmesi gerektiği buradaki kültürel öğelerin ve verilerin çeşitliliğinden anlaşılmaktadır.

## ABSTRACT

The medium-sized mound of Aşıklı Höyük lies on the banks of the Melendiz river in the village of Kızılkaya 25 km southeast of the city Aksaray. Since 1989 salvage excavations have been in progress at the mound, which is comprised of three main levels, all belonging to the Aceramic Neolithic, as confirmed by a deep sounding opened at the northwest. Excavations have now reached as far as the third building phase of Level 3 (Phase 3C), counting from the surface downward.

Level 2 consists of 10 building phases, among which Phase 2B has been exposed over a large area on top of the mound to reveal the settlement pattern.

By the upper phases of Level 2 agriculture had begun; although the economy was still mainly dependent on hunting and gathering, the inhabitants had begun to cultivate wheat (*einkorn*, *emmer* and *durum*) and barley. The developed organization in the upper phases of the Level 2 at Aşıklı, which played most probably a significant role in obsidian trade, leads us to believe that the community was guided by a ruler or an elite family.

Calibrated radiocarbon samples date Level 2 to the 8th millennium BC. Settlement remains even earlier than the habitation on the mound itself, have excavated to the south just on the banks of the Melendiz.

Certain indications of the division of labor between men and women are most interesting, but need to be followed up with additional research.

## INTRODUCTION

At present the site most informative on the Aceramic Neolithic cultures of Central Anatolia is Aşıklı Höyük (Fig. 1; Esin 1998 a, 1998b). The mound lies in the Province of Aksaray (38° 21' 02" N, 34° 13' 04" E), just 25 km southeast of the province capital. When floodwaters fill the reservoir of the Mamasın Dam under construction in the immediate vicinity, Aşıklı Höyük will be surrounded on its north and west by a lake; it is for this reason that salvage excavations were begun by the Prehistory Department of the Istanbul University Faculty of Letters in 1989.

First discovered in 1963 by the Hittitologist E. Gordon, Aşıklı Höyük was investigated by I. Todd as part of a thorough and detailed surface survey (Todd 1980; Esin *et al.* 1991). The morphology of the region around Aşıklı has been presented by geologists as "*Volcanic Cappadocia*" (Toprak *et al.* 1994, Esin *et al.* 1991: 125, 139, pl. 1). The mound is situated on the banks of the Melendiz River in the village of Kızılkaya (Red Rock), which takes its name from a depression of Miocene formation characterized by reddish veins of mineral deposits.

The prehistoric mound of Aşıklı, 1119.45 m above the sea level, is located by the narrow valley along the alluvial flood-plain of the Melendiz River (Figs. 1-2, 4; Esin 1998 b: 62-63). Some 40 km to the south of the Kızılkaya village there are the heights of the Quaternary volcanic cone of Hasandağ and the Melendiz Range of Miocene origin, both over 3000 m high. Issuing from the slopes of these two mountain chains, the river Melendiz cuts through the canyon-like Ihlara Valley to meander past Kızılkaya Village, enclosing the mound of Aşıklı on the south, west and north. It then flows in the direction of Aksaray and continues northwestward, known as the *Uluermak* (the Great River).

Tectonic explosions from the Miocene onward have filled the region with volcanic hard and soft rocks such as tuff, andesite, rhyolite, pumice and basalt. This tectonic activity formed the rock pillars of tuff with heads of

andesite that have weathered into the famous "Fairy Chimneys", and the numerous caves which were worked into underground churches by the early Christians.

The region, at an average of 1000 m above sea level, forms part of the cold Central Anatolian steppe. The annual rainfall is just over the 330 mm, almost at the minimum level necessary for dry farming (van Zeist, de Roller 1995). Cereal grains are raised today in the Melendiz valley; gardening and grape cultivation is of lesser importance. Oak covers the slopes of Hasandağ, and hack-berry woods with edible fruit (*çitlenbik*) grows among other broad-leaf trees in the Ihlara Valley. The economy is based more heavily on agriculture than industry; in addition to crops, both sheep and cattle are raised here.

The region is rich in sources of obsidian, the main occurrences of this rock of volcanic origin are at the Pleistocene formations of *Acıgöl* and *Bekarlar* in the Derinkuyu depression of Nevşehir, nearby the Quaternary paleo-lake of *Çiftlik* in Niğde, the Quaternary formation of *Göllüdağ* and others in the immediate surroundings called "*Nenezi*", "*Kayırlı*", "*Bozköy*", and "*Kömürcü*". *Naviform* cores and blades at the ateliers of *Kömürcü* and *Kaletepe* imply early use of these sources with some on-site mass-production (Toprak *et al.* 1994, M.C. Cauvin 1996: 14 ff., 31, Balkan-Atlı and M.C. Cauvin 1997: 293 ff., Balkan-Atlı 1998a: fig. 1).

It is believed that some of these sources had been used even earlier by nomadic Paleolithic hunters and gatherers who set up temporary camps in the region (Balkan-Atlı and M.C. Cauvin 1997: 296, 306 with ill. 4, 311 with ill. 10). It seems that Aşıklı here in the Central Anatolian steppe, provided with convenient living conditions and nearby sources of volcanic glass, played a great role in trade, supplying not only Cyprus and the Levant, north Syria and Iraq with obsidian, but probably directing a whole network of more distant trade via the Gülek pass, the Çukurova and Cyprus (M.C. Cauvin 1966; Balkan-Atlı 1998a: 1-3, 15 ff.).



## THE CHARACTERISTIC FEATURES OF THE AŞIKLI CULTURE

The mound of Aşıklı covers an area of 3.5 - 4 hectares, rising 15.35 meters above the Melendiz plain at the north, and 13.16 m at the south (Figs. 1-4). Prior to the excavations, a considerable part of the mound and, in particular the northwestern and southwestern slopes had been eroded due to natural agencies and by intensive ploughing (Figs. 2-4). Together with the oldest settlement remains on the riverbank south of the mound, a total area of about 4000 m<sup>2</sup> has been exposed; it is estimated that 10% of the mound has been excavated (Figs. 2-5). The structural remains which have come to light indicate that Aşıklı presents an incipient model for planned town setting and social organisation (Figs. 3-4). Most of the buildings are mudbrick, rectangular or trapezoidal in plan, often with rounded corners (Figs. 3-7, 12). Stone, which came into general use much later than mudbrick, was employed only when necessary and for the foundations of certain special structures; it was also used in the construction of storage bins and enclosure walls (Figs. 3-4, 13, 17-18).

### The Stratigraphy

In the deep sounding in Grids 4 F-H and 4 G-H at the northwest of the mound (Figs. 2-4, 6-11) three levels, designated as 1-3 -counting from top to bottom, have yet been revealed. Level 2 is comprised of 10 consecutive "settlements," or building phases, and mudbrick houses and courtyards of three building phases of Level 3 (3 A-C) have thus far been exposed. To reveal as much as possible of settlement planning, the upper phases of Level 2 have been excavated horizontally over a wide area on the top of the mound (Figs. 2-4).

In addition to habitation on the mound, an additional segment of settlement was encountered on the banks of -and in- the stream of the Melendiz (Fig. 5). Sealed by a 1.5 m deep layer of gravel and sediment, the structures here must have been inundated by a sudden flood (Esin 1996: 35-26). It would appear that the Aşıklı residents then deserted their riverbank

abode to move elsewhere. Settlement at the mound site may well have begun after this, in which case the riverside settlement is definitely earlier. We cannot yet say for sure, however whether resettlement at the mound occurred immediately after the abandonment of the earlier settlement or some time later. The characteristic architectural layout seen at the settlements in the mound was already evident in the riverside habitation. Trapezoidal mudbrick houses were built up one against the next, separated at intervals by narrow courtyards. On the clay-plastered floor of one room -possibly a kitchen- a pair of deer antlers were found alongside stone implements, including a number of grinding stones. Under the floor of the neighboring residence was found a burial, a human skeleton on its left side in a kneeling position, the legs bent back from the knees. The head lay towards the south (Fig. 5). A large hearth with a pebble floor found in the northeast corner of another house appeared no different from those later discovered in the settlement in the mound (Özbaşaran 1998a). A quantity of obsidian tools and waste flakes were recovered from the fill of the houses. These first settlers must certainly have been specialized hunters and gatherers, but they had already established the settled life style that would continue at Aşıklı.

Another findspot worthy of mention is a burned phase on the northwest slope of the mound in Grids 2 J-L, well above the stratum of flood deposit. Because this area has not yet been excavated, no more exact stratigraphy or details are available.

Trenches in Grids 2P and 2M on the southwest of the mound have been dug to depths of 15.52 and 15.28 below the datum point respectively. Settlement phases below the flood deposit continue to this level; we could not reach virgin soil here due to the ground water (Figs. 2, 4; Esin *et al.* 1991: 129).

Virgin soil was reached, however, in a small area at the bottom of the deep sounding in Grids 4 F-H/4 G-H at the northwest of the mound; here virgin soil lies at -16.20 m (Figs.

2, 4; Esin *et al.* 1991: 128, 162, pl. 4). The deep sounding was begun as a step-trench in 1988-1990. Due to the extreme slope here at the northwest of the mound, however, not all the strata were clearly enough represented; excavation was therefore later renewed in the same trench to clarify the stratigraphic sequence (cf. Esin *et al.* 1991: 28). This control sondage in the step-trench has now progressed to the depth of -9.00/-9.20 (Figs. 7-9).

Due to agricultural activity on the mound prior to excavation -as well as natural erosion- what little remained of Level 1 had been well integrated into the topsoil (cf. Esin *et al.* 1991: 128). It is thus the substantial Level 2 of Aşıklı that defines this Aceramic (or Pre-Pottery) Neolithic culture for us. The structural characteristics of Level 2 represent those investigated in the mound in general; they include all the building techniques and principal features (Figs. 3-4, 6, 8, 18).

Separating Level 2 from Level 3 below is a level of silt representing a flooding at this section. Immediately above this and completely covering the areas opened in Grids 4 G-H are the remains of a dump/work-area (Figs. 7-9). Because the floodwaters seem to have washed through the structures of all phases of Level 3, leaving mixed debris in the rooms and on the walls, there may later be a need to correct the stratigraphy of the Level 3 settlements as understood at present.

Now ascribed to the earliest phase of Level 3 (*Phase 3C*) we have only Room UM against the left scarp of the trench, and the narrow court adjoining it to the south. The floor level is at -9.20 m (Figs. 3, 7).

In *Phase 3B* we have a courtyard (UY) with the north-south oriented two-room structure UN-VA, 10.00 x 3.00 m, in the center. To either side of UN-VA are more rooms, VL against the east profile, and a series of rooms, UT, against the west (Figs. 3, 7). One burial under the floor of UT contained a skeleton in the *hocker*, or fetal position, and slightly to the west of this internment a stone mortar had been separately buried. The depth of these structures runs from -8.70 to -8.86.

The structures in *Phase 3A* run into the western and eastern profiles; the center of the trench is occupied by the court UV, filled with flood deposit. Because at least one wall of each room is within the excavated area, we can estimate the dimensions of the rooms at between 3.5 x 4 m and 3 x 2.5 m. Room VI lies to the east, replacing Room VL of *Phase 3B* below; lined up along the opposite (western) side of the court again lie a series of rooms, from north to south, TR, TT with the narrow court TU, UK and VB (Figs. 3, 7). *Phase 3A* was exposed at levels between -7.68 and -7.87 m.

Aside from obsidian, the most frequent tools found in the rooms and fill of Level 3 were of bone and ground stone. The obsidian industry, both in the variety and relative proportion of tool types, can not be distinguished from that of Level 2. In this earlier level the blade industry is dominant, with scrapers on flakes and blades predominating. Within the sample, arrowheads are very few in number, and cores are generally bifacial.

Although the analyses of the plant and animal remains of Level 3 have not yet been completed, a preliminary study of the animal bone by B. Öksüz has revealed some information. She reports that the cattle bones represent mainly young animals. Relatively large in size, they should indicate the larger wild variety. In addition to the cattle, sheep, goat, horse, wild boar, rabbit and fox were represented, but no dog was recognized in Level 3 (cf. Buitenhuis 1996).

In Level 2, above the flood deposit, a large dump/work-shop area appeared in the deep sounding. At first it covered the entire area exposed in the sounding, completely isolating Level 2 from Level 3 below, but over the progressive building levels this dump/work-shop area (labeled RG/SI/SS according to phase) was gradually impinged upon by structures until it eventually covered only the southern part of the trench (Figs. 7-9).

The southern part of the trench in Grid 4 G-H was an area covered with a fill of different organic wastes, mudbrick remnants and

stones. It contained many animal bones and pieces of obsidian, and was laced with veins of ash. In 1998, the removal of Room G, which was situated against the south profile, revealed the room VF, which could be ascribed to Phase 2J. The floor was at -7.04, but the foundation walls reached deeper to 7.56.

Room R of Phase 2H against the east profile was likewise removed that same year. Here a floor level belonging to the later use of the same structure in Phase 2G was encountered at -5.68 m. Below this then appeared the room UU of Phase 2H with a hearth. It had been slightly larger than Room R; on the south and west, the walls of Room R indeed were built just inside its walls. The floor of UU lay at -6.12 m, while the wall foundations had been laid at the -6.68 depth. Beneath UU was a thin stratum of dumped waste, under which lay the room VH of Phase 2J. The west wall of VH, again of mudbrick, was based at -7.45 m.

In 1998 the room VJ in the north of the trench was also excavated. The top part of the walls, which again extend into the profile on the east, could be seen at a level of -7.50 to -7.60 m adjacent to the south and west walls of the room RO to the northeast. The foundation walls of room VJ, however were laid much deeper, at -8.58 m; the floor was at -8.43 m. As a support for the north wall, stones placed both vertically and horizontally lined the interior surface. Under the floor-formed of layer after layer of plaster and the stones lining the wall, was a thick fill containing many animal bones.

Thus the open dump/working area of Phase 2J was bounded on the west by the rooms VF and Y, on the east by VH, and on the north by VJ and RO. The scheme here is thus that of a working area bounded by individual rooms, each independent of one another (cf. Özbaşaran 1998b: 3). The mudbrick walls of the structures were 25-30 cm thick and plastered with clay. They were all large enough to have served as residences.

In Phase 2I as well there is an area left as an open court, the SI dump (Fig. 11). To its east (underneath Room R but slightly larger) stood

the room UU with a hearth, to the southwest a granary (RK), to the west RL and Y to the north of it; to the east of Y and RL ran the rooms PM, PN and AT. South of these, then, the quite large structure RI, which continued in use throughout several building phases, and RL, closed the court SI on the north (Fig. 11). The number of buildings increased in Phase 2I, but whether or not this reflects an increase in the population of the settlement is not yet clear (Özbaşaran 1998b: 3).

The open dump/work-shop area SS that had covered more than half the area of the deep sounding in the preceding phase has now shifted further to the southeast (SI), with the addition of more structures to the north (Özbaşaran 1998b: 4). All of the rooms are trapezoidal/roughly rectangular, but variously oriented; while RK, RI and Y run north-south, the room RL is oriented east-west (*ibid.*).

Hearths were situated on the floors of RI and RL. In RL the westernmost of the small round bins was partitioned into three (Fig. 11). The bins, relatively scarce in the houses at Aşıklı, were unfortunately found empty, so that we still do not know what had been kept in them. They must certainly have served as storage space.

The plastered floor of RI had been cut through for a burial; one former Aşıklı inhabitant lay buried here in the *hocker* position. It was the practice at Aşıklı to renew and replaster the floor after a burial; the room then continued in normal use.

The room Y in the northwest corner of the deep sounding, built in the preceding phase, continued in use as a habitation after renovation of the walls and floor.

Building phase 2H, then, was not much different from the earlier phases in settlement pattern; only the number of rooms and the dimensions of them had changed somewhat (Fig. 11). Old rooms had been restored for continued use; new walls had been built slightly inside or outside the position of old ones in order to reduce or enlarge the interior space. This had become a standard procedure at

Aşıklı, and it was the method used for each new building phase on the mound. The employment of such a building procedure suggests that each Aşıklı family had been allotted a certain area of residential space, which they appropriated over and had to make do with. Those wishing to enlarge their living space could only gain a bit of space by shifting walls outward into any available courtyard area.

The rooms G and R were added in this phase, and the long narrow room RK of the preceding phase was enlarged. Keeping the west wall in the same location, the east wall was shifted further to the east, making RK more spacious in Phase 2H (Fig. 11). This of course reduced the proportions of RG, the open court to the east, which continued in use as a dump/work-shop area. Indeed, this open space had seen no change in character since the beginning of Level 2. With the dismantling of Phase 2H, debris cleared from the old structures was again heaped in this dump in preparation for next phase building. Despite some reduction in size, throughout the whole of Level 2 this area excavated in the deep sounding retained its use as a dump and work-shop area as indicated by of shallow veins containing abundant animal bone, hack-berry seeds, and implements of obsidian and bone as well as other waste. The deposit in these veins had usually been burned.

The old room RK was replaced in Phase 2H with the larger structure MS, with a hearth at the southwest corner of its clay-plastered floor. Across the north of the room, a bench partly of stone and partly of mudbrick ran towards the west wall (Figs. 9, 11).

Room D, reusing only the west wall of the earlier structure, was built above RL. Like room R, room D also had a hearth in its northeast corner (Fig. 11).

The new room P copied the plan of RI below it; a new hearth was built above the old (Fig. 11). Room Y, on the other hand, was smaller than its predecessor, and its walls were rearranged (Fig. 11). In the southwest corner

and at the center of the west wall, low mudbrick partitions were installed, and a thin wall of mudbrick at right angles to the north wall divided the north of the room into two. The southeast corner was covered with large flat stones laid so as to overlap one another, probably a kind of insulation for whatever produce or wares were stored here. Room Y must not have served as a residence in Phase 2H; it was more likely a store-room or pantry.

The single-room structure AS replaced its two-room predecessor at the far north of the trench. Some sort of division must have been called for here, however, because a curtain-wall of very thin mudbrick and stone represents an attempt at interior division in this phase (Özbaşaran 1998b: 5). A hearth was located in the southeast corner. The west section with plastered walls and floor may well have served as a residence (Fig. 11).

In Phase 2G the function of the open area RG of the preceding phase was taken over by the smaller dump/work-shop area in the southeast of the trench designated as MN (Fig. 11). The narrow open area NG, which appears to be branching off between the structures to the west like a dead-end alleyway (Fig. 9) has a different floor level.

The rooms of the structures G and D, from the southwest to the northwest respectively, continued in use during Phase 2G. The walls and floor of the room Y were renovated, but the storage bins on the floor were left out (Fig. 11). In the north of the deep sounding the room AS was reduced in size during the renovation; it received a new floor, and the division wall was taken away. AT to the east of AS retained its place, but its new walls reduced the size of the room (Fig. 11).

The west wall of the one-room structure P of the preceding Phase 2H-towards the center of the trench north of Room R-was also altered, and the hearth that had earlier projected perpendicularly quite far from the south wall had to be situated parallel to it in Phase 2G (Fig. 11). Shifting the west wall of structure P further to the east opened communication into

the alley-like court NG (Fig. 1). Room R to the east of P retained its character from the preceding phase.

There were hearths in rooms MS and D as well as P. In P, however, a second, poorly preserved hearth was discovered in the northwest corner and traces of two pits for burials opened in the floor. All the rooms in Phase 2G had clay-plastered walls and floors (Özbaşaran 1998b: 6).

The number and organization of the structures in Phase 2F were no different from those in Phase 2G (Fig. 11). The structures G, D, P, Y, AS and AT once again continued in use. The wall to the east of the dump/work-shop area (MS) of the previous phase was rebuilt in Phase 2F with a double row of mudbricks, making it 48 cm across. This open area has been designated MT in Phase 2F (Figs. 9, 11). Even though the walls of the dump MN had been reinforced with stones in Phase 2G, the need was felt to strengthen its mudbrick construction in Phase 2F. In another alteration here, the northward continuation of the passage NG was closed off with a wall of mudbrick (Fig. 11). The small room MT thus formed must have been used as a storage or work area (Fig. 11), for it was found heaped full of river pebbles like those used to pave the hearths (Özbaşaran 1998b: 6).

A small window-like smoke-hole accompanying the hearth in the northwest corner of room P indicates that the tradition of the ventilated hearth began in Phase 2F. Hearths were also present in rooms ME and AS of this phase, the one in ME preserving its position in the foregoing phase.

Due to erosion of the north slope, settlement remains of Phase 2E were found very much disturbed in Grids 4 G-H (Fig. 10). Remnants in the northern half of Grid 4 G had been washed down the slope; only the southern part of the rooms here could be excavated (Fig. 10). Although the main lines of the settlement were preserved, certain structural distinctions appear (Fig. 10).

The dump/work-shop area JY was set apart from the structures and narrow passages by

mudbrick walls unique in character (Fig. 10). An internal wall also separated the open area into two. Narrow streets or passages now generally divided the mudbrick houses of the settlement into living quarters (Fig. 10). Thus the layout so characteristic of the upper phases at Aşıklı can be seen evolving in this phase, 2E (Fig. 10; cf. Fig. 3).

The greatest change apparent in the Phase 2E remains in the deep sounding of Grids 4 G-H is that involving the Phase 2F structure ME in the south of the trench. Rooms ME and MT of the previous phase were now transformed into one two-room structure (Fig. 10). The resulting building was comprised of three interconnecting rooms, with the new structure over old ME partitioned into two rooms -JU and JV- by an internal division wall, and then joined to a room over the old Phase 2F room MT, the walls of which had been built anew (Fig. 10; Özbaşaran 1998b: 7). In the northwest corner of the northern division JU was a storage bin paved with rather large stones; its walls were formed with small clumps of mud, and the whole was plastered over with clay. In the bin were found a few burned animal bones, a skull, scattered grains of cereal and a few pieces of charcoal. The east wall of the structure was supported by flat medium-sized stones set at floor level (Fig. 9); among these had been placed a shoulder bone of a large animal. A hearth in the southwestern room JV was of the same construction as those previous phases (Figs. 8-10).

With renovation of the floors and walls, the structures G, D, Y, H and R continued in use in Phase 2E (cf. Figs. 10, 11). By closing off the space between Y and P, however, the small room AF was created.

Phase 2D preserved the layout of the preceding Phase 2E (Fig. 10). Remains of Structure Y must have been eroded. The other structures, with the exception of JU-JV remained in use unaltered save for renovation of the floors and walls. The doorway in the interior partition wall between JU and JV, however, had been closed with a block of mudbrick. The southern

portion of the structure was blanketed with a fill of loose yellow earth and put out of use.

Structures D, P, R, and G continued in use in Phase 2C although some changes were made (Figs. 9, 10). The east wall of room P is new. Large flat stones were set up as reinforcement along the base of the southern walls of rooms P and R (Fig. 10). The tradition of stones set vertically along the base of the walls, initiated in this phase at Aşıklı, has continued in use through modern times in Cappadocia.

The greatest innovation in Phase 2C remains in this area (in Grid 4 H) appears in the one-room structure C built to replace the JU-JV building at the west of the dump/work-shop area, now designated simply as S. Structure C, with a hearth in the southwest corner, a bench/raised platform in the northwest corner and a round support for a post in the center of the floor conveys quite a different impression (Özbaşaran 1998b: 8). A flat stone was placed at the bottom of the post-hole, and stones were then placed around the post-hole for support (Figs. 9, 10).

In Phase 2B, then, rooms D, P and R ran from west to east along the north of the dump/work-shop area S, with room C to the west of it. Because of the erosion on the steep northwestern slope of the mound, not all the walls of D, P and R remained intact (Figs. 9-10). Room O, to the north of C, was now partially built over by Room C, with the eastern part incorporated into the dump/work-shop area S. From their remains in the east and west profiles it is clear that most of the rooms were renovated and reused in Phase 2B.

Room C apparently continued to serve the same purpose as before, although altered in plan and dimension (Özbaşaran 1998b: 8). The small room O now probably functioned as a store-room of C. Remnants of what must have been an oven, or hearth were found partially preserved in the northeast of Room C. Under the clay plaster of its oval floor were found huge logs charred into small bits.

The dump/work-shop area S was now enclosed by even sturdier walls, and a narrow

open space isolated the east wall of C from the dump (Fig. 10). The dump/work-shop area was by now much better isolated from the structures.

In Phase 2A deposit similar to that in the burned veins from 2B again accumulated in the dump. Many animal bones, tools and waste flakes of bone, antler and obsidian, charred and rotted plant remains, and pieces of mudbrick were found here, mixed with deposit from Phase 2B and -most probably- deposit from the later settlements on the mound, which have not survived to the present.

Prior to the excavations, the mound of Aşıklı was sown and harvested. The use of tractors and heavy plows aggravated the natural erosion and resulted in the total destruction of the latest phases on the mound. Thus the remains from Level I have all been scattered and mixed into the topsoil save for a few pits in Grids 3-4 J and 4 H, one earthen channel and a few sections of flooring.

The deep sounding in Grids 4 G-H has thus provided much information not only on the stratigraphy, but also on settlement layout and construction and the tradition involved here. The settlement remains in the upper strata of the sounding (Phases 2A through 2C), moreover, represent the northwesternmost portions of the corresponding settlements excavated on the mound (cf. Fig. 3 and Esin *et al.* 1991: 162, pl. 4).

### The Layout of the Settlement

The architecture of Level II exposed in the wide area excavated on the mound of Aşıklı is proving a great boon to our understanding the layout of the settlement (Figs. 3-4, 12-18; Esin *et al.* 1991, Esin 1996 and 1998a-b).

We now have a much better idea of the building phases 2A - 2C on the mound. Most important is the wide pebble road GA which climbed northwestward from the banks of the Melendiz up the southeastern slope towards the approximate center of the mound (the trenches in Grids 3-6 N-O). It remained in use



throughout all building phases of the settlement, rising gradually with each successive phase (Figs. 3-4; Esin 1994).

From the stratigraphy in the deep sounding in Grids 4 G-H we know that this road or street continued in use at least until the end of Phase 2C; here the more recent strata where the pebble road passed by have been eroded. To the southwest of the road in Grids 3-5 N-R stood a building complex distinct in function the mudbrick residences to the north and east of the street (cf. Figs. 3, 13; Esin 1994). This complex, destroyed by erosion, has been reinforced on the east by terracing walls of stone masonry. The complex comprises the two main structures HV, the casemate construction adjacent to the road, and T to the south of it (Figs 3, 13; Esin 1994: 125, fig. 1, pls. 9-10). These two structures stand on either side of the long, narrow court-yard HJ with walls on stone foundations (Figs. 3, 13). Building T, the east wall of which also stands on stone foundations, and the mudbrick rooms and court-yards to the west and south of it make up one unit of the complex (Fig. 3). The floors and interior walls of T were painted in red (Figs 3, 13-14). The southern half of the lowest of the floors in structure T -which indicated that the complex had remained in use during at least three building phases- has been restored and painted in yellow with iron oxyde. Prof. E. Geçkinli has reported that the original flooring, 6-8 cm thick, consisted of a paste made of ground tuff and water, plastered with a red clay containing iron oxyde and then polished (Figs. 13-14). Inside T were post-holes for large wooden posts and a large hearth situated against the east wall, where a canal for the drainage of liquid opened to the exterior. In the previous phase the canal had opened through the south wall. Along the north, west and south walls ran a low bench or step also covered with red plaster. A large domed mudbrick oven stood in the adjacent court HG. Its floor was paved with blocks of basalt. The basalt blocks were later plastered over with a thick layer of clay. Two graves were found under the floor of room AB, belonging to this

same unit. In one were found the skeletons of a young woman and an elderly man; in the other, a young woman buried together with her baby (Figs. 3, 13; Esin *et al.* 1991: 131-132, 167, pl. 9, Esin 1998b: 90). The woman had apparently undergone the brain surgery known as trepanation; our paleoanthropologist Prof. M. Özbek reports that she survived for only a few days following the operation (Özbek 1992: 153-154, 160, figs. 7-8, Esin 1998b: 90). The interior walls of this room (AB) with the burials were painted in a more purplish red. Both the construction and interior furnishings of this complex composed of T, HV and their ancillary structures leave no doubt that this unit represented something different from the other mudbrick structures in the Aşıklı settlement. Those buried in *hocker* position beneath the floor of AB, therefore, must also have been different from the others in the community, special individuals of an elite class. A comparison of the interior features of Structure T with those of the "Terrazzo" Building at Çayönü and the "Temple" at Nevalı Çori suggests that this structure at Aşıklı may also have been a shrine used for religious ceremonies (Esin 1996: 36-37 with note 29, Hauptmann 1993, M. Özdoğan *et al.* 1994: 107-108). To the west of the casemate structure HV was a pavement of large mudbrick blocks, each 90-100 cm across; on this stood large stone supports for posts. The existence of such a porch or portico overlooking the Melendiz must certainly confirm that this structure was used by privileged individuals (Esin 1996: 37, fig. 12.).

In Grids 6 N-O the pebble road forks (Fig. 3) into two narrow streets, one proceeding to the northeast, the other to the northwest. The alleyway to the northeast leads into a small court, also covered with pebbles, above which new neighborhoods later sprang up (Grids 7 N-O). In one of these, with a narrow court to its east, stood the house TM (Figs. 3, 15), one of the few examples of an Aşıklı residence with bins and storage space. In the northwest corner of TM was a large hearth, nearly centered in front of the north wall were two small

cylindrical mud-plastered storage bins sunk into the floor, and in the northwest corner, more storage space. This bin was convex, bowing out into the room and edged with a line of small stones (Figs. 3, 15).

The "neighborhoods" of Phases 2A - 2C were generally formed of several houses clustered together. Some of the one-room houses were built with narrow courtyards next to them (Fig. 3). Other houses had two or three rooms. Narrow alleyways, 0.50-1.00 m wide, or open court-yard areas separated the residential clusters from one another. Despite this plan in row housing, each house within the living-quarter was supported by its own four walls (Fig. 3). Although there was no communication between one house and the next, there were openings in the partition walls of the multi-room dwellings, providing access between the individual rooms (Esin 1998b: 89). There were no doors in the exterior mudbrick walls, however; access must have been from the flat roofs of the residences or through a window-like opening high in the walls. Portable ladders must then have been used (Fig. 16; Esin 1998b: 84).

On some of the house floors were spread mats woven from reeds and straw from the harvests of wild and cultivated wheat (Esin 1998b: 91). In the floors were shallow holes in which the wooden posts that supported the roof stood, surrounded by stones (Esin *et al.* 1991: 166, pl. 8/3). Some of the hearths that generally occupied one corner of the room were accompanied by chimney holes through which the smoke and fumes were released into the narrow courts outside (Esin *et al.* 1991: 166, pl. 8/1). Large flat stones were set vertically into the ground around the hearth, and the floors were paved with pebble stones; all was then plastered with a thick layer of clay. A ridge of mudbrick also bordered the shallow earthen canals constructed to facilitate the removal of ash (Esin *et al.* 1991: 166, pl. 8/2).

Not only the floors, but the interior and exteriors of the walls as well, were usually plastered with a thick layer of clay. In some rooms this

plaster had been carefully renewed at intervals. In certain rooms/houses the interior walls were tinged with pink, yellow or reddish hues (Esin *et al.* 1991: 130). The standard lengths of mudbricks used in the walls were 90-100 cm, 60 cm and 30-45 cm; the widths varied from 25 to 30 cm; all were usually 6-8 cm thick (Esin 1996: 38).

Between the clusters of "neighborhoods" were open court-yard areas like that of JA in Grids 6-7 J-L, which provided outdoor work space and functioned also as dumps (Figs. 3, 12). They served as ateliers for the production of bone, antler and obsidian tools, and probably for the butchering, cleaning and distribution of food from hunt and harvest; after the supplies had been portioned out between the inhabitants, the residue was burned. This was represented by thin lenses of ash containing animal bones, stones of the red hack-berry fruit (*Celtis tournefortii*) and other vegetable matter, and waste flakes from the bone- and chipped-stone tool industries. The development of such dump/work areas is best exemplified in the deep sounding in 4 G-H, where one such open area can be followed throughout Level 2, from the earliest phase to the latest (Fig. 8-9).

In the final phase of Level 2, the dump in Grids 6-7 J-K was built over (Figs. 3, 12); the new neighborhoods added here were bordered on the northeast (Grids 10-12 J-K) by an enclosure wall (Figs 3, 17-18), which continued in 'S'-curves toward the southeast. Following the curves of the walls was a pebble paved side-street, narrowing to the west. The enclosure wall was built of large stone blocks-tuff, andesite, limestone and the like-with mudbrick and smaller stones in the interstices. It can be followed into Grids 10-11 H to the northeast (Fig 3). The neighborhood complex just inside the wall in Grid 11-K distinguishes itself from the other residential clusters by being set on stone foundations (Fig. 3, 17-18; Esin 1998b: 84). The interior walls and floors of its structures were all red. A skeleton recovered in very poor condition from a grave under the court-yard here was probably that



of the landlord. Leaning to all four walls of a storage-room adjoining the court, ran storage bins formed of thin mudbrick slabs (Fig 3; Esin 1996: 39, fig. 14, Esin 1998b: 84 with illustration below). It seems that the residence of the privileged personages who earlier inhabited the special complex at the southwest of the mound must have been transferred here to this northeastern area within the enclosure wall in this final phase of Level 2 (Fig. 3). The enclosure wall could be followed in this phase as far eastward as the dump/work-shop area in Grid 13 K. Further to the southeast in Grids 12 L-M this enclosure wall gradually descends to a deeper level, where it could be followed, although much more poorly preserved (Figs. 3, 17). This must have been due to an irregularity in the topography of the mound, a depression toward the center; in Grids 9 N-O the mudbrick habitation remains from this final phase of Level 2 must also be at a lower level, whereas in Grids 8 N-O they had been encountered immediately under the topsoil, there was no sign of them at this higher level in Grids 9 N-O (Fig. 3). Stretches of the enclosure walls were encountered on the south slope (Grids 13 R-S) as low as -4.00/-5.00 m. We shall probably find the outer wall of this final phase of Level 2 turning westward from here to enclose the settlement all along the south as well.

The residences and settlement patterns throughout the Aceramic Neolithic building phases of Level 2 at Aşıklı are also significant because of the relatively complex socio-political culture they reflect (cf. Hodder 1999: 25).

#### Burial Customs

Throughout both Levels 2 and 3 at Aşıklı, the dead were buried in pits under the house floors. Occasionally a pit was reused for a secondary burial. By no means, however, were there burials under every room or house in the settlement. Although more than 400 rooms of Levels 2 and 3 have been excavated, the number of individuals found buried in the settlement does not surpass 70. For this reason, the number of skeletons recovered is not helpful

in estimating population fluctuation from phase to phase (cf. Özbek 1998). The position of the skeletons is not always the same. There are burials in the hocker position, but there are also skeletons extended, face up, and others lying on one side, sometimes with the legs bent at the knees (Fig. 5; Esin 1998b: 90).

Most of the skeletons show traces of burning (Özbek 1998). The average age of death at Aşıklı is reported at 31.8 (Özbek 1998). Two males from Aşıklı were of Mediterranean type (*ibid.*). Some of the males survived to 55-57 years of age (Esin 1998b: 90, 92), whereas the majority of the females died between the ages of 20 to 25 (*ibid.*). Despite evidence for wounds, trepanation, and various bone-, spinal and dental disease, M. Özbek characterizes the population of Aşıklı as a relatively healthy one. Wear patterns on the teeth reflect a diet of game, wild vegetation and fruit, as well as some cereals (*ibid.*). Children represented 37.8% of the deceased, with 43.7% of them having died in infancy (0-1 yr.) (Özbek 1998).

The conclusion of studies on the DNA samples from the skeletons of Aşıklı promises to give us a better idea of the genetic relationships among the inhabitants.

#### Subsistence Economy and the Industries

Analyses of the animal bone and plant residue of Aşıklı have so far been completed only on material from the upper phases of Level 2 (Buitenhuis 1996, van Zeist, de Roller 1995, Esin 1998a, Esin 1998c). It should be kept in mind, therefore, that these results are preliminary and subject to change after the final analyses.

According to the analyses so far, game from the hunt and the vegetables and fruit collected by the inhabitants constituted the basic sources of the diet at Aşıklı. The amount of cultivated *einkorn*, *emmer* and *durum* wheat eaten was minimal, as was also true of the barley and legumes planted by the population. Wild wheat and barley was also reaped, however, and brought into the village, where it was husked. Most popular among the wild fruits were the red hack-berry (*Celtis tournefortii*).

*ibid.*). The most frequently consumed wild animals were sheep, goats, pig and cattle; horse, deer, rabbit and different kinds of birds and fish were also eaten (Buitenhuis 1996). According to H. Buitenhuis animals such as the sheep and goats may have been in a stage of *proto-domestication*, although there is no evidence of truly domestic animals at Aşıklı. Because farming had only recently come into practice, it was mainly wild grain that was being consumed (van Zeist, de Roller 1995).

The tools most frequently used at Aşıklı were fashioned from obsidian, bone and antler. Geochemical analysis indicates that much of the obsidian came from the sources of Kayırlı and Nenzenzi near Göllüdağ. It was brought to Aşıklı as nodules; flaking and shaping took place within the settlement (M.C. Cauvin 1996: 14). Cores of the type used at Aşıklı were found at ateliers near both sources, however, indicating that obsidian was being worked near the sources as well. According to N. Balkan-Athi, the tools were fashioned at Aşıklı by first removing large thick flakes from the blocks, then thin ones to prepare the basic form (Balkan-Athi 1998b). The cores were bifacial, with two striking surfaces. Most of the scrapers, which constitute the largest component of the Aşıklı assemblage, were formed on the thick flakes; arrowheads were formed on blades, and the microliths on the tiny blades resulting from the preparation of the flaking surfaces (*ibid.*). Among the microliths, geometrics were few; numerically they appeared most frequently in the earlier building phases of Level 2. Arrowheads, chisels and piercing tools were very few. The material studied through 1997 comprised a total of 15,684 tools; among these the microliths accounted for 7.68%, arrowheads 0.78%, pointed blades 1.66%, borers 1.05%, scrapers 55.77%, side scrapers 0.13%, retouched blades 29.15%, retouched flakes 4.6%, chisels 13%, and tools for multiple function 0.14% (Fig. 19; *ibid.*).

The majority of the obsidian tools were employed in leather-working, cutting, splitting wood and producing bone implements; a very few showed traces of being used in the

harvesting of either wild or cultivated plants (personal communication from P. Anderson, 1995).

By far the largest tool group in the bone/antler industry were the awls (Fig. 19; Esin 1998b: 92-93). Most of the tools had been fashioned from the leg bones of sheep and goats. Although an occasional spatula displayed a small piercing, it is striking that needles with eyes are missing in the assemblage. Many belt hooks were found (Fig. 13; Esin 1998b: 92-93). Our first impression (prior to wear analysis) is that most of the bone tools were used in leather-working. Many of the tools, the awls in particular, showed traces of burning; the awls with fire-hardened tips must have been intended for the piercing of relatively hard materials.

The ground stone industry produced-in addition to a good number of small flat polished celts-mortars and pestles of porous basalt and andesite, and many grinding stones of both types, i.e. those used above and below the product being ground (Esin *et al.* 1991: 167, pl. 9/2-3). Some of the grinding stones were surprisingly large, weighing more than 10 kg. Some had been secondarily used; when the grinding surface had become too worn, they were turned over-or on one side-and reused. Very few stone vessels were recovered, and those found were usually of tuff or limestone, and not particularly well made (Esin *et al.* 1991: 167, pl. 9/2).

Beads, apparently a popular tradition, were widely manufactured at Aşıklı (Fig. 19). Besides those made of stone -either semi-precious or common local varieties- there were beads of bone, deer-tooth and native copper (Figs. 19-20). The beads of native copper had generally been made by beating copper sheet in heated or cold condition and cutting it into thin strips which could be rolled or twisted into shape. Another type of copper bead had probably been made from a small nugget. It was shaped into a small biconical mass which then appears to have been pierced with a hot pointed implement. The stone and copper beads were nearly all recovered from the

graves, where they lay at the necks and wrists of the skeletons; they must have been strung as necklaces and bracelets.

Animal figurines of clay-baked, partially baked, and unbaked-give some, if little, insight into cultic imagery. One of baked clay figurine, found in Room NO formed by the enclosure wall in Grid 11 J, seems to represent a small boar or ox (Figs. 3, 21). Also recovered in the area of the enclosure wall was a small stone plaque (Fig. 22), the surfaces of which were incised with narrow lines of "V" and "O" motives. Parallels to this plaque are known from the Aceramic Neolithic A level of Jerf-el Ahmar in Syria (Stordeur *et al.* 1996). This is important as it represents something other than obsidian to testify trade with distant cultures.

#### Occupational and Socio-political Aspects in the Aşıklı Communities of Level 2

Most all of the small finds at Aşıklı have been recovered from the open courts, narrow alleyways and so-called dump/work-shop areas outside the houses. The frequent rebuilding of the settlement -necessitated particularly by the climatic conditions- meant that the contents of the interiors were repeatedly emptied out into these open areas in the settlement, a great disadvantage to the archeologist seeking to discover how the interior space had been used. Nevertheless, from the dumps and working areas and the pattern of the settlement we have valid clues to the general occupations and tasks of the Aşıklı population.

The most important tasks of the settlers would have been construction -the building and upkeep of the residences and other structures in the community- and subsistence: hunting, gathering and -even if not of primary consequence- farming. In addition there were the obsidian ateliers near the Göllüdağ sources, and the work back in the settlement of turning the imported blocks of obsidian into useful tools, not to mention the exchange routes to regions near and far; the obsidian exchange with Cyprus, the Levant and neighbors in the regions of northern Syria and Iraq needed to

be organized. At home there were also the skins of the wild game to be tanned, and salt to fetched to the settlement, most probably from the region of the great Salt Lake. There was mud-brick to be made for building and repairs, blocks of tuff, andesite, basalt and other rocks of the area to be quarried and transported for use in building walls and shaping grinding stones.

Until the micro-wear analyses can be performed on the obsidian tools, we can say only that some had been used in cutting wood, others in leather-working and harvesting. Certain implements such as the arrowheads, which resemble weapons, may have been employed also as sickles for harvesting and cutting wild and cultivated grasses. We must be careful not to jump to conclusions and interpret the standardized tool and weapon types too literally.

A general consideration of how busy the community of Aşıklı must have been to accomplish what they did, leads to the conclusion that the settlement needed a more complex organization than what first comes to mind. First of all, even to set up this complex organization there must have been, if not an individual, then a group with administrative, ruling power. The layout of the settlements in the building phases of Level 2 at Aşıklı indeed help explain this socio-political system.

#### CONCLUSION AND DISCUSSION

At present the three building phases of Level 3 at Aşıklı have been brought to light only at the northwest of the mound in the deep sounding in Grids 4 G-H (Figs. 2, 3, 7-9) at a depth of seven and a half to nine meters below the datum point at the mound (-7.50/-9.00 m). There are small residences of one or more rooms, again trapezoidal or roughly rectangular, separated by narrow courts and alleyways. Because these settlements could be exposed over only a very limited area of some 15 x 8 m<sup>2</sup>, however, we still know very little about them. Nevertheless, we see that-as is true in the segment of settlement found below the mound to the south on the banks of the

Melendiz as well as in Level 3-the tradition of trapezoidal/rectangular houses adjoining one another, yet supported by their own four walls, was continued from the very beginnings of settlements at Aşıklı onwards (cf. Figs. 3, 5 and 7). Burial tradition, too, was no different from that seen in the succeeding Level 2.

Although preliminary analysis has confirmed that the animal bones recovered from Level 3 are from wild species, the bone and plant samples from Level 3 have not yet been analyzed in detail and we do not yet have the results from the <sup>14</sup>C samples. Thus we have no final data on the subsistence economy or absolute dating. In general we can say, as described above, that the cultural elements and daily tasks of the earlier settlers were not much different from those of the inhabitants of Level 2.

In Grids 4 G-H of the deep sounding a flood deposit separates Level 2 from the earlier Level 3 below, and immediately above this deposit an open dump/work-shop area covers the whole trench here. In the later phases here this open area is reduced in size, impinged upon from the north and west by new structures (Figs. 8-11). Level 2 is represented in the deep sounding by 10 building phases (Figs. 6, 8-11) that appear immediately below the topsoil and extend to a depth of about -7.50 m. Additional houses constructed here in Phases 2I and 2H may very well reflect a growth in the population living on the mound. Because each family was apportioned a restricted plot of land on which to build, an increase in the number of family members could only be accommodated by moving one or two walls outwards or inwards to adjust the size of the rooms (Figs. 8-11). Incorporating an open court or passage belonging to the family plot into the house was also possible (Figs. 8-12). This restriction on space can be best seen in the houses along the southern profile of the deep sounding; it is seen in the way they are rebuilt phase after phase within nearly the same space (Figs. 8-11). This phenomenon also indicates an organization and respect for property rights among the Aşıklı inhabitants.

Information on the layout of the settlements of Level 2, comes from the building phases excavated over a wide area on the top of the mound (Figs. 3-4). The living-quarters or "neighborhoods" of mudbrick structures to the north and east of a wide pebble paved street the homes of the Aşıklı residents (Figs. 3, 12, 15-16). The open areas between the living-quarters of houses were used as dumps/work-shop areas (Figs. 3, 12). To the southwest of this road or avenue stood a building complex made up of two buildings sacred and administrative in character and ancillary rooms; this complex must have been put at the disposal of those privileged individuals responsible for the social organization at the settlement (Figs. 3, 13-14).

It seems that these quarters for elites were later moved to the northeast portion of the mound (Figs. 3, 17-18). An enclosure wall starting from here ran southward to encircle the mound on the east. The fact that this wall has not yet appeared in excavation towards the center of the mound (although the wall appeared at -4.00/-5.00 at the south) suggests that there is still more to learn about the topography of the mound in these phases (Fig. 3).

The remnants of more than 400 structures have already been exposed at Aşıklı. In contrast, the number of burials found under the floors of the houses totals only 70. The disproportion here would suggest that only some Aşıklı residents were buried within the settlement proper. If this is true, then there was very likely a cemetery where the other deceased were buried together, and we are faced with the question whether it was intramural or extramural. It is also to mention that not a single small find with religious connotation -symbolism or imagery- was discovered in the dumps or open work-shop areas (even though the fill here was sieved).

That the intensive hunting and gathering population of Aşıklı had already started sowing and reaping is clear from the analysis of plant remains from the upper phases (van Zeist, de Roller 1995). We have yet no idea, however,

how this agricultural work -or the construction on the site, the transport of obsidian to the site, etc.- was shared between the male and female populations. Spinal deformities among the female skeletons indicate that the women had carried heavy loads (Özbek 1992, 1998). The validity of this as an argument for a division of labor between the men and the women is however questionable. The fact that the men seem to have outlived the women might also be interpreted as proof that the women were subject to more strenuous physical labor.

The inhabitants at Aşıklı certainly knew how to use the raw materials available in the surroundings, and they had discovered how to beat native copper-most probably when heated-into sheet, as the copper beads demonstrate; this illustrates how observant and ingenious they were (Fig. 20).

Obsidian was dominant in the tool/weapon industries at Aşıklı (Fig. 19). Only five tools of flint have been recovered at the site, and these, like the stone plaque characteristic of Jerf-el Ahmar, must be counted among the imports from other regions near and far (Fig. 22). The one small clay animal figurine recovered -the only representative of figurative art- hardly gives us much idea of the religious beliefs of the inhabitants (Fig. 21). From the time they first settled here at Aşıklı, their culture does not seem to have undergone much change. In this sense they would appear to have been a conservative society, but one nevertheless open to trade with the outside world. We must see them as a society working under a leader or group of rulers, a busy, cooperative, and well organized group.

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In 1995 a new project in anthropological studies, DNA analysis and  $^{13}\text{C}$  analysis was begun by the *Prehistory Department of Istanbul University* in cooperation with the *Anthropology Department of Hacettepe University* and the *Biology Department of Barcelona University* (Spain). Research in micro-morphology, phytoliths, obsidian micro-wear, as well as trace-element analysis and geomorphological investigation is also being carried out with the assistance of other Institutes and laboratories, including the *British Institute of Archaeology at Ankara* and *CNRS* (France). Participating scholars include -among others- Dr. W. Mathews, Mme. M.C. Cauvin, P. Anderson and C. Kuzucuoğlu.

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## Obsidian: Sources, Workshops and Trade in Central Anatolia

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**KEYWORDS:** *Central Anatolia, Cappadocia Obsidian, Nenezi Dağ, Göllü Dağ, Kayırlı, Kaletpe, chaîne opératoire.*

**ANAHTAR KELİMELEER:** *İç Anadolu, Kapadokya Obsidyeni, Nenezi Dağ, Göllü Dağ, Kayırlı, Kaletpe, üretim zinciri.*

### ÖZET

Yoğun bir volkanizmaya sahne olmuş olan İç Anadolu Kapadokya bölgesi aynı zamanda tarihöncesi insan için önemli bir hammadde olan obsidien kaynakları açısından çok zengindir. Bu bölgede 60'lı ve 70'li yıllarda ilk obsidien araştırmaları yapılmış ve kimyasal açıdan farklı obsidien kaynakları tanımlanmış ve bu kaynakların obsidienlerinin dağılım sistemleri üzerine sosyal modeller kurulmuştur. Son yıllarda bölgede yeni bir obsidien araştırma projesi gerçekleştirilmiştir. Projenin amacı tüm kaynakları saptamak, kimyasal analizlerle tanımlamak, kaynakların jeolojilerini ve jeomorfolojilerini araştırmak, kaynak yakınlarındaki atölyeleri saptamak, atölyelerdeki obsidien ürünlerini inceleyerek farklı üretim zincirlerini ortaya çıkarmak, bu üretimleri kronolojik olarak yerleşmelere bağlamak ve Anadolu'da ilk atölye kazısı gerçekleştirmekti.

### ABSTRACT

Obsidian which is one of the appreciated raw materials used by prehistoric men, is largely present in Central Anatolia. In the years 60' and 70's this material had been subject to multidisciplinary researches focusing mainly on the geological and geochemical aspects of the obsidian and social models of its exchange system between cultures and regions. In the recent years, a research project is undertaken with new problematics besides the source identification at the source areas, to the variability of its treatment at the workshops near the sources thus defining different *chaînes opératoires*, to the form in which it is exported and to its use and discard at the settlements.

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## INTRODUCTION

Obsidian is one of the appreciated raw materials by prehistoric men. Its homogenous and mechanical qualities rendering it apt for knapping; its attractive, glassy texture of various colors, black, gray, green, brown or red, and its comparative rarity to flint were probably the reasons of this appreciation.

Obsidian, which is a volcanic rock of a glassy variation of rhyolite, is the product of immediate cooling of the lava. It is attached only to acid formations thus, it is not a common result of every volcanic formation. Anatolia is one of the richest regions in obsidian sources of the Near East, concentrated mainly in Cappadocia and in the east. Anatolian obsidian was largely spread in the settlements since 14 000 bp. till, at least, to the end of the Chalcolithic in the whole Near East. Consequently, it has been one the chief interests of Anatolian and Near Eastern prehistory since the 60's and it was the subject of several researches<sup>1</sup>.

Renfrew and his colleagues were the first researchers to treat Anatolian obsidian with a multidisciplinary approach; localizing some of the sources, defining the geologic and archaeological samples by spectrometry (Renfrew *et al.* 1966). They tried to analyse the distribution (abundance or rarity at the sites) of this material proposing a complicated social model: the material travels passing different territories as a result of a succession of exchanges (Renfrew *et al.* 1968). Wright, who applied neutronic activation analyses to the Near Eastern obsidians, insisted on different factors such as the chronology of the sites, types of obsidian artifacts found at these sites and the evaluation of the volume of this material, which should have an effect on the ways of its transport (Wright 1969). He also, as Renfrew, interpreted the distribution of obsidian by an exchange system, among the sedentary and nomadic peoples. In the 70's Renfrew revised his mod-

els by giving them a more precise social status, (Renfrew 1975), such as some sites being the centers of distribution (Renfrew 1977).

These works were the preludes of the obsidian problem and they had brought up the complexity of this material. With the ongoing recent researches, this complexity has expanded and it was necessary to rework the subject. From the geological point of view, new sources were discovered, the state of obsidian, as flows or bombs, was more clearly defined and the role of the quality of obsidian was recognized, as every obsidian is not suitable for knapping. From the geochemical point of view, methods of analyses and number of laboratories have been multiplied searching for more precise elements and from the archaeological point of view researches have been largely increased and new approaches have appeared in the study of lithic assemblages such as technological analyses including experimental aspects which began to play a more important role than classical typology of the artifacts.

Considering this, an obsidian research project is undertaken in Cappadocia by the authors of this paper. The research's aim is to follow this raw material from the models of its acquisition at the source areas to its use as finished items at the settlements. The first steps of this project is concentrated on a specific period in a specific region: the first phases of the Neolithic in southern part of Cappadocia. The project is based on a multi-disciplinary approach combining three disciplines: geology and geomorphology, geochemistry and archaeology. The purpose of this combination can be presented as the following:

The geological and geomorphological research is important to conceive the setting of the sources including the volcanic history, the eruption episodes and the formation of the obsidians; to make an inventory of all the

obsidian sources in the Çiftlik-Göllü Dağ region, taking samples for chemical analyses.

Geochemistry is the best way of characterization of the obsidian thus, it is a must to identify and differentiate the obsidians of each particular source. Furthermore, by the analyses of obsidians from the archaeological sites, the settlements may be coordinated with the sources<sup>2</sup>.

The archaeological approach combines several aims: to look for corresponding workshops or knapping areas near the sources; to study the material of these workshops in order to understand the knapping strategies and, if there is more than one, to understand the variability existing in the *chaines opératoires*; to coordinate these workshops with the prehistoric settlements by technological and by experimental analyses<sup>3</sup>; to work on the diffusion patterns from the sources and workshops to the regional and distant settlements.

This long term project has already given results which constitute the subject of this paper.

The work was carried on in a specific part of Cappadocia, which is the largest volcanic province in Central Anatolia. This province includes Acıgöl, Göllü Dağ (known as Çiftlik obsidians), Nenezi Dağ, Hasan Dağ and Erciyes Dağ volcanoes that produced obsidian. The part of this large province that we have chosen for the beginning of our project includes Göllü Dağ and Nenezi Dağ, the Melendiz massifs and its basin and the Çiftlik plain (Fig. 1). The archaeological work already ongoing in the Melendiz basin such as Aşıklı Höyük (see this volume) was the basic reason of this choice. The geochemical analysis of Aşıklı obsidians had indicated two source

areas: Nenezi and Kayırlı (Göllü Dağ) (Gratuze *et al.* 1994) and this was also proved from the technological aspect by comparing the finds of the workshops of these sources with those of Aşıklı (Abbes *et al.* *in press*).

## OBSIDIAN SOURCES AND WORKSHOPS

### Nenezi Dağ

Nenezi Dağ is a big rhyolitic dome situated 3 km east of Bekarlar village, north-west of Göllü Dağ. It has an isolated situation compared to other domes and it dominates the plain with more than 500 m (Fig. 2). On its western flank exists an important flow of obsidian with perlites. Obsidian is generally black, but locally red or bluish gray obsidian is also present. The dome itself displays gray rhyolites but on its flanks small fragments of gray obsidian exist in a scattered position. At the northern side the base of the dome is covered by a recent basaltic flow (Poidevin 1998).

The obsidians give a date approximately contemporary with Göllü Dağ, *supra*, (Bigazzi *et al.* 1998). The chemical analysis of various samples displaying the variations of colors of Nenezi obsidians, coming from the western flank and the dome, were realised by different laboratories (Poidevin 1998). The results show that all these samples have homogeneous chemical compositions.

On the western side, on the lower of plateau of the Nenezi Dağ a workshop exists yielding big numbers of very dense knapping products (Fig. 3). Eroded obsidian artefacts are also found on slopes, and on the surrounding fields at the base of the dome.

Obsidian artefacts consist of cortical flakes,

<sup>1</sup> Here the aim is not to insist on the history and the status of obsidian research, which has already been the subject of several papers. See especially M.-C. Cauvin 1991 and 1996, Özdoğan 1996.

<sup>2</sup> This raw material being largely diffused in the Near East during the Neolithic and Chalcolithic, it was necessary to develop a reference of the obsidians of diverse sources by constituting a data base of the geochemical analysis realised by different laboratories (Cauvin and Chataigner 1996, Chataigner 1998).

<sup>3</sup> As it was necessary to understand the way of shaping of the archaeological pieces and the mechanical behaviour of obsidian during the knapping, an experimental technological study was realised with a continuous return between descriptive and experimental analysis (This was realised by F. Abbes and D. Binder on The Aşıklı Höyük obsidians, and by G. Der Arahamian on Kayırlı and Kaletpe obsidians).

cores, bifacial preforms and bifacially retouched oval points (Cauvin and Balkan-Atlı 1996). The cores are in most of the cases uni-directional and pyramidal with flat or cortical backs. Bi-directional cores are fewer including short naviform cores with crested backs (Fig. 4: 1).

The presence of certain artefacts indicates certain relations with prehistoric settlements: bifacially retouched oval points (Fig. 4: 2) have strong similarities with those of Çatalhöyük (Balkan-Atlı 1994a, Bialor 1972, Conolly 1996) and the bipolar cores with Aşıklı Höyük (Balkan-Atlı, 1994). Besides, as stated above, the obsidians analysed from those two settlements indicated Nenezi as one of their obsidian source areas (Gratuze *et al.* 1994).

### Göllü Dağ

Göllü Dağ is one of the most important obsidian sources in Cappadocia. It is situated on the north of the Çiftlik-Gölcük road. It is a strato-volcano with about 12 km in diameter with its culminant point, Büyük Gölü, at 2143 m high (Poidevin 1998). Six obsidian sources are known from Göllü Dağ and they are essentially dome-flow obsidians: Kayırlı, Kayırlı-Village, Sırça Deresi, Bozköy, Kömürcü and Gösterli. Chronologically, the eruptions are dated to the Lower Pleistocene, 1.3-0.9 Million (Bigazzi *et al.* 1998). Chemically, they form two main groups with distinctions in each group: East Göllü Dağ with Kömürcü, Kayırlı and Sırça Deresi, and West Göllü Dağ with Kayırlı-Village, Gösterli and Bozköy (Poidevin *in press*). Here the attention will be given to three of them where obsidian workshops and knapping areas were clearly found associated to the sources: Bozköy, Kayırlı and Kömürcü.

### Bozköy

It is a small rhyolitic dome, with an altitude of 1700 m, with irregular obsidian passages along its slopes. This dome is situated at the intersection of two valleys (Poidevin 1998). The obsidian which is black or striped gray in color, is visible along one of the valleys, the modern road from Kayırlı to Bozköy, in a vertical fractured position or in form of natural

blocks along the second valley, Karakaya (towards to the west from the road). But the natural source with good quality of obsidian is found about 1 km to the west in the Karakaya valley, Münne'nin Yeri (Fig. 5) (Balkan-Atlı *et al.* 1997).

A workshop, İlbiz, was discovered situated to the east of the road, on a very sandy terrace. The obsidian artifacts are found in a large area in a scattered and eroded position (Fig. 6). They contain in abundance unipolar cores and blades and various flakes. The cores have flat striking platforms; they are exploited either on one face, the back is left cortical or they are peripheral (Fig. 7). Bipolar cores were not observed at this workshop (Cauvin and Balkan-Atlı 1996).

### Kayırlı

Kayırlı source outcrops are visible along the valley on the north slope of Kabaktepe (Fig. 8). It is a vast dome-flow of 1700 m of altitude. The flow is very thick where the alternance of obsidian and perlite are easily seen. The obsidian is shiny black and of good quality for knapping (Fig. 9). Two workshops were discovered: Bitlikeler on the east and Ekinlik on the west of the ravine (Fig. 10).

Probably these workshops were in use contemporarily in some periods as they yield same kinds of artifacts, but the Bitlikeler workshop (Fig. 11) shows a greater variability indicating probably a longer activity. At the two workshops a considerable number of bifacial preforms, pyramidal unipolar cores with a natural or flat back, bi-directional cores similar to Aşıklı ones (Fig. 12: 2) (Cauvin and Balkan-Atlı 1996). As mentioned above, the chemical analysis of the Aşıklı obsidians indicates Kayırlı as one of its raw material procurement sources. This is confirmed also by the technique of the cores.

The Bitlikeler workshop yielded a richer assemblage with very regular unipolar and bipolar cores. The unipolar cores with centered crested backs are standardized in form and dimension (Fig. 12: 1). The striking platform which is prepared after forming of the

crest, is plain and very oblique. The negatives of the extracted blades are parallel and very regular which might be an indication of the pressure technique.

Naviform cores of the Kaletepe type forms the most numerous group in bipolar cores. They are long and thin with triangular sections (Fig. 13). The back crest is often centered and regular and sometimes natural surface is seen on the lateral sides. This might be the result of the suitable forms of the Kayırlı obsidian in its natural state. The debitage surface often shows accidents of hinge fracture. Their dimensions vary between 110-170 mm for length, 19-36 mm for width and 20-37 for thickness.

Besides cores, the preformes and bifacial pieces attract attention at the workshop (Fig. 14). These are rectangular or oval pieces limited par crests at the edges. Sometimes natural surfaces are visible. Their sections are triangular or more or less rectangular. The dimensions vary between 150-115 mm for the length, 110-55 mm for the width and 50-30 mm for the thickness. Their weight is between 1000-900 gr.

There are also almond shaped bifacial preforms. They differ from the others by their shape (they are smaller) and by their symmetries (Cauvin and Balkan-Atlı 1996). Probably these are pieces more advanced in the formation of the preforms, even though some of them are too thin to become cores (3 mm for thickness) which might be preforms of bifacial points, but here no bifacial points were observed.

Among the various pieces some rare blades were also collected. These are primarily uni-or-bi-polar lateral blades. There are few central blades. Very few pieces of the opening of the striking platform were found (Balkan-Atlı and Der Aprahamian 1998). Finally, a few convex side scrapers were also collected (Cauvin and Balkan-Atlı 1996).

Obsidian is abundant and accessible at this workshop yielding alternative blocs for the knappers' option. The preforms found at the workshop were left either because of an acci-

dent or because of the quality of the raw material (such as inner fracture of the bloc).

### Kömürcü

Kömürcü is the most spectacular and the best known of the obsidian sources of Göllü Dağ with its abundant outcrops (Fig. 15 and 16) and several workshops or knapping areas attached to the sources. This obsidian is the result of one eruption of the volcanic system of the East Göllü Dağ (Poidevin 1998). Obsidian flows are NE-SW oriented and they can be observed in eroded areas. Along the obsidian reaches several knapping spots with scattered artifacts were observed (Cauvin and Balkan-Atlı 1996). The materials that they yield are varied and may be attached to different periods: unipolar cores, scrapers, oval bifacial projectiles, Levallois flakes and cores and bifaces. A very regular biface was found in one the lower terraces in an eroded position (Fig. 17). But several others were observed in higher altitudes. It is likely that this source was exploited since the Early Paleolithic till at least to the Neolithic period. The presence of bifaces and Levallois cores is particularly interesting. Kömürcü produces a good opportunity to obtain information on the Paleolithic of Central Anatolia.

### Kaletepe workshop

Kaletepe workshop is spectacular covering a large area with very dense obsidian artifacts. It is located on the north of the Kömürcü village at an altitude of 1560 m on a supervising position (Fig. 18 and 19). It is an approximately flat plateau of a rhyolitic dome covered by ignimbrites (Kuzucuoğlu pers. com.). Obsidian is present in forms of elongated blocs which are visible in the ravines that cut the plateau.

Kaletepe workshop yielded a variety of material of exceptional quantity: cores of different types, preforms, primary flakes,... About 22 % of the cores collected are unipolar cores. Besides some atypical examples, they are mostly pyramidal cores which are exploited on one surface with a natural back. Besides these exist unipolar cores with a regular, central crested back, a very oblique striking plat-

form and regular blade removals (Fig. 20: 2). As we mentioned above, the same type is also found at Kayırlı/Bitlikeler workshop. Aşıklı type of bipolar cores was not observed at Kömürcü.

The majority of the cores, designated as Kaletepe type, (64.7 %) display high standardization. These naviform cores of triangular sections are long and narrow measuring in average 160 mm of long, 26.2 mm of large and 27 mm of thickness at their discarded state. They have two oblique and flat striking platforms opposed to each other and a crested back (Fig. 20: 1).The debitage surface is parallel to the crested back and always displays the négatifs of an axial blade or two négatifs of lateral previous blades. These cores were the result of the production of regular long pointed blades for exportation. The analyses of the cores and other pieces and experimentation by Gerard Der Aprahamian enabled us to construct the *chaîne opératoire* of these cores (Balkan-Atlı and Der Aprahamian 1998).

Chaîne opératoire of Kaletepe cores

According to Der Aprahamian, three major conditions for this type of cores were assembled at the two sources, Kayırlı and Kömürcü: raw material accessible in form of big blocs, of good quality, and in abundance. The forms of the blocs often present one or several natural surfaces from which the knapper may begin to reduce the bloc. At the first step he prepares a bifacial preform approximately rectangular with the lateral sides parallel to each other. The opposite striking platforms are opened by the removal of the crests. One of the striking platforms will be preferred, and the other will be utilized for the rectitude of the flaking surface. The flaking surface is opened by the removal of two crested blades, first from one striking platform and second from the other. Afterwards the extraction of central blades is prepared (predetermined) by the extraction of lateral blades. The purpose of this *chaîne opératoire*

is the obtainment of long, regular, pointed blades, probably to be used as blanks for projectiles. The rectitude of the flaking surface is important and a necessity to obtain these blades. After the extraction of each blade a concavity is formed on the flaking surface. This concavity is removed by the extraction of an axial opposed blade called the upsilon blade. The debitage will continue till the exhaustion of the core (for more details see *ibid.*).

This standard manufacture may well indicate a specialization and the blades obtained were probably exported to long distances such as the Levant. The study of such obsidian blades found at the settlements may give information about the period of the workshop and the diffusion pattern.

Conclusion on the workshops

The collected material from the survey of these workshops yielded different types of cores indicating different *chaînes opératoires*. We cannot draw specific conclusions from the surface material but tentatively we can make some observations.

As seen in the Table 1, Bozköy/İlbiz workshop presents only one type of core, with probable variations. It is difficult to attach it to a specific period or culture. Further work is necessary on this workshop. It is of an accessible distance from the Çiftlik plain where an important neolithic settlement, Tepecik, is located (Todd 1980).

The material collected from Nenezi Dağ is more varied; besides the unipolar cores that we cannot attach to a specific tradition or period, the Aşıklı type cores and the Çatal type bifacial pieces enable us to state that two prehistoric settlements of Central Anatolia procured at least a part of their raw material from this source<sup>4</sup>.

Kayırlı workshop displays a greater diversity of the cores indicating different *chaînes opératoires*.

<sup>4</sup> 2 of 12 samples of Aşıklı obsidians belonged to this source (Gratuze *et al.* 1994).

	unipolar cores	unipolar pressure cores	bipolar cores	kaletepe type bipolar cores	bifacial points
Nenezi	X		X		X
Bozköy/İlbiz	X				
Kayırlı/Bitlikeler	X	X	X	X	
Kömürcü/Kaletepe	X	X		X	X

Table 1: Core types and workshops.

*toires*. Was the workshop used by different cultures of different periods? Besides the uni-directional prismatic cores, the uni-directional regular cores with centered crested backs, the Aşıklı Höyük type cores and the Kaletepe cores are certainly products of different *chaînes opératoires*. Were they co-existent? Probably they indicate different techno-cultural origins. The standardized Kaletepe cores are visibly products of an advanced technology in skills where a specialization is indicated, whereas the Aşıklı type bipolar cores are more domestic types, the treatment of the raw material is more economical, the form of the bloc usually dictates the shape of the core. Among these cores the intention is the same, obtaining regular blades, but not the process. No specialization is indicated. The uni-directional cores are more difficult to interpret, they are less known in Central Anatolia for the Neolithic and it is not easy to attach them to a certain techno-cultural tradition in the region for the time being. Particularly those regular ones with crested backs and very oblique striking platforms are known from some sites<sup>5</sup>. They also show specialization and standardization. It will be interesting to follow their original techno-cultures.

Kaletepe yields also a rich material. Its position is quite near Kayırlı and they share some

similarities such as the Kaletepe cores and the regular, crested backed unipolar cores. However, here the Aşıklı type is absent whereas bifacial points and their preforms as in Nenezi are present. Was Kömürcü one of the Çatalhöyük's procurement sources? This point needs to be specified. Comparatively here the Kaletepe cores are more standardized and more regular than the ones at Kayırlı. These types of PPNB naviform cores were not known from Anatolia before 1997<sup>6</sup>, but their presence, in flint was noted from the PPNB settlement of Dja'de in northern Syria (Coqueugniot 1994) and Tell aux Scies and Slenfe in Liban (Cauvin 1968).

After these results, an excavation at one the workshops seemed necessary to test our observations. Kaletepe seemed us the best place indicated.

KALETEPE EXCAVATION

The excavation at Kaletepe has started in 1997<sup>7</sup> (Balkan-Atlı *et al.* 1998). The excavation's principle objectives were to arrive to an evaluation of the state of the workshop's conservation and to determine the different phases of the exploitation of the obsidian. More particularly, the aim was to situate the Kaletepe core

<sup>5</sup> Such as Çayönü (Caneva pers. com., Özdoğan 1994).

<sup>6</sup> The Kaletepe workshop was discovered by F. Şaroğlu (MTA) in 1994.

<sup>7</sup> Under the direction of the Niğde Museum and the scientific supervision of the Prehistory Section, University of Istanbul.

assemblage in a stratigraphical context. The study of the debitage corresponding to this naviform horizon *in situ* should allow us to define in detail the proceedings of the bipolar *chaîne opératoire*, to measure its variability and to reach to a qualitative and quantitative estimation of the products taken by the neolithic man for the diffusion.

Concretely the aim was: to characterize the stratigraphy of the anthropic deposits, their geometry and their position regarding obsidian flows; to proceed to a representative selection in the mass of the debitage; to search for elements allowing to estimate the space organization of the acquisition and the production, and the limits of the exploitation. This last goal was only partially reached during the first campaign.

The excavation was realized in several sectors of the workshop: S. 1: the cleaning up the profile; S. 2: the excavation; S. 3 the exploration of the lay out of the neolithic debitage; S. 4 and S. 5 the precisising the extension of the neolithic occupation towards the higher elevation (Fig. 21)<sup>8</sup>.

### S. 1: the profile

The 1996 survey had shown the presence of deposits containing obsidian artifacts apparently *in situ* in a natural profile made by the stream limiting the side to the north-east. The first sounding was placed here. In fact, the aim was to rectify this natural profile in enough depth to estimate the geometry of the deposits. This proved to be a colossal work which revealed the immensity of the prehistoric exploitation and the existence of numerous lenticular deposits *in situ*, stratified and corresponding to the waste of blade debitage; in fact the thickness of workshop's accumulation exceeds probably 6 m (Fig. 22)<sup>9</sup>.

The section drawing of the profile was done by C. Kuzucuoğlu. It was not possible to observe the base of anthropic deposits and their contact with the substratum, natural, alluvial or volcanic. The sounding did not reach neither the rhyolithes nor the obsidian flows whereas the flows are visible on the left bank. The absence of obsidian flows or outcrops *in situ* here is due probably to prehistoric extractions; the hypothesis that the stream was installed following a front of the quarry should be verified. Here and now we can observe that while the actual stream flows from NW towards SE conformably to the general slope of the volcanic deposits and flows, the anthropic deposits present an inclination towards the NW, towards the opposite slope. This fact suggests that their formation is independent off the hydrographic network. Only the top deposits, meaning the coluvions posterior to the last prehistoric accumulation and/or waste, present a conformable geometry to the actual morphology. Consequently, the constitution of an artificial accumulation of several meters high formed by the superposition of the waste of neolithic knapping should be considered. Logically, this accumulation will be placed unwedged in space regarding the exploited obsidian seam; it will fill progressively the hollows caused by the gradual exploitation of the "quarry". These observations suggest that the space has been subject to a more or less rigorous management and the idea that the knapping accumulation was installed directly on the outcrops should be abandoned.

The anthropic deposits are present in different forms under a clayish colluvion of about fifty centimeters thick:

1. Lenticular deposits formed exclusively by the knapping waste products which are in cer-

tain cases without sedimentary matrix; the artifacts are without a visible alteration except a light carbonization of the face in contact with the soil; they are without doubt in primary position. Such accumulations are rare but they are observed in different depths.

2. More heterogeneous deposits formed by artifacts, blocks of raw material, small blocks and gravels of rhyolithes and more or less coarse sands; in certain cases gravels and small blocks of obsidian are more numerous than the flakes;

3. Towards the base and under a very clear surface of incompatibility exists what can represent an ancient topography of erosion (gorge or ditch later on filled up with run down gravels disposed in very thin layers) and on can observe the passages of gravels and obsidian blocs in which artefacts were found (blades) whose sedimental model should be presided. The obsidian layers alternate with horizons formed by blocs of hardened alluvial sediments which will be characterized in thin sections. The disposition of certain blocs may seem artificial; these are continued clearly under the actual bed of the stream which apparently has not yet dug the whole anthropic sequence.

From the technological point of view, the sequence shows variance. At the summit, blades strictly unipolar come from the cores with a flat, slightly concave striking platforms of which the inclination regarding the surface of debitage is normal; these cores are sometimes pyramidal and seem to be coarsely shaping without using systematically the crests; the surfaces opposed to the surface of debitage are often cortical. The analyses of the material will permit to understand if the blades were detached by direct or indirect percussion. These blades are generally arched and irregular with sinuous ridges, rarely prismatic. Two units seem to distinguish themselves: relatively narrow blades or bladelets (ca. 1.2 cm of width) and wide blades (ca. 2 cm); however these two units may coexist in the same *chaîne opératoire*. The apparent large

representation of the blades regarding the cores is surprising in such a context and may suggest a limited number for exportation; this fact contrasts with the bipolar debitage.

It is towards the middle of the sequence that appear the bipolar debitage with some naviform cores and a bipolar core of large blades which evokes more anterior productions; rare elements probably of the shaping of the bifacial pieces are present with them.

The base of the sequence should be looked for complementary elements. However, we should state that we have not meet a clear paleolithic element in this part of the profile.

### S. 2 and S. 3 Soundings

The second and the third soundings were placed in a higher position in regard to the S. 1 where on surface the abundance and the homogeneity of the Kaletpe naviform cores were observed. These small soundings (S. 2: 9 m<sup>2</sup> and S. 3: 1 m<sup>2</sup>) has permitted to acknowledge the presence of the neolithic workshops waste *in situ* and to constitute the first representative sampling of the *chaînes opératoires* realized (Fig. 23).

The strategy of the material recording here was different than the sounding S. 1 as the posed problems were of different aspects.

In the second sounding the strategy was to treat the lithic constitution and their microstratigraphy with the maximum of details. The model was based on the registration of the most characteristic or voluminous elements in three dimensions and the other elements by 1/4 m<sup>2</sup>, and sieving systematically a quarter of each m<sup>2</sup> (1 mm). This approach seems to us relevant if we consider the co-existence of several neolithic *chaînes opératoires* (unipolar, bipolar, bifacial) of which the chronological relations (succession or alternation) ask to be established. In this perspective, the elements were registered individually to form a data base having a graphic interface (PL3) permitting to realise selective plans and profiles.

The stratigraphy of S. 2 and S. 3 indicates the following layers:

<sup>8</sup> A detailed topographical plan of the site was realized by E. Bıçakçı and G. Duru and a metric squaring (AA-JZ 1-225) was wedged up the geographical north.

<sup>9</sup> In the upper section, the most outstanding technological elements were picked up after being positioned; at the same time three units of 1/4 m<sup>2</sup> were exhaustively collected and sieved (1mm) every 10 cm on a depth about 3 m. We should emphasize the complexity of our technical problem; the deposits were containing at least 75% of obsidian and the sampling of this upper part is 4 m<sup>3</sup> of diverse obsidian products. The lower part of the profile was rectified without being able to reach the bedrock.



1. Pulverulant horizon corresponding to actual labour: 10-15 cm.

2. Compact brown-yellow gravelish horizon of about ten centimeters of thick; this layer, as the preceding contains numerous altered artefacts.

3. Layer of waste of obsidian debitage packed up in a brown-red sand with some small blocks of rhyolite; local alterations caused by moles, thickness, c. 20 cm.

4. Very dense layer of debitage waste of obsidian packed up in a dust of obsidian. This layer was only reached in the sounding S. 3; thickness, ca. 25 cm.

5. Yellow sandish sediment covering the irregularities of the rhyolitic substratum.

The majority of the elements registered in S. 2 corresponds to the naviform style (Fig. 24). The knapping process described previously by G. Der Aprahamian is confirmed, except some faint differences.

Layer 3 has yielded several cores which were characteristic in different states of exhaustion, crested blade fragments, opposed crest resharpenings, very characteristic platform spalls (cutting the distal part of the posterior crest), recuttings of crests (Fig. 25), numerous upsilon blades (Fig. 26). Some fragments of pointed blades are present. However, the majority of the lithics is formed by flakes. Besides the thick flakes, abundance of core shaping flakes of the two crests (anterior and posterior) is observed; these flakes are thin and arched and they present on their superior faces multidirectional negatives and they have faceted butts which are highly inclined in regard to the debitage surface. However, these flakes may be confused with the flakes of bifacial shaping out, so their precise analysis should be realized.

In this layer, several elements do not correspond to the blade production of the naviform cores; such as a fragment of a thin bifacial piece, a rejuvenation tablet of a semi-conical core, some arched unipolar blades, several globular cores corresponding to a flake deb-

itage and several bladelet fragments of a gray-green obsidian with a coarser texture, probably coming from Nenezi Dağ, 15 km to NW. It is also surprising to note the presence of some transparent obsidian flakes which evoke the Kayırlı source, some km far away. Also, some pieces of gray obsidian with a metallic aspect are observed. Geochemical analyses are necessary to confirm these determinations.

In the S. 3, layer 4 yields an assemblage comparable, but with an important percentage of unipolar debitage similar to the one described above. In this layer the presence retouched tools and especially a projectile on a regular, prismatic, central blade as a blank. The projectile has a base shaped by inverse semi-abrupt retouches; the sides also bear inverse semi-abrupt retouches and the extremity is broken by a pseudo burin blow (Fig. 26: 9).

The excavation confirms the impressions that we had from the survey, particularly the almost absence of the central blades and the rarity of the lateral blades.

Several facts (presence of a projectile, tools and imported elements) indicate that the site had "domestic" installations in relation probably with diverse activities at the production spot.

#### Conclusion on the Kaletepe workshop

The first campaign of excavation at Kaletepe has revealed the existence of a workshop with an inconceivable accumulation of deposits displaying a complex and standardized debitage of a high technical control. This implies a certain level of specialization.

The Kaletepe style corresponds to the production of long pointed blades (15 cm of length for 15 mm of width). These products were entirely exported also with a part of the sub products such as lateral blades and upsilon blades.

These pieces comprise the characteristic blanks for projectiles (oval, tanged, triangular, etc.) of the PPNB tradition of the Levant. Such kind of different points in flint or obsidian also exist in the southeast Anatolia (Çayönü, Cafer Höyük, Nevalı Çori, etc.) but they are rare or

exceptionals in the Central Anatolian assemblages. Else where this style of debitage seems to continue with the first potteries in the Levant at least. The presence of such productions in Central Anatolia indicates the complexity of the social processes and the cultural interactions in this region. Consequently, comprehension of these mechanisms interests the whole Near East.

#### GENERAL CONCLUSION

At regional context, the Melendiz basin presents a considerable potential to approach the problem of control of the obsidian sources in Central Anatolia. The geochemical analysis of obsidians from prehistoric settlements indicate clearly that Göllü Dağ sources were exploited since 14 000 bp. and this obsidian traveled long distances towards the south, east and west (Cauvin *in press*). Thereupon, the geochemical character of obsidians in prehistoric settlements should be associated with the technological aspects. This association will open new perspectives to understand the exploitation of the sources, the use of the workshops, the forms and ways of obsidian diffusion, exchange, trade..., and the status of obsidian at the settlements.

Consequently, cultural markers identified at Kaletepe should be searched in this context. For the moment Kaletepe is a key site in this aspect. The different *chaînes opératoires* observed at the workshops should be treated from this point of view. In fact, analyses of sealed and correctly dated assemblages at the settlements is necessary to understand the status of these productions in the technical system of the Neolithic: organization of the acquisition and the production, economy of the

debitage, functional analysis, identification of the cultural and social markers.

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## Musular: A General Assessment on a New Neolithic Site in Central Anatolia

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**KEYWORDS:** *Central Anatolia, Pre-Pottery Neolithic, Aşıklı.*

**ANAHTAR KELİMELEER:** *Orta Anadolu, Çanak Çömleksiz Neolitik, Aşıklı.*

### ÖZET

Aksaray İli, Gülağaç İlçesi, Kızılkaya Köyü sınırları içerisinde yer alan Musular yerleşmesi, 1993 yılında Aşıklı Höyük kazı ekibi tarafından çevrede yapılan yüzey araştırmaları sırasında bulunmuştur. Aşıklı Höyük ve Musular'ın yanısıra yine yüzey araştırmalarında saptanan Yellibelen ve Kızılkaya Köyü içi Gedikpaşa yerleşmeleri, Çanak Çömleksiz Neolitik Dönem'de bölgedeki yerleşme düzeni, bu dört merkezin birbiriyle olan kronolojik ve olası kültürel ilişkileri sorununu ortaya koymuş; bu sorun kapsamında 1996 yılında İstanbul Üniversitesi Prehistorya Anabilim Dalı öğretim üye ve öğrencilerinden oluşan ekip, Musular'da çalışmaya başlamıştır.

İlk yılki sistematik yüzey toplaması sonuçları doğrultusunda, 1997 yılında yürütülen kazı çalışmaları, Musular'da şimdilik kaydıyla iki ana yerleşme evresinin varlığını ortaya koymuştur. İlk evre, uzun yıllar boyunca tarımsal faaliyetler nedeniyle tahrip olmuş şekilde ele geçen Çanak Çömlekli Evre'dir; bunun altında ise bu kez Çanak Çömlekli Evre'nin kısmen tahrip ettiği Çanak Çömleksiz Neolitik Dönem yerleşmesi yer alır. Çanak Çömlekli Evre, kazıldığı kadarıyla taş temelli dörtgen planlı, dört mekanlı tek bir yapı kompleksiyle temsil edilir. Ortaya çıkarılan çanak çömlekler, mal grubu çeşitlenmesi ve tipolojilerine bağlı olarak, olasılıkla Neolitik sonu /Kalkolitik Dönem'e tarihlenmektedir. Çanak Çömleksiz Neolitik yerleşme ise şu an için dörtgen planlı, kerpiç duvarlı tek bir yapı ile bilinmektedir. Yapının özelliği, gayet iyi korunagelmiş kırmızı boyalı tabanı ve taban üstü yapı öğeleridir. Söz konusu yerleşme, obsidien endüstrisi özelliklerine göre, Çanak Çömleksiz Neolitik Dönem'in sonlarına, hemen yakınında yer aldığı Aşıklı Höyük yerleşmesinden daha geç bir evreye tarihlenmektedir. Şu an için sonucu alınmış tek bir C<sup>14</sup> örneği (GÖ 8. bin/MÖ 7. bin) bunu doğrulamaktadır. Önümüzdeki yıllarda sürdürülecek kazı çalışmalarıyla bölgedeki yerleşme düzeninin açıklanmasına katkıda bulunacak olan Musular, Orta Anadolu Neolitik kronolojisinde, Aşıklı'dan sonra, Can Hasan III ile birlikte, Çatalhöyük yerleşmesinden daha erken tarihiyle, söz konusu iki merkez arasındaki kronolojik boşluğu dolduracak bir yerleşme görünümündedir.

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## ABSTRACT

Musular is located in Central Anatolia, Province Aksaray, District Gülağaç, Kızılkaya Village, about 400 m west of Aşıklı Höyük. It was first found in 1993 during the regional survey conducted by the Aşıklı Höyük team. Musular, Aşıklı and two more pre-pottery Neolithic sites located in the very close region, raised the question of the settlement pattern of the region during the Neolithic period. Work started at Musular in 1996 with a systematic surface collection, and continued with excavations in 1997. Two seasons of work at the site showed that it was first being settled during the 7th millennium, i.e. during the pre-pottery Neolithic period, and then some time later, by the end of Late Neolithic or the beginning of the Chalcolithic. Ongoing excavations at the site will hopefully add new data in understanding the settlement pattern of the region as well as the chronological problems of the Central Anatolian Neolithic to fill the gap between Aşıklı Höyük and Çatalhöyük sequences.

## INTRODUCTION

During the 1993 excavation season at Aşıklı Höyük (Province Aksaray, Central Anatolia; see Esin, in this volume) the excavation team carried out a survey in the vicinity<sup>1</sup>. Directed by U. Esin, conducted by S. Harmankaya and E. Bıçakçı, the team started surveying from Doğanlarla Village (Göstük) towards south down to Çeltek and along the west bank of Melendiz-Su. The survey yielded thirteen sites (Gülçur 1995: 154), one of which was Musular<sup>2</sup>.

The first observations on the collected material suggested that the site could be contemporary with Aşıklı. If Aşıklı Höyük was a major pre-pottery Neolithic centre in Central Anatolia, could Musular -a small and flat settlement- be an adherent site of an accompanying function: a hunting camp site, a knapping site, or a family unit site. Keeping such questions in mind, the surveys continued in the region by S. Gülçur in 1994 and 1995. Gülçur visited Musular Mevkii (P 33/8) and

Yellibelen Tepesi (P 33/9) -the latter being another pre pottery Neolithic site in the close vicinity. The technological and typological study on the chipped stone industry, by Balkan-Atlı, indicated that the assemblages of Musular and Yellibelen have similarities, but reveal a different tradition from Aşıklı Höyük (Balkan-Atlı 1998: 85-86) which could be more recent than Aşıklı (level 2), or contemporary with its eroded uppermost horizons. Such observations brought out the problem of the chronological sequence of Central Anatolia in the Neolithic period, the gap between the end of Aşıklı Höyük and the beginning of Çatalhöyük.

Besides chronological problems, the questions about the settlement pattern in the area represented by four contemporary sites, namely, Aşıklı, Musular, Yellibelen and another site in the Village of Kızılkaya (Gedikpaşa<sup>3</sup>) (Balkan-Atlı *et al.* 1997: 266) during the pre pottery Neolithic period or the change of the settlement pattern through time, have given us the impulse to work in the region. The ongoing

disturbances<sup>4</sup> at Musular have given the priority to start working at this site.

Musular is located in the Province of Aksaray, District Gülağaç, Kızılkaya Village (38°20'51" N, 34°13'33.5" E), on the west bank of the Melendiz river, across the pre-pottery Neolithic mound of Aşıklı, about 400 m in distance (Plan 1).

Unlike Aşıklı, like Yellibelen and Kızılkaya (Gedikpaşa), Musular is a flat and low settlement leaning partly on the slope and partly above a tufa rock formation, locally called *say*. The site measures 220 x 120 m and has ca. 6.0 m of difference in height between the uppermost point where the datum is 1190 m and the lowest level. The total depth of the archaeological deposit left is about 0.70 m, but this thickness is uneven on the surface: in certain places it is almost totally eroded where one can see the natural rock on surface. Therefore the first campaign's aim was to find out the thickness of the preserved cultural deposit, to collect the surface material -disturbed and split from their contexts by erosion and ploughing.

## SURFACE COLLECTION AND EXCAVATION

In 1996, work started with the topographical plan of the site carried out by Bıçakçı (Plan 2). A 10.0 x 10.0 m grid system is applied to the site that formed the basis for the systematic surface collection, aimed as the second step for the 96 season.

The surface collection (Fig. 1) covered an area more than 11.000 sq.m. 2790 squares were collected, each measuring 2.0 x 2.0 m (Özbaşaran-Endoğlu 1998: 201-202). Random sampling was not applied, each square was collected with the hope to reconstruct the destroyed uppermost horizons. The finds were grouped

in six categories: obsidian, animal bones, ground stones, architectural finds mainly red painted floor and/or wall plaster pieces, pottery and miscellanies as shells, beads, etc., and their distribution showed two main concentration areas; the flat northern part, and the relatively higher southern half of the site.

The third step was to make a section to understand the stratigraphy at Musular. A 16.0 m long section on the east, where a channel was built by the villagers, yielded three levels with a total depth of 0.70 m. Except the mixed surface soil, they belonged to pre-pottery Neolithic. Due to the presence of some architectural features and a human skull observed this area was enlarged to the size of a trench. The trench D 11, (Fig. 2) yielded a round hearth, 0.90 m in diameter and paved with medium sized pebble stones. Burnt debris or ash remains were rare nearby, but some cracked stones of the pavement showed that they were heated. A small pavement south of the hearth with flat and relatively larger stones and a complete, well-preserved skeleton were the finds of the same level laying directly on the natural rock formation. The skeleton, studied by Özbek, belonged to a man who was then 25-30 years old (Fig. 9) (Özbek 1998: 161-173). He was laid on his right side, in hocker position. It was a simple burial; there were no grave goods.

Contrary to the scanty architectural features, the area yielded various bone and stone implements: a bone object about 4.5 cm long was shaped like a spoon, it was well burnished and decorated with horizontal and vertical grooves (Fig. 10); and another object was flat and had a comb like form (Fig.11). Both show excellent craftsmanship. Awls, which can be classified tentatively in two main types are either long (Fig. 12) or short and squat (Fig. 13). Shaft straighteners, a flat object out of tufa with a horizontal groove on its neck (Fig. 14),

<sup>1</sup> It was associated with the national project of "The Anatolian Cultural Inventory" proposed by the Turkish General Directorate of the Monuments and Museums.

<sup>2</sup> It was first found by M. K. Davis -then a member of the Aşıklı excavation team. It had huge amount of obsidian and also red painted floor/wall plaster pieces scattered all over the surface.

<sup>3</sup> Yellibelen tepesi (Gülçur 1995: 156), lies ca. 500 m north of Musular and ca. 700 m northeast of Aşıklı; while Musular is ca. 400 m to Aşıklı. The fourth pre-pottery Neolithic site, in the Village of Kızılkaya/Gedikpaşa, is about 500 m in distance to Aşıklı.

<sup>4</sup> The site has been under cultivation for more than 50 years. Besides, it is cut on its east side by a channel built by the villagers to water the vegetable fields nearby; its west is disturbed by a village road, and moreover, the surrounding wall of a newly built benzine station limits the southwest of the settlements.



pieces of stone cups (one rim, one body piece), a celt, chipped disks, grinding stones and hammer stones are among the stone implements of the northern area.

Another trench 10.0 x 10.0 m, located in square D 9 (Plan 2), revealed three levels: the first one was the surface soil, the second and the third - different in texture and colour- belonged to pre-pottery Neolithic, without any architectural features except a pit. All levels display large amounts of obsidian, animal bones, and some bone implements.

Due to the results of the systematic surface collection and the test trenches of the first campaign, the work continued in three different areas in the 1997 season. Trench E 11, displayed only obsidian finds. The trenches in plansquares H 11-12-13 had a deposit of only 0.30 m thick, mixed with surface soil. A finely worked celt was found in the surface soil.

In spite of the poor finds in the above mentioned areas, the excavations near the highest point of the site (squares N-O 11-12, in plan) revealed substantial architecture with two main phases: Late Neolithic/Chalcolithic (?) and Pre-Pottery Neolithic phases. The early phase was represented by a single mud brick building. It was quadrangular in plan (Building A) measuring 3.50 x 4.50 m (Plan 3, Fig. 4). While its west wall was partially preserved, its north, south and eastern walls were totally damaged, scraped till the floor level by later i.e. the next phase's building activities. On the other hand, its floor, except some later disturbances, was quite well preserved with architectural features on it. These included two flat stones placed in the same line on opposite sides of the room, a pit with a diameter of about 0.50 m, a post hole (?), and a flat stone with a hole in the middle (Plan 3). The pit contained animal bones which are not yet analyzed. The possible post hole was 0.25 m in diameter and 0.15 m in depth and it was empty. The interesting find was a flat stone

with a hole in the middle (Fig. 8). It was found partially surrounded with small pebbles and covered with *kerpiç* earth. It seemed as if a timber beam about 0.10 m thick was put vertically into the hole and surrounded by pebbles to support its base, and then covered with *kerpiç*. The floor of the room was plastered, totally red painted<sup>5</sup> and burnished (Fig. 5). The curves on the edges of the floor towards the walls indicated that the walls were also plastered. While there existed no *in situ* small finds on the floor, its fill revealed obsidian, animal bones and some botanical remains. Except a tiny bead, a celt piece and a small stone stand (?) found in the fill of the building, it did not contain any specific small find *in situ* which would give a hint about its function.

Due to the floor treatment and the architectural features placed on the floor, Building A at Musular can be compared with the Building T at Aşıklı. Building T is a square structure, 6.5 m on a side, has a red (ochre) painted floor which has renewed and/or repaired during the succeeding building phases. Due to its architectural characteristics, location and the comparison with the widely exposed dwelling structures at Aşıklı, it is interpreted as a temple (Esin 1996: 37). In the light of this interpretation, Musular Building A can also be interpreted as a non-domestic building, but it still needs further investigation and confirmation.

The stratigraphical relations between Building A and the pavement on its northwest corner, the partial wall in the north and the most northern features (Plan 3) present problems to be investigated in the next campaigns.

The succeeding phase, Late Neolithic/Chalcolithic (?) (see below), was represented by a massive stone architecture (Plan 3, Fig. 7). The building complex was made up of two small cell-like rooms (B and F), a very narrow corridor-like passage (H), and a relatively large room (G) -its western and southern walls being partially disturbed. Together with the

big wall in the east -although it is stratigraphically unclear for the time being- the architectural features seem different from the previous phase. The wall in the east was 0.80 m in width and more than 10 m in length with two courses of stones. Due to the slope, while the lowest course on west was laid directly on the bed rock, on east, it was laid on a prepared surface of clay and earth. It was built with big limestone blocks, placed vertically on outer sides which gave a monumental appearance (Fig. 6). In between, it was filled with middle sized limestones and local pinkish tufa blocks. The east extension of the wall was disturbed by later building activities, which probably also caused the destruction of the eastern part of the Building A.

Some of the few small finds found in the deposits of the rooms were a grinding stone (in room B) and a polishing stone (in room F). Two awls, a polishing stone and a grinding stone belonged to the same phase, but were found outside the rooms. A celt, a stopper (?) and an adze from the surface soil may belong to the fill of this phase, pulled apart during ploughing.

Besides the stone building, the pottery phase was represented by pits and a working area. The pits cutting the pre-pottery levels were also destroyed till their lowest level by ploughing, which resulted in a total mixture of the deposits of the pottery and pre-pottery horizons.

The pottery of Musular is hand made and it can tentatively be classified in five sub groups:

1. The first group has a pinkish-buff paste, it is densely straw, rarely sand and grit tempered, sometimes contains mica. They are either plain or self slipped and slightly burnished. Shiny burnishing is rare. The surface colour is pinkish-buff, light or dark gray or red, or a variation of these colours.
2. The second group has a grayish paste with few straw, but more grit temper, plain or self slipped; it is slightly burnished, and has a grayish to dark brown as surface colour.

3. Paste and temper is the same as the first two ware groups, it is red slipped, glossy/highly burnished; it is red, pinkish-beige and occasionally their inner surface is gray due to firing.

4. Coarse ware with reddish-brownish paste, it is densely straw, grit and sand tempered, porous and poorly fired. Surface colours are reddish brown or pinkish-light brown.

5. The last group is almost the same in paste and temper but differs from the first two by a glossy burnish and surface colours. It is mottled in orange-beige, pinkish-beige and gray.

As it is shown above, the groups do not have distinctive differences in ware groups (Fig. 15, 16), nor have a variety in forms. The majority are straight sided open bowls and plates (46%). The short necked globular jars (30.33%) make the second major group with a diversity in size. Decorated sherds are almost none, out of two pieces one has the trace of a washed-out paint (?) decoration (Fig. 15, first row, fifth from left), and one piece has two knobs on the rim (Fig. 15, first row, fourth from left). Six sherds have or bear the trace of a handle/lug.

Most of the pottery comes either from the surface soil or from the pits that cut the pre pottery deposits. Due to the fact that they are not represented in full contexts and not sufficient in quantity, it is difficult to speculate on their date. Moreover, the absence of an excavated site which could provide the chronological sequence for the development of the pottery in the Neolithic and the subsequent periods for Central Anatolia, hinders to give an exact date for the Musular pottery. According to the comparison with the survey material of the area kindly presented by Gülçur, and the excavated sites like Gelteri (Esin 1993: 47-56), Güvercinkaya (Gülçur 1997: 95-97), Can Hasan I (French 1963: 34, 38-41/fig. 5-8, 1965: 28, 29, 31/fig. 2, 1966: 118, 122-123/fig. 5-6) and Köşk Höyük (Silistreli 1986: 130-131, 1991: 97-98), Musular pottery can tentatively be dated to the Late Neolithic or Chalcolithic period.

Pottery was accompanied by some small finds

<sup>5</sup> The red plaster was not exposed totally for protective purposes.

as two weights, one probable brazier and a grinding stone in the working area and a grinding stone, a pierced bone tool probably used as a spatula in a pit.

### CHIPPED STONE INDUSTRY

Obsidian is the main raw material used in this industry, flint is very rare. The preliminary observations on about 5.000 pieces indicate that the chipped stone industry of the pre-pottery Neolithic Musular is primarily a blade industry where naviform technology was used. The relative rarity of cortical flakes may suggest that the raw material was brought to the settlement in form of roughed out blocks. On the other hand, the abundance of thin flakes of shaping indicates that the preforms of the cores were realized in the settlement. The cores are few and found in exhausted states, but the presence of crested blades, tablets, lateral blades and central blades, especially upsilon blades, points out the naviform tradition.

Projectiles are quite numerous (4.6%) if we take in consideration that they are generally the most poorly represented retouch modified pieces in the settlements due to their loose or breaking during the hunting activities. They are mostly unifacial, rarely bifacial, pressure retouched oval shaped pieces (Fig. 17, 18). Besides, a few examples of Byblos points were also found.

Tools constitute 16.8% of the industry. They are not all retouched. Use retouch modified tools are quite numerous: 24.8% of the flakes and 32.2% of the blades bear use wear.

Among the use retouch modified tools, scrapers constitute the most important group (34.2%). Scrapers on flakes (22.2%) are more numerous than those on blades (12%). The other tools are burins, borers, steep retouched blades and splintered pieces, which are quite frequent. For the moment no microlithes were found.

Flint is very rare (about 20 pieces). It is a yellowish small grained flint of good quality (Fig.

19). Flint pieces were all in form of retouched blades (except a borer on a flake) and some bear silica sheen on the bords. As there is no proof of their being produced in the settlement, they were probably imported as exchange items.

Besides common tools as scrapers, two of the elements of the Musular chipped stone industry show some similarities with the other settlements in the region.

1) Unifacial pressure retouched oval projectiles were found on the surface layer of Aşıklı (Todd 1980: 59), at Can Hasan III (Ataman 1988) and at the lower layers of Çatalhöyük (Balkan-Atlı 1994: 128-129).

2) Splintered pieces are also numerous at Can Hasan III (Ataman 1988) and at Hacıbeyli (Fujii 1995: 141-142), where naviform technology also exists.

### BOTANICAL AND FAUNAL REMAINS

The botanical remains are being studied by R. Cappers and H. Woldring from the Rijksuniversiteit Groningen. Except for some hackberry (*Celtis*) and grain samples which could be recognized by naked eye during digging or floatation, the variety of collected and/or produced food remains is not known since the analyses are not completed. On the other hand, faunal remains, being studied by H. Buitenhuis, showed that sheep and goat and cattle are present in the pre-pottery Neolithic Musular's faunal assemblage and domestication problems still survive, as at Aşıklı (pers. communication with Buitenhuis).

### CONCLUSION

In the light of the preliminary results of two seasons' work at Musular, the following can be concluded:

There are two main settlement phases at Musular, pre-pottery Neolithic followed by a later pottery phase. The pre-pottery settlement lays mainly around the highest point of the

site and does not extend to north, although north seems within the activity area, but not included in the centre. The architectural characteristics of the earliest phase (i.e. the red painted floor phase) have close resemblances with the example at Aşıklı. Compared to it, the building at Musular could have a specific function rather than a dwelling. The next phase, represented by massive stone architecture, shows a different tradition in building activities. The four roomed building complex is exposed in its foundation level with its fill almost totally disturbed and mixed with surface soil.

The technological and typological characteristics of the obsidian industry of pre pottery Neolithic Musular point to the later stage of this period. Compared to Aşıklı, it is later than its main settlement phase (level 2) and probably contemporary with its eroded latest horizons. Such a sequence places Musular chronologically between Aşıklı and Çatalhöyük. The only C<sup>14</sup> date yet analyzed confirms this sequence: Musular sample no 5 (GrN-23518) is dated to 7980±220 bp<sup>6</sup>. Based on a series of uncalibrated C<sup>14</sup> dates, the main settlement phase of Aşıklı (level 2) dates to the 9th mill. bp (Esin 1995: 138-141, 144-146) and the latest building phases exposed in the southwestern area -where Building T with its red-painted floor is located- date to 8400±40 and 8420±30 bp (Esin 1995: 146). Although there is only one dated sample for Musular for the time being, it fits well with the relative dating based on chipped stone. On the other hand, Çatalhöyük "...covers the span between 6500-5700 BC..." (Mellaart 1964: 116-118), while the recent analyses date it back to 7020±50 BC (Kuniholm and Newton 1996: 246) and Can Hasan III with the lack of published C<sup>14</sup> determinations is dated to 6500 BC (French 1970: 142). To sum up, the preliminary results indicate that Musular was settled either during the latest phase of Aşıklı or after Aşıklı was abandoned;

probably contemporary with Can Hasan III and some time before Çatalhöyük.

To conclude, the Neolithic of Central Anatolia prior to recent excavations and surveys which started in early 90's, was mainly known by Çatalhöyük and Can Hasan III and the surveys carried out by I. Todd. The ongoing surveys in the region added tens of new pre-pottery and more than 30 pottery Neolithic sites to the inventory of Central Anatolia (Harmankaya *et. al.* 1997). The excavations at Aşıklı since 1989 and the new excavations at Çatalhöyük since 1993 displayed new evidences for the distinct Central Anatolian culture. Musular being one of the new sites, seems a promising site both to reconstruct the definite chronology for the region and also to explain the processual cultural developments in Central Anatolia.

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<sup>6</sup> The calibrations -provided by O. Tanındı and H. Buitenhuis- fall in a range of 8947, 8845, 8790, 8734 BP and 6997, 6895, 6840, 6784 BC being the most probable range 7060-6550 BC.

Sert (1997), Oğuz Tanındı (1996-97), Seden Yüksel (1997), Sandy Zurikoğlu (1997). Aksaray Museum was represented in 1996 by Fariz Demir and in 1997 by Demet Kara to whom we are grateful for their great help and cooperation during and after the excavations. The chipped stone industry is being studied by Nur Balkan-Atlı in collaboration with Didier Binder, Marie Clarie Cauvin and Gerard Der Aprahamian. Rene Cappers and Henk Woldring are studying the botanical samples while Hylke Buitenhuis, the faunal remains (all are from the Rijksuniversiteit Groningen). Metin Özbek (Hacettepe University) kindly accepted to study the anthropological remains. We are thankful to all and also to the Rijksuniversiteit Groningen, *Centrum voor Isotopen Onderzoek* for the prompt  $C^{14}$  dating and to Oğuz Tanındı and Hylke Buitenhuis for the calibrations.

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## Renewed Work at Çatalhöyük

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**KEYWORDS:** *Art, Symbolism, Çatalhöyük.*

**ANAHTAR KELİMELER:** *Sanat, Sembolizm, Çatalhöyük.*

### ÖZET

Çatalhöyük’de uzunca bir süre için durmuş olan kazı çalışmaları 1993 yılında yeniden başlamıştır. İlk dönem Çatalhöyük kazıları, bu ilginç yerleşmenin doğal çevre ortamı, beslenme ve toplumsal düzeni kadar, sanatı ile ilgili bir çok soruyu gündeme getirmiş, ancak eldeki verilerin çok sınırlı olması nedeni ile bu konular ilk kazı döneminden bu yana sonuca varılamadan tartışıla gelmişti. Yeni dönem Çatalhöyük kazıları, yukarda değinilen soruların çözümüne katkıda bulunmak amacı ile başlatılmıştı. Yeni kazı dönemi ile birlikte, bu yazıda da üzerinde durulacak olan, sanat ile toplumsal ortam arasındaki ilişki tartışması gündeme gelmiştir.

1993 - 95 arasında yüzey toprağının hemen altındaki yapıların dağılımını anlamak için geniş bir alanda üst toprak örtüsü sıyrılmış, ayrıca jeofizik yöntemler ile de tarama yapılmıştır. Bu çalışma, yapı dağılımının höyüğün hemen her yerinde J. Mellaart tarafından daha önceleri saptanmış olanlar ile benzeştigini, ayrıca yer yer büyük çöplük alanları da bulunduğunu göstermiştir. Bu arada seki, sütun, ambar, heykel, duvar resmi, baskı düzeltili aletler ile belirlenen ve “kutsal yer” olarak tanımlanmış özel yapıların da, yerleşmenin yalnızca belirli bir kesimde değil, hemen her yerde bulunduğu anlaşılmıştır. Bu da, Çatalhöyük’deki kült yapıları ve kült uygulamasının yerleşmenin belirli bir kesiminde yaşayan özel bir sosyal sınıfla ilişkili olmadığını, bunları günlük yaşam ile birlikte düşünmenin daha doğru olduğunu göstermiştir.

Bu yazıda özellikle “1 no.lu Yapı” ve bu yapıdan elde edilen verilere göre yaşam ile sanat arasındaki ilişkilerin yorumu ele alınacaktır.

“1 no. lu Yapı” ayrıntılı olarak ele alınmıştır; Fig. 2’de görüleceği gibi yapının bir çok yenileme evresi vardır ve duvarlarında da en az 40 sıva katmanı sayılmıştır. Yapım sırasında duvar temellerinin arasına temiz bir toprak katmanı serilmiş, adak olarak ölüler yerleştirilmiştir. Mekan içinde yapılan mikromorfoloji değerlendirmeleri, 70 ve 71 no.lu mekanlarda ahşap, obsidyen, kemik alet yapımı, balık ve bitkisel besin hazırlaması gibi işlevlerin yapıldığını göstermiştir. Yapıda bulunan duvar resmi, bu tür işlerin yapılmadığı, tabanı daha temiz olan bölümdedir. Buna karşılık bu kesimdeki taban ve seki altında şimdiye kadar 64 mezar bulunmuştur. Yapının daha sonraki yenileme evrelerinde de, yapıda ölü gömme ile duvar resimlerin aynı

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alandan olduğunu, buna karşılık besin hazırlaması ve alet yapımı gibi günlük işler için diğer mekanların kullanıldığını göstermiştir. Buna karşılık duvardaki kabartma belirli bir kullanım alanı ile ilişkili değildir. İlginç olan duvar resimlerinin sık sık yenilendiği, kabartmanın ise yapının tüm süreci boyunca kullanılmış olmasıdır. Bu da kabartmaların mimarinin ayrılmaz bir ögesi olduğunu düşündürmektedir. Yapının 40 yıl kadar, bazı değişiklikler ile ayakta kaldığı anlaşılmaktadır. Yapıdaki ilk gömülerin çoğu çocuk yaşıta, buna karşılık son evrelerde ise yaşlıların oranı artmaktadır. Ölülerin sayısının fazlalığı da göz önüne alınırsa, "1 no.lu Yapı'nın" bu binada oturanlardan daha geniş bir ailenin ortak "ölü gömme" yeri olduğu, ilk önceleri daha çok gençlerden oluşan bu ailede çocuk ölümlerinin de fazla olduğu söylenebilir.

## ABSTRACT

Re-excavation of Çatalhöyük since 1993 has allowed questions to be asked about the environmental, economic and social context of the art, although this paper deals only with social aspects. The detailed excavation of Building 1 in the north part of the Çatalhöyük East mound is described and the arrangement of activities in each phase of the building is shown. It is argued that two types of art relate to two different social rhythms. The relief sculpture is associated with the life cycles of buildings and whole extended family groups. It may be related to ancestral links between families and buildings. The painting, on the other hand, appears to be related to the burial of young people. It may have a specific and shorter term role in dealing with the spiritual dangers of young death. These examples are presented as a first step in the understanding of the symbolism at Çatalhöyük.

## INTRODUCTION

The 9000 year old site of Çatalhöyük in central Turkey was first excavated by James Mellaart (1967) between 1961 and 1965. It quickly became of international importance for a number of reasons. For example, there is its early date. There are  $C^{14}$  results from the site and dendrochronological studies suggesting a range of dates from the mid seventh to the mid sixth millennia bc, although 5 metres of occupation which occur below Mellaart's lowest level (XII) indicate an earlier foundation for the site. Initially these early dates indicated the importance of areas outside the Fertile Crescent for the early development of agriculture. Discoveries since the 1960's have, however, demonstrated that many earlier sites exist in Turkey with large settlements or agriculture. But Çatalhöyük retains an importance in terms of its symbolic complexity. While similar symbolic themes such as the bull, the vulture, the removal of heads, and female figurines, have now been found widely from the Near East into southeast Europe, Çatalhöyük stands out in terms of the complexity and density of its use of these themes.

There are certainly other reasons for pointing to the complexity of Çatalhöyük. For example, the artifacts demonstrate widespread exchange (eg obsidian, Mediterranean shells) and technical proficiency or even specialisation (as seen in polished obsidian mirrors and finely flaked flint daggers - Fig. 6). However, recent evidence suggests that there are other reasons for arguing for a limited degree of complexity. We remain unsure of the degree of dependence on domesticated plants and animals, but certainly an important component of the subsistence was wild resources such as tubers and equids. In addition there is no evidence of central administration, ceremonial centres or public buildings, although in a site 13.5 hectares in size (Çatalhöyük East), such evidence may prove difficult to find. Overall, Çatalhöyük stands out not so much in terms of its size or political, economic or social complexity, but in terms of its symbolism.

New work began at the site in 1993, under the auspices of the British Institute of Archaeology at Ankara. The first three years of fieldwork concentrated on studies of the surface of the West (Chalcolithic) and East (Neolithic)

mounds (published in Hodder 1996). Since 1995 excavation has been undertaken in the areas identified in Fig. 1. One of the aims of this work is better to understand the art and symbolism at Çatalhöyük East.

## Building 1

I wish to provide an example of the social character of art at Çatalhöyük East by discussing the first building that we have excavated in detail - Building 1 in the North area of the site.

Scraping of the surface of the mounds at Çatalhöyük had earlier proved successful in establishing the overall arrangement of architecture on the Neolithic East mound. Despite some later (Hellenistic and Byzantine) occupation, in many areas on the top of the mound removal of the plough-soil immediately exposed plans of Neolithic buildings. These results and the supporting geophysical prospection are described by R. Matthews (1996) and Shell (1996). It became clear that the upper levels of occupation on the East mound consisted largely of densely packed small buildings and extensive midden areas. The small rectangular buildings recalled closely those excavated by Mellaart (1967) in the southwestern part of the mound. Indeed, the scraping technique suggested that these buildings, even well away from the area excavated by Mellaart, included elaborate examples with complex internal fittings. This suggested that the so-called 'shrines' occurred in different parts of the site at a high density. Rather than envisaging a priestly elite in one quarter of the site, it became necessary to think of domestic cults widely spread.

Further study of the material excavated in the 1960's, including the artefacts housed in museums in Turkey, suggested a more complex picture (Hodder 1996). A continuum of variation could be identified between more and less architecturally complex buildings. The more complex buildings with more platforms, bins, pillars, sculpture and painting also tended to have more bifacially flaked obsidian points and more obsidian cores. They also tended to be more innovative in the use of ceramic

forms, and to have more figurines. It was also clear that the more elaborate buildings in one phase would often continue to be more elaborate when rebuilt in ensuing phases. There are many difficulties with the definition of such variation between more and less elaborate buildings because of the limitations of the surviving records. In any case, what variation occurs is within a narrow band, and micro-morphological work (W. Matthews *et al.* 1996) indicated that even the more elaborate buildings (termed 'shrines' by Mellaart) had traces of a wide range of domestic activities on their floors.

In approaching Building 1, therefore, we were of the opinion that the art at Çatalhöyük had a domestic context but that certain buildings played a slightly more central role in the generation and transmission of cultural elaboration. Unfortunately, the preservation of Building 1 proved to be relatively poor since the walls and upper fills had been subject to millennia of erosion on the top of the North mound, and since the plasters on the surviving walls and floors (the latter only 50 cm from the surface of the mound) had been affected by roots, animal burrows and freeze-thaw action. Nevertheless, the building yielded a large amount of information, resulting from detailed data collection. All soil from the site was dry-sieved, and 30 litres from each deposit were wet-sieved in a flotation system. The heavy residues from this were collected in a .5 mm mesh, were dried and then sieved through 4 mm, 2 mm and 1 mm meshes before hand sorting. The resultant heavy residue plots from the floors in Building 1 will be discussed below. (The results from the organic and inorganic chemistry analyses of the floor samples are not available at the time of writing.) This work on micro-artefact distributions on the floors at Çatalhöyük is needed because the floors were carefully swept clean in antiquity. Macro-artefacts (above 4 mm) occur rarely on or beneath floors, and when they do they appear to be special foundation or abandonment deposits or material which has fallen from roofs or walls.

Up to 40 layers of replastering were found on the walls and floors of Building 1. We believe, on the basis of correlations with dendrochronological sequences, that these replasterings occurred annually (Kuniholm and Newton 1996). The use of the building has been divided into the 8 phases summarised in Fig. 2. The following is a brief summary of the story of these phases. During the construction of the building (phase one), clean foundation deposits were placed between the walls and burials were placed within these deposits. In particular, a row of three neonate burials was placed just in front of what was to be the entrance from the western room (Space 70) into the main eastern room (Space 71). In the first occupation phase (phase two) a fire installation was constructed within the south wall of Space 71. Adjacent to this were the traces of a ladder which allowed access to the building, presumably through the same roof hole through which the smoke from the fire escaped. The western room (Space 70) contained a fire installation in the southwest corner. In the centre of the west side of Space 71 a relief sculpture was placed on the wall, although since this was later removed (see phase eight) we do not know what this consisted of. Certainly there was a frame of vertical plaster edges within which the relief sculpture was placed. Although traces of red paint were found elsewhere on the walls of Spaces 70 and 71, the only concentration of painting and the only evidence of designs and motifs occurred around and on the northwestern platform (Platform 13) in Space 71. Here some of the early layers of plaster were painted in geometric designs (Fig. 3) in various hues of red and in black.

In order to understand the social role of painting in Building 1 we need to try and determine what activities were taking place in the building, particularly around the northwest platform. The micro-artefact distributions suggest a wide range of activities, as do the micromorphological studies by W. Matthews (*et al.* 1996). It is clear that micro-traces survive of obsidian knapping, fish processing, wood-

working, bone implement manufacture, hearth sweeping, plant storage, within the buildings at Çatalhöyük. There are indications of animal dung, even on the cleaner floors, although this may derive from dung used as fuel (*ibid.*). However, in Building 1 most of these activities occurred in the southern part of Space 71 and in the western room (Space 70), as is indicated by the micro-artefact plots. The floors in the north and east parts of Space 71 had thicker and cleaner plaster and fewer artefact residues. It is possible that this differentiation into 'clean' and 'dirty' floors resulted from the placing of carefully woven reed mats on the floors of parts of the building (the imprint of such mats having been recorded by Mellaart 1967). The painting in Building 1 thus occurred in a domestic context. And in particular it occurred in the 'cleaner' parts of the building away from the main food preparation and storage areas. In order to understand these areas better, and in order to understand what particularly was happening on the northwest platform, we need to continue on to the second occupation phase (phase three). In this phase, the fire installation in the south wall of Space 71 was blocked up. A small basin (F27), perhaps used for grinding (grinding stones with traces of red ochre were found within it) was placed in the southern part of Space 71. A wooden bin, perhaps for storage was built within Space 70. In this phase, the same division in the use of space between the southwest and the northeast parts of the building occurred, as seen in the micro-artefact distributions and micromorphological studies.

In phase four, the third phase of occupation, a substantial fire installation was built in the southwest corner of Space 70. A grinding installation was also constructed in this room. A storage bin used mainly for lentils was placed on the south wall of Space 71. The entrance between Spaces 70 and 71 was remodelled and a cattle horn set within the western wall of Space 71.

What activities were occurring in the 'cleaner' parts of Building 1 (that is in the north and

west parts of Space 71) during these first three occupation phases? One important activity seems to have been burial. So far at least 64 individuals have been found in a series of graves beneath the northwestern platform, beneath the floor immediately to the east of the northwestern platform, and beneath the main eastern platform. Study of the human remains (Molleson and Andrews 1997) has indicated that most of the burials were placed in small graves while still fleshed, the bodies tightly flexed and often wrapped in cloth or braids. As later bodies were added into graves, earlier bones were disturbed, moved aside or removed. This repeated cutting and recutting of graves has made phasing of the grave sequence difficult, as will be discussed below. But bodies seem to have been added to the building throughout the phases of occupation.

The spatial patterning of the ages of the individuals buried in different parts of the building is informative. The northwest platform has not only the highest concentration of burials. It also has the highest proportion of young individuals. So the painting in Building 1 is associated with burial, especially of young people. If this spatial link can be established, what of the temporal link between the painting and the burials?

The fourth phase of occupation (phase six) occurs after a serious fire, perhaps deliberately controlled, had destroyed the southern half of the building. As a result, the building was remodelled (phase five). A wall was constructed to separate the rubble in the southern half of the building from the re-occupied northern half (Fig. 2). The eastern platform was rebuilt as a separate small room (Space 110) and a small, perhaps storage room, was built in the northeast of the building (Space 111). A fire installation was placed near the northwest platform.

The micro-artefact distributions suggest that even in this remodelled space the west was kept for food processing and other 'dirty' activities, while the eastern spaces were kept

'clean'. Burial continued especially under the floor of the eastern room (Space 110), and declined beneath the northwestern platform (Platform 13). Perhaps this was because this latter platform had come to be used for domestic activities. Indeed, the last floor surface on this platform was associated with a concentration of fish bones. It is thus of interest that the latest layers of plaster around this platform do not seem to have been painted.

There is thus both a spatial and a temporal link between the painting around the northwestern platform in Building 1 and burial, especially of young people. What can we say about the traces of relief sculpture on the west wall of Space 71, including the cattle horn set into the wall here? In the first three phases of occupation the sculpture is not associated with a particular activity area. Instead it seems to be centrally located, looking out into Space 71 as a whole. Behind it is the food storage and preparation taking place in the smaller western room. Unlike the painting which has a short, annual cycle of use, the relief sculpture has a life cycle linked to the building itself. Fixed to the wall it is less easy to change and transform. As Mellaart often remarked (1967), the relief sculptures are integral to the architecture of the Çatalhöyük buildings, being attached to upright beams and pillars.

The sculpture in Building 1 is centrally placed in the building and it has a life cycle which spans the building as a whole. That 40 year cycle in Building 1 seems to follow the life of an extended family. There are too many individuals buried in Building 1 to have been produced by deaths within a small nuclear family in this time period. We assume that a larger, extended group had rights of burial in this building. However, the early burials are predominantly of young individuals and the later of older individuals. It would appear, therefore, that the building was constructed by a young family which suffered a high death rate among its young children. Most of these young deaths were accommodated beneath the northwestern platform. But as the family matured, some individuals lived on within the building,

they had fewer children, and the building was abandoned after the burial of the last old family head beneath the floor in Space 110.

The relief sculpture thus seems to be related to this longer family/house cycle. A specific relationship between this sculpture on the west wall of Space 71 and the house cycle is indicated by the final phases of use of Building 1. We do not know what happened to the sculpture in the fourth occupation phase. This is because, after the abandonment and infilling (phase seven) of the fourth occupation in the building (phase six), a pit was dug down against the west wall of Space 71 and the sculpture removed (phase eight) leaving only traces and fragments. Small deposits of bone points and obsidian blades were left as offerings against the wall. The pottery from the robbing pit suggests that the removal of the sculpture occurred in the Neolithic, not long after the abandonment of the building.

This social concern with the sculpture on the west wall of Building 1 is reflected in numerous similar acts at Çatalhöyük. In Building 2 in the South or Mellaart area of the site (Hodder 1997), the west wall had been violently destroyed, and in the debris around the wall a very large wild bull's horn was found. Mellaart (1967) had noted a repeated pattern of destruction of the west walls of buildings. These actions can be seen as destructive, or as attempts made to recover sculptures of great social significance. Whatever the specific interpretation, it does seem that the end of the use of a building was often linked in some way to the relief sculptures within it. As already noted, the sculptures are often found integrated into the architecture of the buildings. And the buildings themselves are built and rebuilt as part of family cycles.

## CONCLUSION

Clearly we do not yet have a full answer to questions regarding the meanings of the unique flowering of art at Çatalhöyük. So far we have made only short steps. But the approach being followed is to contextualise

the art and by doing so we have seen that the art had a social character.

The life of the houses in which the art occurred may relate to the life cycles of extended families. Some of the art, especially the relief sculpture on the western walls, seems to be related to these longer cycles. It seems to have been used and destroyed as the house was used and abandoned, and as family heads grew from young to old. The destruction or recovery of relief sculpture from central points in abandoned buildings perhaps suggest a concern with the passing on of authority, rights of access, or ancestral ties.

Other aspects of the art, in this case the geometric wall painting, seem to be linked to shorter cycles of activity. The painting in Building 1 is placed on plaster which is annually renewed. Any particular painting is quickly covered over. Mellaart (1967) records examples of repeated repainting of similar motifs. But the best examples of this are on relief sculptures such as leopards and bull's heads. Our own observations are that most walls have some painting but that this is infrequently applied, to different degrees in different parts of a building. The motifs painted are much more varied than the relief sculptures. It is thus of interest that in Building 1, the painting around the northwestern platform seems to be related to specific events rather than to the life cycle of the building as a whole. The painting here seems to be related to concentrations of burials, especially the burials of young people. Perhaps this spatial and temporal link implies some generic association between painting and young people, say between painting and the initiation of young people. On the other hand, the painting may be related specifically to the death of young people.

Because of the link to young people under the northwestern platform, it seems unlikely that the painting (perhaps in contrast to the relief sculpture) is associated with ancestors. Rather, the painting may have something to do with protecting the inhabitants of the building from negative spirits surrounding young death, or

the painting itself may have helped directly to calm or control those spirits (as happens in many small-scale, shamanic societies - Humphrey and Onon 1996).

Jean Clottes (pers. comm.) has pointed to the way in which animals in some southwestern French Palaeolithic art seem to be 'coming through' the walls in the deep parts of caves. David Lewis-Williams, in his work with the Çatalhöyük project, has suggested that the bull's heads and some other relief sculpture at the site may be seen as 'coming through' the membrane of the walls in the interior parts of buildings. Certainly, there is much evidence of vulture beaks, jaws of fox and weasel and the tusks of wild boar protruding through the walls into the interior spaces at Çatalhöyük (Mellaart 1967). It is possible that much of the art and symbolism at Çatalhöyük has little to do with representation and symbolism at all. It may be more like a tool, used to control or communicate with animals, spirits and ancestors. The common use of the hand motif at Çatalhöyük may suggest the idea of touching or reaching through the walls. The location of the images deep in buildings does not suggest a concern with communication or display to other people. Rather it suggests a concern to control or communicate with another world.

We must await further excavation at Çatalhö-

yük in order to see whether the patterns so far identified in Building 1 are repeated elsewhere. We still have little idea of the degree of conformity to social norms at the site. Hopefully further analyses in Building 1 and further excavation of other buildings will allow a fuller contextualisation of the imagery. In this way can the different types of 'art' be related to the differing social rhythms of life at Çatalhöyük, and perhaps to conceptualisations of the world very different from our own.

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## The Neolithic of The Lake District

Refik DURU\*

**KEYWORDS:** *The Lake District, Early Neolithic, Late Neolithic, Hacılar, Kuruçay, Höyücek, Bademağacı, Suberde, Erbaba.*

**ANAHTAR KELİMELE:** *Göller Bölgesi, İlk Neolitik, Son Neolitik, Hacılar, Kuruçay, Höyücek, Bademağacı, Suberde, Erbaba.*

### ÖZET

Göller Bölgesi, coğrafi bir deyim olarak, Burdur ilinin büyük bir kısmını, Isparta'nın hemen bütünü ile Beyşehir ve Suğla Göl havzalarını içine alan, oldukça geniş bir bölge için kullanılır (Harita 1). İrili ufaklı çok sayıda göl bulunan bölgenin güneyini Toros Dağları, kuzeyini da Afyon ve Denizli illeri sınırlamaktadır. Antik çağların Pisidia'sı ile bir ölçüde çakışan bölge, Akdeniz sahil kuşağı ile Anadolu Platosu ve Konya Ovası arasında kaldığı için, yer yer hakim komşu bölgelerin etkilerini taşır. Bu nedenle buranın iklim ve ona bağlı koşullar açısından, bütünlük gösterdiği söylenemez.

Göller Bölgesi tarihöncesi dönemlerinin bu yazıda ilgilenilen zaman dilimi, Anadolu'nun diğer kesimlerine göre göreceli olarak çok daha iyi şekilde ve daha çok sayıda merkezde incelenmiştir. Anadolu yaylasında Neolitik'in varlığının öğrenildiği 50'li yılların ortalarından bugüne geçen 40 yılı aşkın süre içinde, bölgede Neolitik'in değişik basamaklarına ait yerleşmeler veren beş merkez kazılmıştır: Doğuda Suberde<sup>1</sup> ve Erbaba<sup>2</sup>, batıda Burdur kesiminde Hacılar<sup>3</sup>, Kuruçay<sup>4</sup> ve Höyücek<sup>5</sup>. Bölgenin güneyinde yer alan Bademağacı Höyüğü'ndeki kazılar da son beş yıldır devam etmektedir (Merkezlerin ayrıntıları için bk. İngilizce kısım)<sup>6</sup>. Bu kazılara ek olarak, bölgede kapsamlı yüzey araştırmaları yapılmıştır<sup>7</sup>.

Yaklaşık tarihlerle MÖ 8. binyılı sonlarından 6. binyılı ortalarına kadar olan 1500 yıl içinde, Göller Bölgesinde yaşanan Neolitik'in tüm ara basamaklarının, yukarıda sayılan merkezlerde yapılan çalışmalarla doğru şekilde öğrenildiği ve anlaşıldığı söylenemez. Oldukça geniş bir alanı kapsayan bölgenin, Isparta'yı ve ona

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<sup>1</sup> Solecki 1965, Bordaz 1969, Bordaz 1973.

<sup>2</sup> Bordaz 1970, Bordaz and Bordaz 1976, Bordaz and Bordaz 1982, Bordaz 1973.

<sup>3</sup> Mellaart 1958, Mellaart 1959, Mellaart 1960, Mellaart 1961, Mellaart 1970.

<sup>4</sup> Duru 1994, Duru 1996.

<sup>5</sup> Duru 1992, Duru 1995, Duru 1995a.

<sup>6</sup> Duru 1997, Duru 1997a, Duru 1998.

<sup>7</sup> Dr. Mehmet Özsait'in, bölgede yaptığı yüzey araştırmalarının bibliografyası için bk. Duru 1994: dip not. 6.



doğudan komşu olan Beyşehir-Suğla Göller kesimini içine alan doğu yarısı pek iyi araştırılmamıştır. Bu yörede kazılan Suberde ve Er Baba gibi iki merkezin çok kalın birikim oluşturmamış olan Neolitik yerleşmeleri, sadece belli dönemler hakkında kısıtlı bilgiler vermiştir. Öte yandan bu merkezler, coğrafi açıdan bölgenin merkezinde değil, periferisinde kalmaktadır. Hatta bu merkezlerin, Göller Bölgesinden çok, Konya Ovasının uzantısı içinde bulunduğu dahi ileri sürülebilir. Isparta ve yakın çevresinin Neolitik yaşamı hakkında ise hiçbir şey bilinmemektedir. Bölgenin batı yarısındaki Hacılar, Kuruçay, Höyücek ve Bademağacı'nın Neolitik yerleşmeleri ise, hem çok daha geniş kazı alanlarında araştırılmıştır, hem de Neolitik'in ara basamakları konusunda alınan bilgiler çok daha fazladır. Bölgenin ayrı kesimlerinden öğrenilenler dengeli olmasa da, doğu ve batıda yaşamış Neolitik toplumların tümünün, bu uzun dönemdeki yaşam biçimlerinin birbiriyle aynı veya çok benzer olmadığı anlaşılmaktadır. Hatta doğu ile batı arasında önemli farklılıkların olduğu rahatça söylenebilir.

Anadolu'nun neolitizasyon süreci için klasikleşmiş Akeramik Neolitik-Erken Neolitik-Geç Neolitik ayrımının Göller Bölgesinin tümü için geçerli olup olmadığı henüz kesin şekilde belli olmamıştır. Hacılar'ın öncele-ri Akeramik (AKN) denen en erken VII-I yapı katlarının Erken Neolitik (EN) olduğu anlaşıldığına göre<sup>8</sup>, Suberde III ve II katları, bugün için bölgedeki Keramiksiz Neolitik'in tek örneği durumunda kalmaktadır. Hacılar gibi Kuruçay ve Höyücek'te de, ana toprağa kadar inilmesine rağmen, keramiksiz bir dönem saptanmıştır. Bademağacı'nın inilen EN 5 katı dar bir alanda araştırılmış ve çok az sayıda çç bulunmuştur. Bademağacı'nda ana toprağa kadar, sanırım en az 2 m'lik birikim vardır ve bu alt katmanda neler bulunacağı elbette belli değildir. Bununla birlikte, sepet kulplu ve dörtgen biçimli kapaklı kutu gibi bazı ilkel kap formları, EN 5. katta çömlekçiliğin erken dönemlerine inildiğine işaret eder gibidir.

Suberde'nin III. yapı katında, evlerin tabanlarına açılmış ve kenarları sıvanmış çukurlar, bir tür taşınmaz kap sayılsa bile, gerçek anlamda keramiğin olmaması, Konya Ovasındaki sürece uymaktadır. Aşıklı Höyük ve Can Hasan III Höyüğü gibi merkezler, bu bölgede Neolitik'in başlarında keramikçiliğin bilinmediğini göstermiştir. Çatalhöyük'ün alt katlarında çç'nin çok azalması ve formların ilkelleşmesi de (Mellaart 1964: 82, lev. 33), daha erken yerleşmelerin keramiksiz olabileceğini akla getirmektedir.

Burdur Bölgesinde, özellikle Bademağacı'nda, durum farklı olabilir. Başka bir deyişle Bademağacı'nın en eski yerleşmelerin sahiplerinin bile keramik yapımını bildiği düşünülebilir. Çünkü Bademağacı'nı sadece Toros Dağlarının ayırdığı Antalya Bölgesinde, Neolitik öncesi dönemlerinde dahi çç'nin kullanıldığına işaret eden bulgular vardır. Beldibi B2 evresinden gelen kaba keramik gerçekten Mezolitik'in malzemesi ise (Bostancı 1959: 146; pl. IV), bölgede çömlekçilik pratiğinin Neolitik öncesine kadar geri gitmesinin söz konusu olduğu ve belki de Anadolu'nun güneybatı kesimindeki ilk köy yerleşmesini kuran insanların, ilk Bademağacıların keramiği sahil kesiminden beraberlerinde yaylaya getirdikleri söylenebilir. Bademağacı'nın en eski yerleşmesinin keramikli ya da keramiksiz oluşu konusu, yakın gelecekte Bademağacı araştırmalarının gelişmesiyle doğru şekilde irdelenebilecektir.

Göller Bölgesinde Erken Neolitik'in gelişmiş dönemleri hemen her merkezde yaşanmıştır. Er Baba'nın III. yapı katının mimarlık özellikleri, Konya Ovasında bir önceki Akeramik Neolitik evrenin geleneklerinin devamı gibi düşünülebilir. Yapılar birbiri ile hemen her kenarından yapıştırılmış, arada bazı açık alanlar veya çıkmaz sokak görünümünde geçitler olmakla birlikte, Aşıklı, Can Hasan III ve Çatalhöyük'ü andırır şekilde, yerleşmedeki evler bal peteği gibi konumlandırılmış gibidir. Yapılara giriş çatıdan olmalıdır. Evlerin duvarlarının taştan örülmesi önemli bir fark gibi görünmekle birlikte, bu pratik uygulama, sanırım sadece Er Baba çevresinde taşın bol bulunmasının sonucudur. Bu bakımdan Er Baba'yı Konya Ovasının kerpiçli mimarlık geleneğinden tamamiyle ayrı düşünmemek doğru olacaktır.

Batıdaki merkezlerden Hacılar'ın EN katları mimarlığı ile Kuruçay'ın 12. kat mimarlığını değerlendirmek için yeterince kalıntı ele geçmemiştir. Bununla birlikte, Hacılar EN VII-I katlarında ev tabanlarının boyalı oluşu ile Kuruçay 12. katının bir evinde köşelerin yuvarlatılmış olması, dikkate alınması gereken özgün uygulamalardır. Burdur Bölgesinde EN'nin en iyi izlendiği merkezler, Bademağacı'nın Erken Yerleşmeler Dönemi'nin (EYD) 3 yapı katı ile Höyücek Tapınak Dönemi (TD) yerleşmeleridir. EYD içinde mimarlık açısından çok büyük gelişmeler saptanmaktadır. Burdur Bölgesi mimarlığında, Geç Neolitik (GN) içlerine kadar devam

<sup>8</sup> Duru 1989. Bir yerleşmeye Akeramik Neolitik denmesi için, o yerleşmenin mutlaka çok geniş alanlarda kazılması gereklidir.

edecek olan bazı yapı ve plan özelliklerinin öncülerinin, bu iki merkezde ortaya çıktığı görülmektedir. Höyücek'in dinsel bir merkez olmasının doğurduğu bir takım uygulama değişiklikleri dikkate alınmaz ise, duvarlarda normal ve plano-convex kerpiçlerin kullanılması (Mellaart 1970: 11), kutu ve silo ile fırın yapım tekniği, massif topraktan sabit 'merdiven' uygulamaları (Mellaart 1970: 17, lev. VI/b, VII/a), evlerin dikdörtgen planlı olup, kapıların uzun kenarda açılması ve kapıların karşısına gelen duvara fırınların konulması gibi rastlantısal olmayan bazı özellikler, bu aşamada saptanan ortak ve özgün niteliklerdir.

Höyücek TD yerleşmesi bir köy ya da kasaba tipi yerleşim değil, çok büyük olasılıkla dinsel yapılar kompleks, ve belki de bölgenin kült merkezidir. Bir tapınak ve adyton'u ile bu kutsal yapıların eklerinden oluşan ve bazı gerekçelerle birbirine bitişik konumlandırılan Höyücek TD yapılarının çağdaşı olan Bademağacı 3. katı ise, tam bir yerleşim yeri, büyükçe bir köydür. Bademağacı'nda yapılar bağımsız ve birbirine bitleştirilmeden konumlandırılmış, yapı aralarında sokak sayılabilecek geçişler ve ev gruplarının arasında avlular bırakılmıştır. Bu uygulamalar, Er Baba ve Konya Ovasının AKN ve EN dönemlerinin yerleşme planlaması geleneğine uymamaktadır. Yerleşmelerde bağımsız evlerle birlikte sokak ve avluların düşünülmesi, bütün Anadolu Neolitik'i için yeni bir aşamadır.

Göller Bölgesi ile doğu komşusu Konya Bölgesinin Neolitik mimarlığı arasında şimdilik tek benzerlik -eğer Hacılar EN V. yapı katı evinin taban düzleminde kapı aralığının bırakılmaması ihtimali gözönüne alınmazsa-, ev tabanlarının kırmızı boyalı olması gibi görünmektedir.

Keramikçiliğe gelince: J. Bordaz'ın Suberde'nin Yüzey Tabakasında bulduğu parçalar için kullandığı "...dark Neolithic' wares from Anatolia" ifadesi ile ne tür bir keramiği tanımladığını bilmiyoruz. Bu malzemenin Çatalhöyük'ün O-VIII. katları malzemesi ile benzerliğe işaret edilmiştir. J. Bordaz, Er Baba'nın en erken yapı katı olan III. kat keramiği konusunda açıklama yaparken de, malzemenin bir yanı ile Çatalhöyük katlarının çç'si ile ilişkisini vurgulamıştır (Bordaz 1973: 284). Er Baba'nın üst katlarının çç'sinin de, Hacılar GN çömlekçiliği ile benzerliğinden söz edilmektedir (Bordaz 1973: 284). Er Baba'nın oldukça zengin bir koleksiyon oluşturduğu anlaşılan çç'si henüz yayınlanmamış olduğundan, bildirilen ilişkileri, bugünkü bilgilerle yeniden kontrol etme olanağı yoktur.

Burdur Bölgesinin EN çömlekçiliği konusunda bilgiler bir hayli fazladır. Kuruçay ve Hacılar keramiği yayınlanmıştır. Güneyde, Höyücek ve Bademağacı'nın EN çömlekçiliği hakkındaki çalışmalar henüz bitirilmemiştir. Bununla birlikte, edinilen ilk izlenimler, güney ile kuzeyin çömlekçiliğinin ilk dönemlerinde ortak pek çok ögenin bulunduğu doğrultusundadır. Bademağacı ve Höyücek'le Hacılar-Kuruçay ikilisinin bu dönemde ürettikleri keramik ağırlıklı olarak, gri-bej hamurlu, kırmızı veya kahverengi boya astarlı, iyice açılanmış ve fırınlanmış bir malıdır. Bademağacı'nın EN 5-3 yerleşme katları, Höyücek'in EYD birikimi ile Kuruçay 13. kat ve Hacılar EN yerleşmeleri gibi EN'nin en erken dönemlerinde üretilen bu mal, bu merkezlerde kullanılan tek keramik türüdür; bunlara yabancı olan hiçbir parça yoktur. Kuruçay'da A türü mallar olarak tanımlanan ve ayrıntılı şekilde incelenmiş olan bu grupta, küçük yayvan tabakçıklar, küçük boy çanaklar, geniş ağızlı yumuşak S profilli çanaklar, dik kenarlı derin çanaklar ve yumuşak S profilli, kısa boyunlu veya kapanan ağızlı çömlekler egemendir (Duru 1997: lev. 9/1, 2, Duru 1997a: lev. 11-14, Duru 1998: 15-16, 19-22, Duru 1995a: 15, Duru 1994: 19 vdd., lev. 34-36, Duru 1989). Bademağacı'nın antisplash profilli küçük çömlekleri, daha ziyade bölgenin güney yarısına özgü bir biçimdir (Duru 1995a: 460, lev. 18/2, Duru 1997a: 154, lev. 15/4, Duru 1998: lev. 16/1). Bu mal grubunda ortak bir özellik, hemen her boy kaba dikine delikli tüp tutamak konmasıdır. Bezeme bir iki başarısız boya bezek denemesi dışında yapılmamaktadır (Duru 1998: lev. 15/2, 16/1, 21/1, Duru 1994: lev. 35/9, 19, 36/11, 12).

EN'nin daha sonraki dönemlerinde bu tek düze görünüm değişmeğe başlamıştır. Bademağacı EN 2-1 katlarında eskiden bilinen biçimlerden bazıları yok olmuş, bazı yeni biçimler ortaya çıkmıştır. Yeni biçimler arasında küresel karınlı, kapanan ağızlı kaplar, dudağı kalınlaştırılmış ve dudak üstü düz kesilmiş derin kaplar sayılabilir (Duru 1997a: 15/3, 4, 7, 8 - 16/1, 5).

Höyücek TD çömlekçiliği, EYD mallarına oranla büyük bir aşama göstermiş, büyük olasılıkla dini törenlerde veya tapınak görevlileri tarafından kullanılmak üzere yapılan kaplarda, yüksek kaliteye ulaşılmıştır (Duru 1995: 731 vd., lev. 15, 17, 18, Duru 1995a: 19-25). Sıradan kaplar yanında çok sayıda fantazi biçimli kap da -böbrek, kuş ve çizme şeklinde-, bu dönemde, büyük olasılıkla dinsel törenler için yapılmıştır. TD'de, antisplash kaplarla (Duru 1995a: lev. 18/1, 2, 254/1, 2), çok sayıda mermer kabın bulunduğu da belirtilmelidir.

Kuruçay 12. katta boya bezemeli parçaların sayısında büyük bir artış olmuş (Duru 1994: lev. 37-42, 49), ayrıca A malları yanısıra yeni mal türleri de görülmeye başlanmıştır (Duru 1994: 31 vdd., lev. 46, 52).

Neolitik'in son dönemi, en iyi şekilde Hacılar VI. kat ve Kuruçay 11. katta izlenmiştir. Hacılar'da bu dö-

me ait çok sayıda evin yapım ve plan uygulamaları bir önceki dönemin, Bademağacı 3. kat ve Höyücek TD'den bilinen niteliklerini sürdürmektedir. Neolitik'in iki evresi arasında mimarlık açısından çok fark olduğu söylenemez.

Kuruçay 11. kat yerleşmesi, bağımsız bir sur ile koruma altına alınmıştır; yerleşme bir kale görünümündedir (ibid: Resim 1). Aşıklı'da sur olarak düşünülen taş temelli bir duvar parçası dışında, Neolitik'in erken dönemlerinde yerleşmelerin nasıl korunduğu ne Göller ne de Konya Bölgelerinde kesin şekilde saptanabilmiş değildir. Hacılar VI. katında yerleşmenin en dış halkasında ise, neler olduğu belirsizdir. Ancak Kuruçay ve Hacılar gibi, birbirini görebilecek uzaklıkta kurulu olan -10 km- iki yerleşme arasında mimarlık açısından çok büyük farklılık olması pek mantıklı olmayacaktır.

Bölgede GN çömlekçiliği her merkezde ayrı yönlerde gelişme sürecini içine girmiş gibidir. Kuruçay'da A türü mallar yine çoğunlukta olmakla birlikte yeni yapımlar ortaya çıkmış, form repertuarı çeşitlenmiş ve boya bezemeli kapların sayısı artmıştır (ibid: 34-40, lev. 55-102). Hacılar'daki durum fazla farklı değildir (Mellaart 1970: 102 vdd., lev. LI-LXIII, fig. 45-59). Höyücek Kutsal Alanlar Dönemi (KAD) çömlekçiliğinde de yeni eğilimler ortaya çıkmış, yapım tekniklerinde ve formlardaki değişimler çok kapsamlı olmuştur (Duru 1995: 731, lev. 11-14, Duru 1995a: 461 vd., lev. 26-30).

Bademağacı'nın GN çömlekçiliği hakkında fazla bilgimiz olmamakla birlikte, burada da benzer bir oluşum vardır. Boya bezemeliler artmıştır, özellikle Kuruçay'da B türü mallar olarak tanımlanan kaplara benzer tipler ile kırmızı astar üzerine beyaz boya yapılmış yeni bir bezeme uygulaması ortaya çıkmıştır (Duru 1997: lev. 9/5-13, Umurtak 1998).

Yukarıda yaptığımız karşılaştırmalı değerlendirmeler ışığında durumu daha basitleştirirsek, Göller Bölgesi her ne kadar coğrafi bir bütünü tanımlıyorsa da, Neolitik içinde gerçek bir kültür bütünü olduğu söylenemez. Bölgenin doğusu ile batısı arasında yaşam biçimi açısından önemli farklılıklar vardır. Ancak bu farkların tanımlanması ve boyutlarını söyleyebilmek için öncelikle Beyşehir-Suğla havzası merkezlerinin buluntularının ayrıntılı şekilde yayınlanmasına ve o yörede yeni araştırmaların yapılmasına gereksinin vardır. Bilgilerimizin bugünkü düzeyinde, doğu kesimde Neolitik yaşamın Konya Ovası ile bir ölçüde paralel olduğu söylenebilir<sup>9</sup>. Doğu ile batı yarı ilişkileri ise, bugün için büyük ölçüde belirsizlik içindedir.

Burdur kesimi kuzeyden güneye bir ölçüde taranmıştır. Elde edilen bilgiler, başlangıçta bölgenin tümünde ortak nitelikleri olan bir Neolitik yaşamın varlığını gösterir gibidir. Önceleri köy ölçüsündeki basit yerleşmeler, EN'nin gelişmiş evrelerinde değişmekte, köylerden daha büyük yerleşim birimlerine belki kasaba niteliğindeki yerleşmelere geçilmektedir. Bu gelişmeye paralel olarak, önceleri var olan ortak uygulamalar, mimarlıkta ve ağırlıklı olarak çömlekçilikte farklılaşmaya başlamıştır. Bölgenin güneyindeki gelişme, kuzeye oranla daha yavaştır. Hacılar ve Kuruçay'da keramikçilik tekdüzeliğinden çıkarak, özellikle boya bezemenin sevilerek yaygınlaşmasıyla, bağımsız bir gelişme içine girmiştir. Kuzeyde, geleneksel çömlekçilik içine, yeni öğeler, yeni yapım ve süsleme pratikleri girmektedir. Bu değişme ve gelişme süreci, Neolitik çömlekçiliğinin çıkış yerini güneye yakın yerlerde aramanın doğru olduğunu göstermelidir.

Kanımızca Göller Bölgesindeki neolitizasyonun Akdeniz Bölgesiyle sıkı bir bağı vardır. Paleolitik sonrasında Akdeniz sahil kuşağındaki iklim koşulları, büyük olasılıkla ilk tarım ve hayvan yetiştiriciliğine, çobancılığa başlayan yarı göçebe insan topluluklarının gelişmesi için uygun bir çevre yaratmıştır. Mezolitik olarak da tanımlanan, Paleolitik ile Neolitik arası bu dönemin sonuna doğru, bazı grupların Toros Dağlarını kuzeye doğru aşarak, yayla koşullarını daha uygun bulup, bu yüksek düzlüklerde uzun süreli veya sürekli yerleşmeler kurarak orada kök salmış olmaları büyük olasılıktır. Neolitik içindeki tarım pratiğinin önemini hiç abartmadan ve hatta fazla önemsemeden, bu toplulukların bu yerleşik hayat biçimini giderek kuzeye doğru, koloniler halinde genişlettikleri, yayıldıkları düşünülebilir. Toplulukların, bütün zorluklarına karşın, binlerce yıldır sürdürdükleri pastoral hayattan bir oranda kopmuş olmakla birlikte nomad hayatın vazgeçilmesi zor alışkanlıklarından uzun süre kurtulamadıklarını ve beraberlerinde yapay konut yapım bilgilerini -mimarlık, çömlekçilik pratiğini ve ana tanrıça inancını taşıyarak, daha kuzeye ve belki batıya, iklimi çok daha elverişli olan yaylanın, yaşam için koşulları daha uygun, av hayvanı bol olan kesimlerine göçlerini sürdürdüklerini

düşünmek fazla spekülatif öneri sayılmamalıdır. Ancak bu genişleme, bir bölgeyi tümüyle kaplayacak, bir bakıma işgalci bir yayılmacılık olarak değil, tek tek yerleşmeler kurarak yayılma şeklinde düşünmek doğru olacaktır. Bu hareket yüzlerce -belki binlerce- yıl sürmüş ve ana merkezden uzaklaştıkça başlangıçta belleklerde kalan yaşamın pratik çözümleri, yeni koşullara ve gelinmiş olunan yörelerin otokton toplumlarının çözümlerinden edinilen yeni bilgilerle, kültürel bakımdan zenginleşerek değişmiş olmalıdır.

Yukarıda söylediklerimizle vurgulamak istiyoruz ki, Göller Bölgesi neolitizasyonunun çıkış yeri, kanımızca Anadolu'nun diğer neolitikleşme odaklarından farklıdır. Çıkış yeri Torosların Akdeniz'e bakan yamaçlarında, çok büyük olasılıkla Antalya'nın yakın çevresinde aranmalıdır. Bu durumda komşu Konya Ovasındaki neolitikleşmenin biraz daha erken başlamış olduğu varsayılsa bile, Göller Bölgesinde Neolitik'e geçiş aşamasında, doğudaki çağdaş neolitikleşmeden, hemen hiçbir şekilde etkilenilmemiş olmalıdır.

Bu bağımsız Neolitik çıkış ve kuzeye yöneliş, Batı Anadolu'nun sahil ve kısmen kuzey kesimlerini ve orada yaşayan otokton halkları da etkilemiş olmalıdır. Ege sahilinde (Voigtländer 1983), Gediz havzasının sahil ve yakın kesimlerinde (French 1965, Meriç 1993), Troad'da (Seeher 1990), Eskişehir yöresinde (Seeher 1987), Güney Marmara'da (Roodenberg 1990), Kuzeydoğu Marmara sahilinde (Özdoğan 1979, Özdoğan 1983) ve hatta Trakya'da Hoca Çeşme'deki çömlekçilerin (Özdoğan 1993, Özdoğan 1998), bir takım keramik uygulamalarının, örneğin kırmızı boya astarlı, sıkı açıklı, S profilili kapların, daralan boyunlu çömleklerin, antispash profilili kapların, dikine ip delikli tüp tutamakların, açık renk zemine kırmızı boya ve kırmızı boya astar üzerine beyaz boya ile yapılmış band bezemenin Göller Bölgesine çok benzer olması, güneyden gelen bu aşamalı genişlemenin ve etkilenmenin sonuçları olabilir.

Bugünkü bilgilere göre, Göller Bölgesinin Neolitik yaşam modelinin doğuya doğru genişlememiş olduğu gibi bir görünüm vardır. Göller Bölgesi neolitikleşmesinin yankıları, Isparta çevresi için söylenemez de, Beyşehir-Suğla havzasına kadar bile genişleyememiş gibidir. Bölgenin bu en doğu kısmı, Konya Ovasından çıkan ve gelişen yüksek Neolitik kültürün yayılma alanı içinde ve etkisinde kalmıştır. Beyşehir-Suğla havzası, Konya ve Göller Bölgesi gibi iki bağımsız Neolitik çıkış ve gelişim merkezi arasında bir ara bölge olarak da kabul edilebilir. J. Bordaz Er Baba çanak çömleğinin Hacılar GN çömlekçiliği ile ilişkileri vurgulamıştır. Bu konu Er Baba malzemesinin yayınlanmasıyla daha doğru şekilde yanıtlanabilecektir.

Göller Bölgesi ile Konya Ovası arasında ilişkilere gelince: Arada çok yakın ilişkilerin olduğu söylenemez. Yakın zamana kadar, ortak ana tanrıça kültü ve onun belirleyicisi olan figürinlerin Çatalhöyük ve Hacılar'da benzer şekilde bulunmaları dışında, herhangi bir somut ilişki yoktu. Son 15 yılda bölgeler arası ilişkilere işaret eden bazı yeni bulgular ele geçmiştir. Bu yeni ilişkinin belgelerinden biri, Kuruçay, Höyücek ve Bademağacı'nda, bulunmuş olan, baskı yöntemiyle şekillendirilmiş, okucu veya mızrak uçlarıdır. Bölgede sileks ve obsidien işçiliğinin hiçbir zaman çok gelişmemiş olması gözönünde tutulursa, yukarıda sözü edilen zarif ve çok ustaca işlenmiş uçların, Burdur Bölgesine tamamiyle yabancı olduğu kesindir. Uç'lar Konya Ovasının EN dönemleri için tipiktir (Bialor 1962: 103 vdd.) ve kanımızca bu eşyalar bölgemize Konya ve yakın çevresinden gelmiş olmalıdır. Suberde'de ele geçen obsidien uçlar (Bordaz 1969: 53, res. 26, 29), bu tiplerin geliş yolunu gösteriyor gibidir. Bölgeler arası ilişkilere işaret eden ikinci buluntu türü, damga mühürleridir. Bademağacı EN 3 katında bulunmuş baskı mühür, Çatalhöyük mühürleri ile çok yakın benzerlikler içindedir (Mellaart 1964: fig. 1, 9). Nihayet Bademağacı'nın sepet kulplu kabı ile, tahta kapları taklit eden pişmiş toprak kutusu da, Çatalhöyük'ün benzer kapları ile (Mellaart 1965: lev. 58, Mellaart 1964: fig. 37/4, 38/5, 39/3), açık bir ilişkiye işaret etmektedir. Ancak yukarıda saptanan benzerlikler yanında, Çatalhöyük'ün sınırlı ve basit kap form repertuarı içinde tipik olan ve ağırlıkta bulunan, kapanan ağızlı (hole mouth), küresel karınlı çömleklerin, bölgemizde Neolitik'in başından itibaren bilinen bir form olmadığını özellikle vurgulamak gerekir.

Göller Bölgesindeki neolitikleşmenin tarihsel -kronolojik- konumuna gelince: Bölgede kazı yapılan merkezlerden, Er Baba dışında hepsinden C<sup>14</sup> ölçümleri alınmıştır. C<sup>14</sup> tarihlerine göre hazırlanan tablo bu yazının sonunda verilmiştir. Bu tarihler çok güvenilir kabul edilmese de, belli bir fikir vermektedir.

Göller Bölgesinin batı yarısındaki Neolitik merkezler arasında, karşılıklı ilişkilere dayalı olarak yapılacak sıralama da, C<sup>14</sup> tarihlerine göre hazırlanan tabloya genelde uymaktadır. C<sup>14</sup> tarihlemesi ile analojik sıralama yöntemine dayalı tarihlemeye bir önemli uyumsuzluk Hacılar VI katının durumu konusundadır. Mimari bakımdan Hacılar VI ile pek çok paralelliğin saptandığı Höyücek TD ve Bademağacı EN 3 yerleşmeleri çağdaş olmalıydı. Hacılar VI için C<sup>14</sup> tarihleri 6. binyılı ortalarındaki 200 yıldır. Aynı yöntemle göre Höyücek TD, Hacılar'dan en az 500 yıl eski görünmektedir. Bademağacı EN 3 katından henüz C<sup>14</sup> ölçümleri alınmamışsa da, bu yerleşme de Höyücek TD ile aynı tarihlere konulabilir. Kanımızca bu merkezlerin arasında böylesi bir ta-

<sup>9</sup> Aşıklı Höyük'te 1997 yılı kazılarında, bir evin tabanında silindirik bir çukurunun bulunduğu, Prof.Dr. U. Esin tarafından bildirilmiştir. Üst kısmı tabandan yükselmiş olan bu silo çukurunun işlevi ve yapım yöntemi, Suberde silolarıyla tam bir benzeşme içindedir.

rih farkı olmamalıdır. Aradaki tarih farkının nasıl kapanacağını henüz tam olarak bilemiyoruz.

Bölgenin doğu ile batı kesimleri arasındaki ilişkilerin durumu çok belirgin değildir. Suberde III. kattan, az sayıda C<sup>14</sup> ölçümleri alınmıştır. 6. binyılının ilk üç çeyreğini işaret eden bu tarihlere göre, Suberde III yerleşmesi, Bademağacı EN 3-5, Höyücek TD, Hacılar EN I-V ve Kuruçay 13-12 katlarıyla, yani başka bir tanımlama ile Erken Neolitik içinde kalmaktadır. Suberde'de çç'nin bulunmaması, Göller Bölgesinin batısı ile doğusu arasında, çömlekçilik konusundaki alışkanlıklar ile ilgili kabul edilip çok önemsenmemesi gereken bir konu sayılabilir. Çömlekçilik yukarıda değinildiği gibi, Pamphylia'da Neolitik öncesinde ilk denemeleri yapıldıktan sonra, kuzey komşusu Göller Bölgesinde geliştirilip genelleşen bir teknolojik yenilik olabilir. Suberde ile batıdaki dört merkez arasındaki analojik ilişkiler şimdilik belirsizdir.

Erbaba'nın en erken yerleşmesi için önerilen tarihler ve çağdaşlık, çç ilişkilerine göre, Çatalhöyük VIII-0 katları iledir. Çatalhöyük'ün sözü edilen katları 6800/6000 arasında çok uzun bir zaman parçasını kaplamaktadır. Erbaba'nın daha yeni katları ise Hacılar LN ile çağdaş sayılmaktadır. Bu durumda Erbaba III ile II-I katları arasında büyükçe bir tarih farkı olmalıdır.

Çatalhöyük'le Göller bölgesinin batı kesimi arasında arkeolojik belgelere göre yapılacak tarihleme denemesinde, Çatalhöyük'ün en eski katlarının, Bademağacı-Höyücek-Hacılar-Kuruçay'ın en erken yerleşmeleriyle çağdaş veya biraz eski olduğu gibi bir görünüm vardır. Bu durumun, Çatalhöyük'ün daha erken katlarıyla Bademağacı'nın EN 5 katından daha erken katlarına inilmesi halinde değişmesi olasıdır. Bu konuda bir başka önemli etken de, ilerde ilgilendiğimiz dönemler için kullanılacak C<sup>14</sup> kalibrasyon eğrisinin değişmesi olacaktır.

Önümüzdeki 5-10 yıl içinde hiç kuşkusuz, Göller Bölgesindeki neolitikleşmenin daha iyi anlaşılır bir tablosu ortaya çıkacaktır. Bademağacı'nın en alt katlarının bu soruna büyük ölçüde yanıt vereceğini tahmin etmek kehanet değildir. Çatalhöyük'ün alt katlarının da Konya Ovası için aynı şeyi yanıtlayacağını sanıyoruz. Böylece Anadolu'nun batı yarısında MÖ 8. binyıldan 7. binyıla geçişte neler olduğu, neolitikleşme için alt tarih sınırının ne olacağı ve Konya Ovası ile Göller Bölgesinden hangisinin tarihsel açıdan önceliği olduğu ve iki bölge arasındaki ilişkilerin boyutları daha iyi anlaşılacaktır. Bu gerçekleşirse, Anadolu'nun Göller Bölgesinin daha batı ve kuzeyindeki kesimlerdeki neolitikleşme süreci de büyük oranda öğrenilecek ve belki denizötesi ülkelerdeki neolitikleşme sürecinde Anadolu karasının etkisi konusu hakkındaki varsayımlar daha gerçekçi kanıtlara dayanacaktır.

## ABSTRACT

Through the excavations at Hacılar, Kuruçay, Höyücek, as well as the ongoing work at Bademağacı, the process of neolithization in the Burdur part of the Lakes District is much better documented than most other regions of Anatolia. As what was thought to be an Aceramic level at Hacılar, is now understood to be belonging to the Pottery Neolithic phase, it is no more possible to speak of the presence of a pre-ceramic Neolithic stage in this region. Even in the earliest Neolithic horizon that has been recovered in the region, in Level 6 of Bademağacı, the pottery is rather sophisticated, being well fired under oxidizing conditions. The Neolithic way of living, as well as the tradition of pottery making, seems to have initiated in high plateaus along the Northern flanks of the Taurus range, and with a certain pace of development, to continue into later periods, also having an impact on the sites such as Höyücek, Kuruçay and Hacılar that are located further to the north. Likewise, the main architectural trends, that have been initiated in later stages of the Early Pottery Neolithic, are shared in considerably large area from Bademağacı in the South to Hacılar in the North.

In the later part of the Neolithic period, there are some apparent differences in the pottery traditions between the northern and southern parts of the region. While in the South, as documented at Bademağacı and Höyücek, the plain undecorated wares sustain in the traditional way, in the North, at Kuruçay and Hacılar, there is a growing tendency to use red painted decoration on cream slip. This implies that diversity in Neolithic communities is related to distance. At present there is not enough evidence to document the exact limit of the dispersal of the Neolithic cultures originating from the flanks of the Taurus range. Nevertheless, the presence of some elements, such as the vertical tubular lugs, and red on cream painted wares in the region of Marmara, is suggestive of some kind of an interaction throughout Western Anatolia during the Neolithic period.

## INTRODUCTION

What is referred to as the Lake District comprises a considerably large region, including a large part of Burdur and nearly all of Isparta as well as the basins of the Beyşehir and Suğla lakes (Map 1). This region of many lakes -both large and small- is limited by the Taurus Mountains to the south, and the provinces of Afyon and Denizli to the north. A region overlapping to an extent the Pisidia of ancient times, bordered by the Mediterranean coastal strip, the Anatolian Plateau and the Konya Plain, certain areas reflect the characteristics of the dominant neighboring regions; the climate and climatically controlled factors are not uniform throughout.

Although the phase treated here is the best known of all the prehistoric periods in the Lake District, in respect both to the manner of research and in the number of sites explored, in the present status of research, there are still considerable lacuna in our knowledge, that makes presenting a conclusive sequential development difficult. Since the mid-fifties from the time when the presence of a Neolithic phase has been first evidenced in Anatolia, five sites presenting various stages of the Neolithic period have been excavated in this part of the Anatolian plateau: in the east, Suberde and Erbaba; and to the West, in the Burdur area Hacılar, Kuruçay and Höyücek. There is also Bademağacı Höyüğü in the south of this region, where excavation has been underway for the last five years. Intensive surface surveys have been undertaken in this region<sup>1</sup>.

## A DESCRIPTION OF THE EXCAVATED NEOLITHIC SITES

### Suberde

The small mound of Suberde, some 4 m. in height, is located in the southeastern part of

the Lake District, on a natural rise known as the Görülüktepe, by the northwestern coast of the Lake Suğla. The site was first recorded by Ralph Solecki in the course of his surface survey of the region, was later excavated by a team under Jacques Bordaz in the years 1964-1965.

The excavations at Suberde consisted of 60 soundings of various dimensions conducted at different parts of the site, have only been published as preliminary reports<sup>2</sup>. The cultural sequence, consisting of three cultural layers above the virgin soil are as follows:

Mixed surface level	Level I
Aceramic Neolithic	Levels II and III
Steril fill	Level IV
.....	
Virgin soil	

The architecture of the oldest settlement level (III), where no building was fully excavated, consisted of some floors and mudbrick wall segments 60 cm across, with right-angle turns, suggesting the presence of rectangular structures. Set into some of the floors of these structures, clay-plastered cylindrical pits have been recovered (Bordaz 1969: 46, fig. 6). The rim of these pits that are 70-80 cm in diameter and 45-60 cm deep, rose 15-20 cm above the level of the floors. As this layer has been destroyed by a heavy fire, the plastered sides of the pits have been strongly burnt during this conflagration to take the appearance of crude pottery sherds. Because no pottery was found in this level, it was described as Aceramic Neolithic (ACN).

The succeeding level of ACN (II) had received widespread damage; only a few segments of mudbrick walls and plastered floors were uncovered.

Because Görülüktepe was used as a cemetery in its latest phases, the surface level at Suberde had been greatly disturbed and architectural

<sup>1</sup> For bibliography on the survey work in the region done by Prof. Mehmet Özsaıt of the Department of Antiquity at Istanbul University, see Duru 1994: note 6.

<sup>2</sup> Solecki 1965, Bordaz 1969, Bordaz 1973.

traces of the settlement deposits hopelessly confused.

Among the mixed pottery (prehistoric through Islamic) in this surface level (I) were a few sherds defined as Neolithic<sup>3</sup> suggesting the presence of an Early Neolithic (EN) occupation level within this phase (Bordaz 1973: 284).

There are seven C<sup>14</sup> dates from Suberde Level III (Aurenche and Evin 1987: 733).

Level III	6570 BC
Level III	6326 BC
Level III	6299 BC
Level III	6226 BC
Level III	6045 BC
Level III	5957 BC
Level III	5634 BC

### Erbaba

On the eastern bank of Beyşehir, the mound of Erbaba with a cultural accumulation of approximately four meters was also discovered by R. Solecki (1963) and later excavated by a team under J. Bordaz with campaigns in 1969, 1971, 1974 and 1977<sup>4</sup>. As there is no later occupation phase overlying the Pottery Neolithic layer of Erbaba, it has been possible to investigate the settlement through extensive exposures.

The stratigraphy of the three cultural levels at Erbaba is as follows.

Late Neolithic	Levels I - II
Early Neolithic	Level III
Virgin Soil	

The architectural elements of the most recent settlement (I) are well understood, and evidence from Levels II and III would indicate that the architecture had been much the same as in Level I.

In all three phases the walls stood on stone

foundations ca. 50 cm in height (Bordaz 1970: fig. 3, 4). In Level III, most of the cobble stone foundations, as well as the floors have been plastered; occasionally there are traces of red coating. Elongated rectangular shaped buildings consist of two to three rooms (Fig. 1) and the walls are occasionally reinforced with inner buttresses. The fact that no door openings were found, suggests that the houses were entered from the roofs.

Although not much can be said about the general settlement plan, it is clear that no streets ran between the houses although there were open areas which may have served as courtyards.

Much pottery was recovered from all the levels at Erbaba. Typical of Level III is a thin-walled, brittle ware. Level II is a transitional stage between Levels III and I, where the ware of the preceding level continue in diminishing amounts is replaced by a new ware characterized by beaten fresh water mollusc shell temper. Most common among the vessel shapes are hole-mouthed forms, straight-sided open shapes, and jugs with slightly outturning rims (Bordaz and Bordaz 1982: 88). There are also forms particularly characteristic of each level.

From the standpoint of the pottery, the excavators correlate the earliest phase at Erbaba with Çatalhöyük levels VIII-O, and the latest levels at Erbaba with Hacilar LN levels IX - VI (*ibid.*, p. 88). The C<sup>14</sup> dates are as follows (Aurenche and Evin 1987: 705 ff.):

Lowest Level	5780 BC
Lowest Level	5600 BC
Uppermost Level	5620 BC

### Hacilar

This settlement, three kilometers from the southwest tip of Lake Burdur, 25 km west of the city of Burdur, was first discovered in 1952 by James Mellaart, who then excavated at the

site from 1957 to 1960. The importance of Hacilar lies not only in the remarkable finds of its assemblage, but also in the fact that it constitutes the first undeniable evidence of the presence of Neolithic habitation on Anatolian plateau.

The Neolithic and Early Chalcolithic (ECh) stratigraphy revealed in J. Mellaart's excavations was divided into three separate phases, as given below<sup>5</sup>.

Early Chalcolithic	Levels I - V
Late Neolithic	Levels VI - IX
.....hiatus.....	
Aceramic Neolithic	Levels I -VII
Virgin Soil	

During the last excavation season, a sounding was made on the western part of the mound to control what laid below the Late Neolithic deposits. Here, below what at that time seemed as a sterile fill, a sequence of occupation layers were recovered (Mellaart 1961: 70 ff). As no pottery sherds were recovered in this fill, this distinct horizon was ascribed as representing an Aceramic phase.

Twenty-five years after the close of the Hacilar excavations, new investigations to discover the cemetery of Hacilar revealed evidence of pottery in strata such as that previously described as 'Aceramic Neolithic' by Mellaart (Duru 1989). After these new findings, it became necessary to redefine these seven levels mentioned above as Aceramic phase of Early Neolithic; accordingly the revised stratigraphy of Hacilar is as follows.

Early Chalcolithic	Levels I - V
Late Neolithic	Levels VI - IX
.....hiatus.....	
Early Neolithic	Levels I -VII
Virgin Soil	

At Hacilar a considerably developed architectural tradition is apparent from the earliest

levels onward. A partially excavated structure in EN Level V (old ACN V) revealed mudbrick walls 70 cm long, some on a foundation course of stones, and the floor first plastered, then coated with red and polished (Mellaart 1961: 70 ff.). It is obvious that the structure was rectangular in plan (Mellaart 1970: pls. 2-5); as it is partially excavated, it is not possible to say whether or not there was a doorway; at least none appears in the excavated part.

The architectural remains in the other levels of the Early Neolithic were scanty, not yielding much more information. We can say, nonetheless, that colored floors were present in each level, as were open areas -courtyards- used for daily tasks.

After the destruction of EN level I, Hacilar was deserted for a rather long period<sup>6</sup>, not being settled again until the Late Neolithic period (Level IX). This reoccupation continued well into Early Chalcolithic times, (Levels VI upward) and can be followed through to the end of Level II<sup>7</sup>.

LN levels IX through VII have not revealed much architectural remains. The architecture of Level VI, however, was well enough preserved to offer quite a clear picture. As many as ten structures have been either completely or partially excavated. The house walls are of mudbrick, generally built on a single course of stone foundations and plastered on the interiors. Wood was freely employed, and in some walls -most particularly the interior division walls- a wattle-and-daub technique is seen as well.

The structures were rectangular (Fig. 3) with the doors usually in the long walls. In nearly every house an oven quadrilateral in plan was found against the other long wall just opposite the door. Interior features include many boxes formed of clay slabs, hearts and niches opened

<sup>5</sup> Mellaart 1958, 1959, 1960, 1961, 1970.

<sup>6</sup> Mellaart approximated this sequence as lasting for 1000 years.

<sup>7</sup> The final settlement at Hacilar, E Ch level I, represented the introduction of a sequence different from that of the earlier settlements.

<sup>3</sup> Six thin-walled sherds with dark reddish biscuit, very highly burnished and well fired, were described by J. Bordaz as "dark Neolithic ware" (Bordaz 1969: 45).

<sup>4</sup> Bordaz 1970, 1973, Bordaz and Bordaz 1976, 1982.



into the walls. It is clear that daily tasks were performed in the open areas outside the houses.

Even though the extent of the excavated area is not sufficient to understand the general layout of the settlement, it is clear that some of the houses were built next to each other, but still leaving open areas or courtyards between them.

It is not clear whether or not the settlement was surrounded by a fortification wall. The fact that some of the structures in Level VI (the Q structures) seem to be grouped toward the center of the settlement suggests that these may have been encircled by another ring of buildings (Mellaart 1970: pl. 9).

Even though no ceramics had been found in the EN settlement during the earlier excavations, the soundings of 1985/86, opened very close to the area excavated, revealed red and yellow floors with sherds clinging to them (Duru 1989). As the red floors are so characteristic of the so called Aceramic Phase of Hacilar, and as no such remnants are known from later occupation phases of the Neolithic period, we can assume with some certainty that the newly recovered ones, and thus the pottery found in association, must be dated to the so called Aceramic period<sup>8</sup>. The sherds found *in situ* upon these floors display gray to grayish brown biscuits (Fig. 4). The pottery in general is burnished and well fired. The surface of some sherds is pitted due to the firing technique.

Here it should be noted that the employment of sophisticated techniques in pottery making, as well as the apparent increase in its use, appeared first by the LN level of Hacilar (Phases IX-VI). Generally red-slipped and

highly burnished, the pottery of this new period includes some vessels with decorative bands of red paint over a cream slip (Mellaart 1970: 102 ff., pls. LI-LXIII, figs. 45-59)<sup>9</sup>.

Close to eighty figurines and idols of baked clay were recovered from the LN strata of Hacilar. The mother-goddess figures, nearly all from three houses in Level VI, are remarkably naturalist representations (Mellaart 1970: pp. 166 ff., pls. CXXV-CLIX, figs. 192-230).

C<sup>14</sup> samples from the Hacilar Neolithic settlements have given the following dates.

Early Neolithic	(Level V)	6750 BC
Late Neolithic	(Level IX)	5393 BC
Late Neolithic	(Level VII)	5820 BC
Late Neolithic	(Level VI)	5590 BC
Late Neolithic	(Level VI)	5399 BC

### Kuruçay

Excavations at Kuruçay Höyüğü, just two kilometers to the south of Lake Burdur and some 15 km from the city of Burdur on the road to Hacilar, were carried out from 1978 through 1988 by a team under the present author<sup>10</sup>. The stratigraphy revealed is as follows.

Early Bronze Ages	Levels 1-2
.....	hiatus .....
Late Chalcolithic	Levels 3, 3A, 4, 5, 6, 6A
.....	hiatus .....
Early Chalcolithic	Levels 7 - 10
Late Neolithic	Level 11
Early Neolithic	Level 12
.....	hiatus .....
Early Neolithic	Level 13
Virgin soil	

The earliest cultural remains at Kuruçay are those belonging to Level 13, a 60-to-80 cm deep deposit of gravel and rubble containing

sherds encountered beneath the floors of structures from Level 12. As no architectural remains were recovered within this fill and it seems likely that it is a secondary deposit, possibly washed down by floodwaters from the high plateau to the south of the site (Duru 1994: 9). Nevertheless, as the material recovered within this fill is earlier than the rest of the material found at Kuruçay, it has been designated as Level 13.

The earliest settlement with a recognizable architecture at Kuruçay is Level 12. One of the houses was completely excavated (Fig. 5), its inner dimensions are 8.5 x 5.3 m and the thickness of its walls are 1.10 m. The second structure exposed displays rounded corners which make the room a half-circle in plan. Other building remains in Level 12 were in very poor condition of preservation; it would seem that the greater part of the settlement to the north had been washed away by flooding of the stream which runs past this slope of the mound.

Following the abandonment of Level 12, the new settlement, Level 11, was founded on an area somewhat more westward than its predecessor (Duru 1994: 11 f.). The most significant of the architectural remains in this settlement is the stone foundation 1.10 meters in width and preserved to a length of 27 m (Fig. 6), evidently representing a part of a free-standing fortification system encircling the settlement. Two towers, semicircular in plan (Fig. 7), were added to the best-preserved part of the defences, the southern stretch. There is no doubt that this settlement, which we believe was quadrilateral in plan, was completely enclosed by this wall; we may suppose that such tower configurations existed on every side. The main entrance to the fortification must have been a gate near the southeast corner. A large portion of the settlement of Level 11 was probably cuten away by the flooding of the stream to the north (Duru 1994: fig. 1).

About 150 small sherds were found in the deposit of Level 13. The majority were of a dark gray unburnished ware; the others a

beige ware with a reddish slip (Fig. 8). Generally well burnished, the surfaces of some were pitted and very brittle due to firing conditions (Ware class A). Most were from jars (Duru 1994: 30 f, pls. 34-36), some from oval jars. A few pieces bore band decoration executed in dark red or brown paint.

Although the class A wares reflect simple craftsmanship but, by no means do they represent the first attempts at pottery making. Nearly all the characteristics of the pottery from Level 13 parallel those of the ceramic found *in situ* on the red floors of the Hacilar Early Neolithic period.

By Level 12 the pottery had changed and the quality developed. The most frequent ware was now the reddish slipped Ware A with a beige biscuit, burnished and nearly always well fired. There was a clear increase in the variety of vessel forms (Duru 1994: 31 ff., pls. 37-54). Painted decoration becomes more common, and in addition to basic geometric linear decoration (Fig. 9), the mysterious abstract patterns which were to become more popular in the later levels began to appear. A few pieces had decoration in relief.

Two new wares appeared in this level, if only in small quantities: Wares B and C (Duru 1994: 32 f., pls. 46, 52).

In level 11, even though the traditional Ware type A still constitutes the majority of pottery sherds, there is a marked variation among the wares of Level 12 (Duru 1994: 43, pls. 54-105). However, there is also a considerable increase in linear painted decoration in red, mainly consisting of simple lines (Fig. 10) or bands in various arrangements (Fig. 11), stylised naturalistic motifs (bucrania Fig. 12) and abstract designs of unknown origin. There is also a relative increase in the use of relief decoration.

The proportion of the wares newly introduced in the preceding level have also increased. The form most characteristic of the B wares is a relatively deep bowl (Duru 1994: pls. 63-65, 87-93). Jugs are relatively scarce. Red painted bands appear on the Ware B bowls, some-

<sup>8</sup> EN building level 7, discovered during the final campaign, was investigated over a limited area of ca.100 m<sup>2</sup>. The explanation for Mellaart's not having found any pottery should be that ceramics were not appreciated in this phase, by no means commonplace and certainly not used in every house.

<sup>9</sup> This type of Neolithic ware, particularly painted examples, became more common in the Early Chalcolithic period, when it reached a truly exceptional quality.

<sup>10</sup> Duru 1994, 1996.

times only on the exterior, sometimes on both surfaces (Fig. 13).

The D wares represent a thick-walled coarse pottery most often represented by deep bowls (Duru 1994: 35 ff., pls. 66-67, 94-95). Knobs sometimes placed on the interior of the vessel rims.

A buff colored burnished pottery, Ware E, also appears for the first time in this layer; the vessels usually have basket handles.

Ware types O and E are both alien to the pottery manufacturing technology of Kuruçay.

Among the EN and LN small finds from Kuruçay there are mother goddesses of baked clay (Duru 1994: 60 ff., pls. 185-186, 191), animal figurines and rytons (Duru 1994: 62 f., pls. 194-195), clay ladles (Duru 1994: 63, pl. 199), spoons and needles of bone (Duru 1994: 65 ff., pls. 208, 210-219), and beads, pendants and chisels of stone (Duru 1994: 69 ff., pls. 222-224, 231).

The chipped stone industry does not seem to have played an important role anywhere in the Neolithic of the Burdur region, as is the case at Kuruçay (Duru 1994: 71, pls. 233-243). One arrowhead (Fig. 14), however, most probably originating from the Neolithic settlement, was recovered in fill from the Chalcolithic period. The tip, worked by pressure flaking, and the delicate shape of the implement are unusual for Kuruçay (Duru 1994: 74, pl. 238/7, Duru 1980: pls. 44/5, 45/4).

C<sup>14</sup> dates for the Kuruçay Neolithic levels are listed below.

EN (lower Level 12)	6190 ±70 BC
EN (upper Level 12)	6080 ±35 BC
LN (Level 11)	5990 ±95 BC

### Höyücek

Following the close of the Kuruçay excavations the same team began work at the mound of Höyücek, some 35 km to the south, in the

district center of Bucak, also in the province of Burdur. The mound, located 100 m west of the Burdur-Antalya highway, rises about 3.5 m above the plain level with another 4.5 m of it buried below, a total cultural deposit of ca. 7.5 m. The visible diameter is 120 m.

Excavations continued from 1989 through 1992 and reached the virgin soil<sup>11</sup>. Because some of the occupation phases obviously represented areas other than normal habitation, it was decided to name the levels by description rather than by number or letter. The accepted stratigraphy is outlined below.

LN / E Ch	Mixed Layer
..... hiatus .....	
Late Neolithic	The Sanctuaries Phase
..... hiatus .....	
Early Neolithic	The Shrine Phase
..... hiatus .....	
Early Neolithic	The Early Settlements Phase

Virgin soil

The first four meters of deposit above the virgin soil could be reached only in a deep and very narrow sounding of 35 m<sup>2</sup>. Although traces of burning and quantities of pottery were found, no *in situ* building remains were encountered, the deposit was divided by arbitrary levels, the lowest 0.70 m being called ESP 3 (Early Settlements Phase 3); the middle strata (1.30 m in depth), ESP 2; and the upper (1.80 m), ESP 1 (Duru 1995a: 450 f).

Despite the small area of the Early Settlement Period opened, there should have been some trace of architectural remains had not the building materials been of wood and light-weight in nature.

Following a considerable lapse in time a new occupation phase began above the ESP, this one of a character completely different from the older phases below. Because all the structures seemed relegated to religious purposes, it was named the Shrine Phase (Sh P). The

Shrine Phase consisted of two building levels, but the architecture of the earlier subphase was so disturbed that we shall limit discussion here to the much better preserved architecture of the later subphase.

In the 45 x 25 m area of the Shrine Phase that was excavated, five structures were exposed lined up from east to west (Fig. 15). They were built of mudbrick from the foundations up (Duru 1995a: 450 ff., pl. 5). Some of the bricks were ordinary in form, others were rounded on the upper surfaces (plano-convex). Structures 1 and 2 on the plan were poorly preserved. The walls of the quite well preserved Structure 3 were of all different thicknesses with recesses and niches on the interiors of some. This was a rectangular structure with the main entrance in one long wall and secondary entrances on the other three walls. A large oven had been installed opposite the main entrance on the same axis. It had a flat top and a trough in front of it. The door opening to the left led to an outdoor work area.

The walls of Structure 5 were preserved to a height of 2 m (Duru 1995: 727 ff., pl. 4/1, 2). Both ordinary and plano-convex bricks had been used in them. Earlier used as a one-room structure, 11.50 x 8.5 m, it was later divided by an interior wall. The entry, which was originally at the center of the north wall, was bricked up; the new doorway was most probably in the narrow eastern wall. The doorway in the interior division wall was closed up with mudbrick in the last phase. Aside from one marble basin, nothing was to be found inside the building.

In the narrow space between Structures 3 and 5, the small Structure 4 was built (Duru 1995a: pl. 4). The interior of this small room (exterior measurements 8 x 3 m) was full of built-in furnishings (Duru 1995: 728 ff., pls. 5-7). A low wall across the center divided the room into two, and interior walls in the northeast formed a kind of tub or cell-like room. Found in this small room were the remains of a wooden post, and at the threshold of the door to the room, deer antlers, mandibles and

knucklebones of ruminant animals. Against the wall of the cell was a miniature staircase of solid clay with six steps, leading to a height of 80 cm (Duru 1995: pl. 6/1). In the rest of the room there were a number of boxes constructed of clay slabs, a medium-sized cupboards and large storage bins (Duru 1995: pls. 10-11). Vessels of various shapes set upon clay platforms and in niches in the walls of the room (Duru 1995: pls. 16/2, 19/2). There were marble bowls (Duru 1995: pls. 20/1, 21/1) and in front of the staircase, a huge marble basin in which a stack of ceramic bowls and a boot-shaped vessel were found (Duru 1995: pls. 6/2, 16/1, 19/1, 20/3, 21/3). In a pit in the floor behind the staircase, thousands of flint blades had been deposited (Duru 1995: pl. 44/2).

In the southern half of the structure there were five large bins -or chests- in one of which a miniature table was found (Ibid., pls. 37, 39).

The furnishings and contents of Structure 4 convinced us that this small room and Structure 3 which led into it had served sacred purposes. Structure 3 would have been a temple, and Structure 4 its most sacred place, an 'adyton'. The south part of the adyton separated by the low wall might have provided storage for certain ceremonial equipment as well as foodstuffs, and Structure 5 may well have housed the priests or temple officials.

Following the destruction of the Shrine Phase there was no occupation at Höyücek for a while; the new occupation clearly began as a completely new start. Although the traces of architecture are few, objects of sacral purpose were found grouped in specific locations, and small finds were numerous. On these grounds the new occupation was named the Sanctuaries Phase (SP).

The architectural remains of the Sanctuaries Phase consist of five short stretches of walls parallel to one another in the north section of the area excavated. Because no traces of connection between them was found, it is impossible to say what sort of construction these represented (Duru 1995: pl 3/1, Duru 1995a:

<sup>11</sup> Duru 1992, 1995, 1995a.

pl. 12/1). In two localities associated with these walls, however, quantities of mother goddess figurines and schematized idols appeared, as well as assorted vessels and stone chisels (Duru 1995: 726 f., pls. 22-36, Duru 1995a: 457 f., pls 41, 46-47, 51). In another spot not associated with the walls mother goddess figurines were found upon a plastered platform. Such sacred objects clustered together at specific locations suggests religious ceremonies repeated at set intervals.

There were no architectural remains in the upper mixed deposit at Höyücek, only amorphous heaps of mudbrick at certain places on the mound were encountered. From such deposits, all sorts of finds -from prehistoric painted pottery to recent materials- were recovered.

Each period at Höyücek yielded an abundance of pottery. That of the ESP phases was quite uniform in appearance (Duru 1995a: 460). Slipped and burnished wares of gray, or less frequently brown hues with fine paste remained predominant throughout all the subphases (Fig. 16). A limited development can be traced in the vessel forms, from shallow flaring bowls through deeper 's'-profile forms to vessels with short necks, jars with spherical bodies.

The Shrine Phase, on the other hand, displays more developed technique as well as a richer inventory of forms. Despite an organic bond with the ESP pottery, the Sh P ceramics appear almost too sophisticated to be the successor of the ESP ceramic tradition. The wares are generally of high quality. The paste is very clean without any tempering matter whatsoever. The biscuit is of brown or gray tone; the vessels were highly burnished and well fired (Duru 1995a: 460 f.). The majority of the forms were bowls -plain and 's'-profile- and 's'-profile pots (Duru 1995a: pls. 16-25). Vessels with the lips extended into antisplash rims (Fig 17), and kidney-shaped (Fig. 19), as well as boot- and bird- shaped vessels (Fig. 19), are among the different forms found in the structures of the Shrine Phase.

Most of the vessels had vertically pierced tubular lugs. No true handles were in use. Very little ornament was to be seen, no painting whatsoever; one or two body sherds boasted relief or incised decoration. Lugs in the shape of animal heads, and the ring bases with cut-away openings must also be considered as ornamentation (Duru 1995a: pl. 19).

The pottery of the Sanctuaries Phase reflects a tradition completely different from that of the Shrine Phase (Duru 1995: 731 f., Duru 1995a: 461). The quality of the vessels, with a typically brown biscuit, burnished and well fired, was not as high as in the preceding phase. Sharp carinations on the deep bowls with an 's'-profile, a new plate or flaring bowl form with knobs on the interior rim (sometimes both on the interior and exterior), and a total absence of lugs and handles are among the characteristics of the SP ceramic inventory (Duru 1995: pls 11-14, Duru 1995a: 26-30).

A beige-slipped ware with red painted ornament was also new in the Sanctuaries Phase (Duru 1995a: pl. 12/2, 3). This type of ware resembles the LN and ECh painted wares of Hacilar and Kuruçay.

The painted wares from the Mixed Layer include both red-on-beige and red over a white slip (Duru 1995a: 461 f., pls. 32-35). Relief ornament (Duru 1992: pls. 13-18/1-4) and notched decoration (*Ibid.*, pls. 12-15, 18/5-8) appeared only occasionally.

Noteworthy among the small finds of the Shrine Phase are the marble basins (Fig. 20; Duru 1995: pls. 20-21, Duru 1995a: pls. 36-40), the miniature clay tables (Fig. 21; Duru 1993, Duru 1995: pls. 37-39, Duru 1995a: 54-56), ladles of marble and clay, spoons of bone, and more than 100 stone chisels of various sizes.

The richest group of small finds from Höyücek consists of the mother goddess figurines and idols of baked clay. There are nearly 100 of them, most recovered from concentrations in the three SP sanctuaries (Duru 1995: pls. 22-36, Duru 1995a: 54-56).

When we look at type distribution of the fig-

urines and idols among the individual sanctuaries, we see that the more naturalistic representations only appear in one sanctuary (Fig. 22) whereas in the other two, the idols predominate (Fig. 23, 24); in one area only the idols had heads of bone (Duru 1993, Duru 1995: pls. 41/1-3, 44/); and whereas in two of the sanctuaries there were no stone chisels, in the third there were some chisels together with the figurines and idols. This situation suggests that these objects were brought to the sanctuaries at different times, and perhaps by different peoples, most probably as votive offerings during pilgrimages to the site.

The study of the chipped-stone industries at the mound is still underway. Two obsidian points are crucial in dating and comparison. The one, pressure-flaked, is from the Sanctuaries Phase (Fig. 25); the other is from the Mixed Layer (Fig. 26; Duru 1992: 562, pl. 21/1).

The C<sup>14</sup> dates for Höyücek, a site of critical and fascinating archaeological evidence despite its small dimensions, are as follows.

The Shrine Phase	6427/6358 BC
The Shrine Phase	6425/6356 BC
The Shrine Phase	6186/6122 BC

The ages for the samples, all collected from carbonized remains of wooden posts from the Shrine Phase, go back to the mid seventh millennium BC. The four-meter deposit of the Early Settlements Phase would then fill the first half of the millennium and the earliest settlements would have to be put back towards the end of the eighth millennium.

Although there are no absolute dates for the Sanctuaries Phase, parallels between the figurines and idols of Höyücek and those of Hacilar provide the basis for a date within the Late Neolithic, that is within the first half of the sixth millennium. The Mixed Layer

belongs most probably to the very end of Late Neolithic or to Early Chalcolithic times.

### Bademağacı

Our most recent work was at the site of Bademağacı, located in the southernmost part of the Burdur province, on the border with ancient Pamphylia. The site, previously published as Kızılkaya Höyüğü<sup>12</sup>, is located on the Antalya-Burdur highway 51 km north of Antalya, just 5 km north of the Çubuk Beli pass over the Taurus Mountains, in a small plain surrounded by low hills. It takes the name of the small town Bademağacı, from which it lies 2.5 km northward. The mound is oval, 210 X 110 m, with a visible height of 7 m. When we consider that the virgin soil lies another two to three meters below the plain level, the actual height would be about ten meters. The Höyücek excavation team has been working at Bademağacı for the past five years<sup>13</sup>.

Just below the surface at the central part of the mound, there is a mixed layer with E Ch and LN pottery. At 6.70 m below the surface here, settlements of EN times came to light.

However on the eastern part of the mound, Early Bronze Age layers are immediately below the top soil. Thus, it seems that the structures of the Early Bronze Age encircled the Neolithic mound, forming a ring, almost 30 m. in diameter.

The extend of the excavated area is still limited and it is probable that the future work on the site might lead to changes in the stratigraphic sequence; accordingly in denominating layer designations, we preferred to renumber them independently according to the main cultural phases. The cultural sequence, as it stands at the end of the 1997 campaign is as follows:

<sup>12</sup> One of the mounds that J. Mellaart visited and collected 1958 was recorded as Kızılkaya (Mellaart 1961a: 160). During our survey it became clear that there was no mound in the area named Kızılkaya; the proper name for Mellaart's Kızılkaya should indeed be Bademağacı (Duru 1997: note 3).

<sup>13</sup> Duru 1997, 1997a, 1998.

Early Bronze Age II	EBA levels 1 - 3
Early Bronze Age I	EBA levels 4 - 5
..... hiatus .....	
Early Chalcolithic	
Late Neolithic	E Ch /LN levels 1 - 2
..... hiatus .....	
Early Neolithic	EN levels 1 - 5
?	?
Virgin soil	

At present, the excavations have gone down 60 cm within the fill of Level 5, not yet reaching the architectural remains.

At a depth of 6 m from the summit of the mound, a small EN structure appeared in Level 4 (Fig. 27). It consisted of a single room with exterior measurements of 2.90 x 2.0 m. The walls, 20 - 21 cm thick, were of unusual construction: two rows of clay slabs seven to eight centimeters wide had been laid parallel with an interval between them which was then packed with earth. Nothing was recovered from the room aside from a few sherds and one stone chisel.

The most detailed information on Early Neolithic architecture came from building level EN 3, explored over 300 m<sup>2</sup> (Fig. 27). None of the structures had stone foundations, but were built generally of ordinary mud-brick, occasionally with plano-convex bricks. The foundations of some exhibited a different technique. These were built in layers of straw-tempered mud, one layer being applied after the one beneath it had dried. Wood was also widely used in construction. Postholes to hold wooden supports for roofing were found in the floors of some houses.

In plan, the structures so far excavated are like irregular rectangular in shape, varying from five to six meters in length and three and a half to four meters in width, and rounded at the corners. The doors of these structures, most probably houses, were located in one of the long walls. The doorways were a meter or slightly more across, with deep narrow recesses cut vertically into the jambs and sturdy wooden beams laid as thresholds.

The interior arrangements are exhibited by the well preserved Structure 1 (Fig 28). The floors of hard-beaten clay, carefully plastered revealed configurations with a slight difference in level; for example, the floor all along the eastern wall of the house, was one 20 cm step higher than that in the western part of the room.

In each of the three houses, a round oven with a flat top was located on the long wall opposite the door. Horse-shoe shaped troughs for hot coals or ash adjoined the oven fronts.

On the floors of the houses were found portable hearths and grinding stones as well as vessels of all sorts. In Structure 1, two grinding stones had been left side-by-side next to the oven (Duru 1998: pl. 4/2).

In the layout of EN Level 3 the houses were not built up against one another, but were free-standing. In one of the streets or open areas between the houses -the open area between Structures 1 and 3- a storage facility was discovered (Duru 1998: pls. 2, 5/1, 2) consisting of six separate compartments (Fig. 29), each made of four 65 x 70 cm previously baked clay slabs standing upright. As no contents remained in the storage bins, we have no idea what was stored in them. In two of them were found single vessels, one intact.

On the walking ground around the storage area, hundreds of flint and obsidian blades were found together with two vessels that contained dozens of celts.

The passage between Structures 2 and 3 had been blocked at one end by a curving wall. The use of this area -filled with burnt mud-brick and plaster- remains a mystery.

The wall segments in EN Levels 2 and 1 yielded no clear plan.

A few more remnants of EN architecture were located toward the south of the area excavated and on the east skirts of the mound. Foundations here consisted of single courses of two parallel rows of stone placed 50 cm apart (Fig. 30).

the explanation of these stone configurations, obviously laid down with a deliberate purpose in mind, eludes us; if they were constructions for buildings, this would imply an unusual and thus far unknown foundation system. As the relation between these structures and the buildings with single-course stone foundations is not very clear, their stratigraphic position is rather problematic. Nevertheless, we are inclined to consider them as belonging to Level 3.

The pottery of the EN settlements at Hademağacı displays a continuous development from Level 5 to the latest settlement of the phase. Although a detailed study of the ceramics has not been completed, we can characterize the earliest pottery from the 1997 season as having a grayish biscuit, medium-well fired, with the surfaces sometimes burnished. The vessel forms are shallow and deep bowls, all simple in profile (Fig. 31). Another significant observation is that the pottery is very scarce in deeper strata; in the last 20-30 cm of the central sounding (to -6.65 m) only one or two sherds were encountered.

The ceramics of the more recent EN levels generally displayed a gray-to-dark-gray or brown biscuit, fine burnishing and rather thick walls. Thin-walled wares lighter in color were in the minority. By EN Level 3 the main forms were globular pots and jars with simple (Fig. 32) or slight 's'-profiles (Fig. 33). Different shapes include vessels with slight or pronounced oval mouths and thickened rims (Fig. 35), jars with pierced lugs one above another, and lightly inturning antisplash bowls (Fig. 36) as well as bowls -generally smaller- with oblique string-holes in thickened rims (Duru 1997: 791 f., pls. 9, 14, Duru 1997a: 154 f., pls. 11-16, Duru 1998: pls. 15-21). There were no handles on the vessels, but nearly every jar displayed vertically pierced tubular lugs: one, three, or sometimes two or four placed opposite one another.

Among the EN pottery were two vessels with wide painted bands from the rim to the base. The faded paint on the very dark gray clay represents a rather unsuccessful attempt at

decoration. No sherd with incised or red slip decoration were found.

Two vessels of unusual form should be mentioned here. One is a basket-handled pot found on the walking ground of the period, just to the east of Structure 1 in the EN settlement (Fig. 37; Duru 1998: pls. 16/7, 22/1), and the second a ceramic box from the debris of EN Level 4 (Fig 38; Duru 1998: pls. 16/8, 22/2). The box, of pale yellowish beige clay, lightly burnished and poorly fired, is rectangular with straight walls. A narrow ledge along the interior rim indicates that it had a lid. The basket-handled vessel and this box clearly represent forms out of the ordinary. Both are ceramic copies, the one of a reed or twig basket, the other of a whittled wooden box.

Along with the Neolithic pottery from the area of the parallel stone lines on the lower eastern slope of the mound, came a few sherds alien to the EN ceramic inventory. Displaying white painted decoration over a red slip and profiles with outturning rims, these must belong to the Late Neolithic or Early Chalcolithic periods.

Small finds from the EN settlements were few. From the LN or E Ch levels above came several fragments of mother goddess figurines. The goddesses, sitting cross-legged, were decidedly steatopygic renderings (Duru 1998: pls. 17/2-5, 23/1-2).

Two seals of baked clay were recovered from EN Level 3. The stamp face of one displays dots and that of the other, incised concentric circles (Fig. 39; Duru 1998: pls. 18/5-6, 23/4-5).

Various sized chisels and large axes of stone as well as bone spatulas were among the other small finds from the Early Neolithic phase.

There were also many blades and flakes of flint and obsidian. One obsidian arrowhead was found on the floor of Structure 2 in EN Level 3 (Fig. 40; Duru 1998: pls. 18/9, 24/4). Smokey gray in color and 8.8 cm in length, it is intact save for one small chip on the stem. The tip was formed by a delicate process of pressure flaking on both faces.



There are as yet no C<sup>14</sup> dates for the Neolithic settlements at Bademağacı. Comparative chronology would take the EN settlement back to the beginnings of the seventh or even the end of the eighth millennium BC. The technique demonstrated by the obsidian arrowhead, strongly resembles that used in the chipped stone industry of Çatalhöyük levels VIII-II, would imply dating EN Level 3 to the mid seventh millennium (Newton 1996: 79), and the clay imitation of a wooden box from the Level 4 debris would correspond to Çatalhöyük VI, where wooden parallels have been found.

Thus the Early Neolithic settlements 5-1 should correspond to a period from beginnings of the seventh well into the sixth millennium BC.

#### NEOLITHIC OF THE LAKE DISTRICT: A CONSPECTUS OF THE EVIDENCE

The Neolithic Period in the Lake District covers a long period of time from 8000 to 6500 BC, lasting over one and a half Millennia; at the present state of our research, it is not yet possible either to present a final assessment of this period, or to make a detailed presentation of various stages of its development. The eastern half of this extensive region, in particular from Isparta to the area of the Beyşehir and Suğla lakes, has not been well explored. Excavated sites like Suberde and Erbaba, where the deposits are not very deep, have provided only limited knowledge of certain stages. These two sites, furthermore, lie on the periphery of the Lake District and indeed might better be considered an extension of the Konya Plain. In Isparta and its surroundings, nothing whatsoever is known of Neolithic settlement. In the western half of the district, on the other hand, the Neolithic sites of Hacilar, Kuruçay, Höyücek and Bademağacı have been excavated extensively, all revealing successive phases of the Neolithic Period. It is attested

that between the eastern and western parts of the region, though there was a sort of conformity in the modes of living, there were also considerable differences.

We cannot even say for sure whether the classic Aceramic /Ceramic /Early Neolithic/ Late Neolithic sequence is valid throughout the Lake District. Now that the earliest Hacilar building levels VII-I -previously accepted as ACN- have been demonstrated to be EN<sup>14</sup>, Levels III and II at Suberde remain the only Aceramic Neolithic strata in the district. As at Hacilar, at Kuruçay and Höyücek as well, where the virgin soil was also reached, no Aceramic levels were documented. EN Level 5 at Bademağacı, explored only in a very limited area, produced very little pottery. Although we do not yet know what the approximated two meters more of deposit above the virgin at the site may show, primitive forms like the basket-handled vessels and the boxes indicate that the tradition of pottery making had a very early beginning there.

The absence of true pottery in building level III at Suberde (for even should we accept the plaster-lined depressions sunk into the edges of the floors as a type of built-in vessel, they are by no means ceramics) parallels the sequence in the Konya Plain, where settlements like Aşıklı Höyük and Can Hasan III show that ceramic was unknown at the beginnings of the Neolithic. The rapidly decreasing quantity and simplicity of form found in the lower levels of Çatalhöyük (Mellaart 1964: 82, pl. 33) suggest that pottery may have been unknown in earlier levels.

The situation may well have been different in the Burdur area, most particularly at Bademağacı; that is to say that even the earliest settlements might have known the art of pottery making. In the Antalya region just across the Taurus Mountains to the south, there are hints that pottery was in use even earlier than the Neolithic period (Bostancı

1959: 146, pl. 4). If the crude pottery of Beldibi phase B2 is really Mesolithic in origin, there is a case for the use of ceramics being older than the Neolithic period, and perhaps the earliest people to found villages in southwestern Anatolia were those who brought the first pottery with them from the coastal area to Bademağacı in the high pastureland. Through the excavations now in progress at Bademağacı, we should soon know definitely whether the earliest levels at the site were ceramic or aceramic. Developed stages of the Early Neolithic are represented at nearly every site in the Lake District. The architecture of building level III at Erbaba may be considered as a continuation of the preceding Aceramic phases in the Konya Plain. The houses were built up against and around one another with an occasional open court or blind alley, recalling those of Aşıklı Höyük, Can Hasan III, and Çatalhöyük; the plan of the settlement resembles a honeycomb. Access to the structures was through the roof. A striking difference is that the house walls at Erbaba were built of stone, which may well represent a practice local to Erbaba and to its surroundings, where stone was abundant. The use of stone, contrary to the use of mudbrick in the Konya Plain, however, does not necessarily imply the presence of completely different architectural traditions.

Although not enough is known to evaluate the architecture of the EN levels at Hacilar and Kuruçay (Level 12) in the west, characteristics of note are the painted floors in Hacilar levels VII-I and a house with rounded corners in Kuruçay Level 12. The most fully exposed EN levels at sites in the Burdur area are Level EN 3 at Bademağacı and the Shrine Phase at Höyücek. Here, substantial advances in architecture are apparent. The innovations in architectural practices, including structural construction as well as the details of plan types, that appear for the first time in these two sites, have continued into the final stages of the Neolithic Period. Disregarding a few distinct traits that must have been implemented through the cultic practices at Höyücek, com-

mon attributes clearly intentional and representative of this phase include the use of both normal and plano-convex mudbricks (Mellaart 1970: 11), the construction techniques used in storage facilities and ovens, the employment of fixed staircases of solid earth (*ibid.*, pls. VI/b, VII/a), and the rectangular layout of the houses with doors and ovens on the central transverse axis.

The Shrine Phase at Höyücek does not represent village or town settlement; it must have been a religious complex, perhaps the cult center of the region. It consisted of a temple and an adyton with ancillary additions necessarily built up against them. Bademağacı Level 3, on the other hand, was a true settlement, a rather large village. Here the structures were free-standing, arranged with street-like passages between them and courtyards left between groups of houses. Such a plan does not reflect the tradition of the ACN and EN settlements of Erbaba and the Konya Plain. The idea of a settlement with independent houses arranged with streets and courtyards represents a new step in the Anatolian Neolithic.

It would now seem that there is only one parallel between the EN architecture of the Lake District and that of its eastern neighbor, the Konya Plain: that would be -disregarding only the possible absence in Hacilar EN level V of breaks in the foundations at floor level for doors- the red painted floors.

#### The Pottery

From the surface of Suberde we have only J. Bordaz expression 'dark Neolithic wares from Anatolia' to work with, although a relationship to the pottery of Çatalhöyük levels 0 - VIII was specified. As for the pottery at Erbaba, J. Bordaz has underlined a certain relationship between that of the earliest phase, Level III, and pottery from the strata at Çatalhöyük (Bordaz 1973: 284). The ceramics from the uppermost levels at Erbaba are said to parallel the pottery of Hacilar Late Neolithic (Bordaz 1973: p. 284). Although there is an abundance of ceramic material from Erbaba, because it has not been published we cannot confirm the

<sup>14</sup> A wide area of a settlement must really be excavated before it can be defined as Aceramic.

foregoing relationships in the light of our present knowledge.

We have a great deal more information about the EN pottery from the Burdur region. The ceramics of both Kuruçay and Hacilar have been published. Although the study of the EN pottery from the sites of Höyücek and Bademağacı to the south has not yet been completed, first impressions confirm that many common features existed between the pottery of the north and south in the early phases. At Bademağacı and Höyücek, as well as at Hacilar and Kuruçay, the bulk of the pottery was at this period a ware gray-to-beige in biscuit, slipped red or brown and quite well burnished and fired. In EN Levels 5-3 at Bademağacı, the Early Settlement Phases at Höyücek, Kuruçay Level 13 and the EN settlements of Hacilar, not only did this ware appear from the very beginnings of the Early Neolithic, but it represented the only ware of the period at such sites; there is not a single sherd of a different ware. The principal forms of vessels in this ware, designated as the Kuruçay A Wares and studied in detail, include small flaring plates, small bowls, deeper bowls with vertical walls, and vessels with short necks or incurving rims displaying slight 's'-profiles (Duru 1997: pl. 9/1-2, Duru 1997a: pls. 11-14, Duru 1998: pls. 15-16, 19-22, Duru 1995a: pl. 15, Duru 1994: 19 ff., pls. 34-36, Duru 1989). The small antisplash forms of Bademağacı seem to have been a shape particular to the southern half of the region (Duru 1995a: 460, pl. 18/2, Duru 1997a: 154, pl. 15/4, Duru 1998: pl. 16/1). A characteristic feature throughout this ware group is the vertically pierced tubular lugs found on nearly every vessel regardless of size. There was no ornament apart from one or two poor attempts at painted decoration (Duru 1998: pls. 15/2, 16/1, 21/1, Duru 1994: pls. 35/9, 19, 36/11-12).

In the periods following the Early Neolithic this rather monotonous inventory began to change. In Levels EN 2-1 at Bademağacı some of the old forms gave way to new, among them closed shapes with round bodies and

deep pots with rims thickened or cut off horizontally (Duru 1997a: pls. 15/3-4, 7-8, 16/1, 5).

At Höyücek the pottery of the Shrine Phase displayed great improvement over that of the Early Settlements. The vessels, most probably created especially for religious ceremonies or use by the priests, demonstrated high quality workmanship (Duru 1995: 731 f., pls. 15, 17-18, Duru 1995a: pls. 19-25). In addition to the normal forms there were fantasized shapes -kidney-, boot- and bird-shapes vessels- that must have been produced for the religious ceremonies of this phase. Also of note in the Shrine phase are antisplash bowls (Duru 1995a: pls. 18/1-2, 254/1-2) and a quantity of marble basins.

Kuruçay Level 12 is marked by a large increase in painted ware (Duru 1994: pls. 37-42, 49) and the appearance of new wares in addition to the A Wares (Duru 1994: 31 ff., pls. 46, 52).

The final phase of the Neolithic can best be followed in Level VI of Hacilar and Kuruçay Level 11. House construction and planning of the many houses of this phase at Hacilar followed the tradition of the previous phase here, that of Bademağacı Level 3 and the Shrine Phase of Höyücek. From an architectural point of view there does not seem to have been much difference between the two phases of the Neolithic.

At Kuruçay the settlement of Level 11 was protected by a free-standing fortification wall, which must have given it the look of a fortress (Duru 1994: fig. 1). Apart from stone foundations believed to represent a fortification wall at Aşıklı there has been no other definite indication of settlement defense in the Early Neolithic -neither in the Lake District nor the in Konya Plain. In Hacilar Level VI the configuration of the outer ring remains unclear; however, it seems unlikely that two sites in view of one another -founded only 10 km apart- would have been architecturally very different from one another.

It would appear that during the Late Neolithic period the sites followed independent devel-

opment in the art of pottery making. Although the A Wares remained in the majority at Kuruçay, new wares appeared and the form repertory increased, as did the amount of painted ornament (Duru 1994: 30-40, pls. 55-102); at Hacilar the situation was much the same (Mellaart 1970: 102 ff., pls. 51-63, figs. 45-59). By the time of the Mixed Layer at Höyücek the pottery was displaying new trends; both the techniques of the wares and the range of forms had changed substantially (Duru 1995: 731, pls. 11-14, Duru 1995a: 461 f., pls. 26-30).

Although we know little about the LN pottery of Bademağacı, it reflects a similar development. Painted decoration had increased, and -most particularly on vessels resembling those of the Kuruçay B Ware- a new style of white painting over a red slip had appeared (Duru 1997: pl. 9/5-13, Umurtak *in press*).

To simplify even more the picture provided by the above discussion of the comparative material, we see that however much the Lake District forms a geographical unit, we cannot say that it comprised a cultural unit during the Neolithic period. There were basic differences between the life style in the east and that in the west of the region. In order, however, to delineate and project these differences, the finds from the sites in the Beyşehir-Suğla basin first of all must be published in detail and new research undertaken there as well. From what we know at present we can say that Neolithic life in the east of the district ran somewhat parallel to that in the Konya Plain<sup>15</sup>, whereas we know very little about the relations between the eastern and western halves of the district itself.

The Burdur region has been investigated in a sense from north to south. The facts in hand suggest that at the beginning of the period there was -throughout this area- a Neolithic existence with common attributes. Simple set-

tlements, at first no larger than villages, grew throughout the Early Neolithic into communities perhaps large enough to be called towns by the developed phases of this period. Parallel to this development came differentiation within the traditions formerly shared, architecture and more especially pottery. Development in the south proceeded relatively slower than that in the north. Ceramic production at Hacilar and Kuruçay broke away from the old monotony, and, reflecting a special fondness for painted wares, followed an independent course. In the north new elements, as well as new wares and decorative practices soon accompanied the traditional pottery. This sequence of change and development would justify our seeking the origins of Neolithic pottery somewhere near the south of the district.

We are convinced that it was close ties with the Mediterranean region that led to the Neolithization of the Lake District. The climatic conditions of the coastal strip at the end of the Paleolithic provided the right environment for the development of groups leading a semi-nomadic pastoral existence into the first societies with farming and husbandry. It was between the Paleolithic and Neolithic periods -probably toward the end of the Mesolithic- that certain groups ventured north across the Taurus Mountains and discovered the more favorable conditions of the upland pastures, where little by little, in the form of seasonal and/or permanent settlements, they began to put down roots. We can picture these Neolithic groups, not practicing much agriculture and probably not even appreciative of its inherent value, gradually extending their adopted pattern of settlement northwards. Surely it is not too speculative to imagine these societies surviving over the millennia in spite of the hardships, still clinging to their accustomed nomadic way of life in spite of their know-how in building artificial shelter -

<sup>15</sup> Prof. U. Esin has reported a cylindrical pit with raised sides found in one of the houses at Aşıklı Höyük during the 1997 excavations. The use of this pit for storage, as well as the construction, would make it an exact parallel to those at Suberde.

architecture- and creating pottery. Together with their belief in the mother goddess they would have continued their migrations to the north and perhaps to the west, finding climates more suitable to their pastoral way of life and areas rich in prey for the hunter. This extension, eventually to occupy the entire region, should not be thought of as claiming territory, but rather as the founding of new settlements, one by one. As this pattern continued over the years -perhaps millennia- proceeding farther and farther from the homeland, the memories of the old living standards were adapted to new challenges and enriched practically and culturally by contact with the native inhabitants in the areas of the new settlements.

Together with the above I should also like to stress that the origin of the Neolithic of the Lake District must have been separate from other Anatolian Neolithization, with a source on the Mediterranean slopes of the Taurus Mountains, most probably in the surroundings of Antalya. During the transition into the Neolithic period there must have been practically no influence upon the peoples of the Lake District from their contemporaries in the Konya Plain, even should the Neolithization process have started a bit earlier in the east.

There can be no doubt that this independent Neolithization and its spread northward influenced the autochthonous peoples with whom it came into contact. Certain trends in pottery appear along the Aegean coast (Voightländer 1983), in the Gediz valley near the coast (French 1965, Meriç 1993), in the Troad (Seeher 1990), in the Eskişehir region (Seeher 1987), in the southern part of the Marmara region (Roodenberg 1990), on the northeast coast of the Sea of Marmara (Özdoğan 1979, 1983), and indeed as far afield as the site of Hoca Çeşme in Thrace; including red slip, a high burnish, 's'-profile walls, jar forms pulled in at the neck, antisplash bowls, vertically pierced lugs, painted bands in red on pale surfaces and in white over red slips, these features all recall the pottery of the Lake District and may well represent spread and influence from here during this phase.

As far as we know today, the settlement model of the Lake District did not spread eastward. Although we cannot speak for the environs of İsparta, it would seem that echoes of the Lake District Neolithization did not reach even as far as the Beyşehir-Suğla basin. This easternmost part of the district remained within the area influenced by the strong Neolithic culture that arose and developed in the Konya Plain. The Beyşehir-Suğla basin might also have been a buffer region between the sites of the two independently developing Neolithic traditions. J. Bordaz has pointed out similarities between the pottery of Er Baba and that of Hacılar. This will become clearer with the publication of the Er Baba material.

As for relationships between the Lake District and the Konya Plain, there seem to have been no close ties. Until recently the only concrete evidence of a common tradition was the figurines of like type found at Çatalhöyük and Hacılar, indicating a cult of the Mother Goddess in both areas. Over the past fifteen years a few new hints of contact between the two regions have come to light. One of these is represented by the pressure-flaked arrow- and spearheads found at Kuruçay, Höyücek and Bademağacı. These elegant points of outstanding workmanship are totally foreign to the chipped stone industry of our district, which never reached a state of high development. Such points are typical of the EN phases of the Konya Plain, so it would seem likely that they reached our district from there or a neighboring area. The obsidian points recovered at Suberde (Bordaz 1969: 53, figs. 26, 29) suggest the route over which they might have come. A second artifact type demonstrating a relationship between the two regions is the stamp seal. The seal from Level EN 3 at Bademağacı (Fig. 39) very closely resembles seals from Çatalhöyük (Mellaart 1964: figs. 1, 9). Finally, then, also reflecting open contact, we have from Bademağacı the basket-handled pot and the vessels imitative of wooden boxes, comparable to finds at Çatalhöyük (Mellaart 1965: pl. 58, Mellaart 1964: figs. 37/4, 38/5, 39/3). In addition to the parallels specified above, it is

also noteworthy that certain vessel forms characteristic of the rather restricted and simple Çatalhöyük inventory -the hole-mouth vessels and round-bodied jars- were not among the vessels present in our repertoire at the beginning of the Neolithic period.

### *Chronology*

Let us turn to the chronological aspects of the Neolithic in the Lake District. With the exception of Er Baba, we have C<sup>14</sup> dates for all the sites excavated. These are included in a table at the end of the article. If not totally reliable, they do offer a general idea.

The sequence derived from the relative stratigraphy of the sites in the western half of the Lake District corresponds in general to that in the table prepared from the C<sup>14</sup> dates. The one critical discrepancy between the relative chronology and the C<sup>14</sup> dating lies in the position of Hacılar Level VI. From the architectural point of view -supported by many parallel details- Hacılar VI must be contemporary with the Shrine Phase at Höyücek and the settlement of EN Level 3 at Bademağacı. The C<sup>14</sup> dates would place the duration of Hacılar VI within 200 years in the middle of the sixth millennium, whereas they indicate the Höyücek Shrine Phase (to which Bademağacı Level EN 3, although no C<sup>14</sup> dates are yet available, must certainly be contemporary) as being at least 500 years earlier. Such a great difference in date appears highly unlikely; we are presently at a loss to explain such a gap.

The relationship between the eastern and western sections of the district is not particularly clear. The few C<sup>14</sup> dates from Suberde Level III suggest a duration within the third quarter of the sixth millennium, corresponding to Bademağacı EN Levels 3-5, the Shrine Phase at Höyücek, Hacılar EN Levels I-V and Kuruçay Levels 13-12, that is to say, within Early Neolithic times. The fact that no pottery was found at Suberde may reflect different attitudes toward the adoption of pottery in the east and the west of the district and need not be considered critical here. As mentioned above, the art of pottery may have been a tech-

nical innovation brought from Pamphylia where the first attempts occurred, into the Lake District, where it then developed and became widespread. Between Suberde and the four western sites there are as yet no links clear enough to establish a relative chronology.

By relative dating, the earliest settlements at Er Baba have been judged contemporary, based on the pottery, with Çatalhöyük Levels VIII - 0. This stratigraphy at Çatalhöyük covers a very long period of time, from ca 6800 to 6000 BC. The more recent levels at Er Baba, on the other hand, are considered contemporary with Hacılar LN levels, thus leaving quite a substantial gap between Er Baba Level III and Levels II - I.

As for relative comparison between Çatalhöyük and the sites in the west of the Lake District, evidence among the finds suggests that the oldest levels at Çatalhöyük are as old as, or slightly older than, the earliest settlements at Bademağacı, Höyücek, Hacılar and Kuruçay. The excavation of deeper levels at Çatalhöyük as well as of levels below EN 5 at Bademağacı will alter this equation. Another important factor will be any change in the C<sup>14</sup> calibration curve employed for the period involved here.

Within the next five to ten years, we shall doubtlessly have a clearer picture of Neolithization within the Lake District. It is a safe prediction to say that the excavation of the lowest strata at Bademağacı will be of great help. We can say the same for the deep levels of Çatalhöyük in the Konya Plain. Thus it should be possible to understand what was happening in the western half of Anatolia in the eighth and seventh millennia BC, to discover the lower limit of the Neolithization process, and to determine whether either the Konya Plain or the Lake District was running ahead, as well as to establish the extent of contact between the two regions. Should this be possible, the results will clarify to a great degree the Neolithic sequences of the regions lying further to the west and north of the Lake District and possibly even provide more realistic evidence for hypotheses regarding the



effects of the Anatolian mainland on Neolithic sequences abroad as well.

#### ADDENDUM: BADEMAĞACI 1998

In the 1998 campaign at Bademağacı, excavation proceeded below the EN 4 building level, reaching -7.85 m, which is 0.75 m below the present-day field level, by the end of the season. Pottery and a few traces of floors in the lowest levels indicate that we still have not reached the virgin soil.

In the 1.5 m deposit excavated there appeared no traces of architecture; 0.50 m below the EN 4 floor, however, a burnt level appeared throughout the trench. This has been termed EN Level 5, and other burnt segments of floor some 60 cm below it have been interpreted as EN Level 6.

Although no architecture has appeared in Bademağacı EN Levels 6 and 5, in the approximately 25 m<sup>2</sup> opened, we encountered three child burials, the skeleton of a wild boar (probably a sacrifice), and a fair amount of pottery, stone chisels and bone tools.

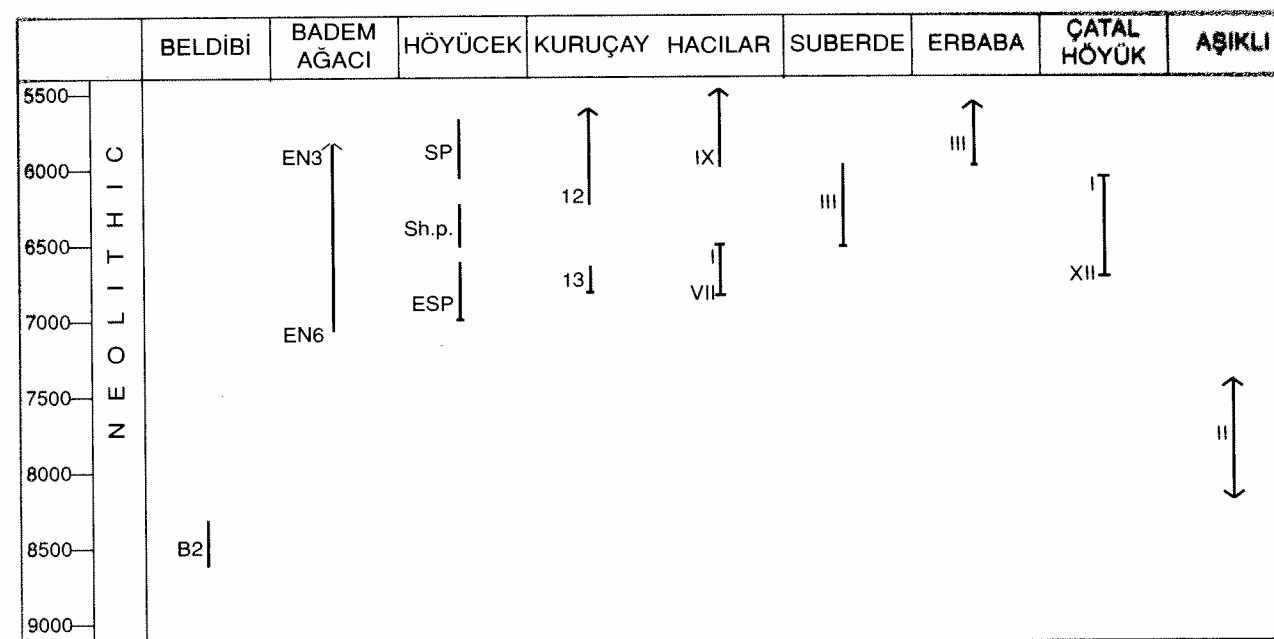
As the pottery recovered in this level is the earliest yet known of this region and as it has some distinct features, we considered as useful to include them here. That from the oldest phase (Early Neolithic Level 6) is characterized by a pale grayish beige paste (Fig. 41, upper row) built up in thick or rather thick walls with a self-slip, lightly burnished. Many of the sherds display a shiny tempering material, perhaps mica. Aside from some vessels with flaring rims (Fig. 42/1), the great majority of the forms seem to have been hemispherical. The most distinctive feature of these hemispherical bowls is the rim; there is a sharp -right angle- transition to the lip, the top of which is smoothly cut (Fig. 42/2, 3). A unique example represents an antisplash bowl (Fig. 42/4). The many base fragments recovered suggest that most of the vessels had thick flat bases (Fig. 42/5).

Nearly all the pottery of the succeeding level EN 5 is similar to that of EN 6. The paste is again a pale grayish beige (Fig. 41, middle row). The forms display little difference; in

addition to the hemispherical bowls cut off flat at the rim -which appear to have remained the most popular form- there are now also bell-shaped vessels (Fig. 42/6, 7) and nearly cylindrical vessels with steep walls (Fig. 42/8). One fragment demonstrates a bowl form with a slight carination and inturning rim (Fig. 42/9). The bases remain flat (Fig. 42/10).

Although we have already introduced a few complete vessels from EN Level 4, much more pottery from this phase was recovered in 1998. Although the pottery of EN 4 follows the traditions of the early pottery to some extent, there are some differences in the ware. In addition to the pale grayish beige paste, wares of dark gray paste appear, as well as others with brown and reddish biscuit (Fig. 41, bottom row). The burnishing has considerably improved, and the form repertory widened. Flaring bowls as well as hemispherical and straight-walled forms continue to be popular, as well as those with flattened lips (Fig. 42/11, 12). The proportion of carinated bowls, bowls with slight 's'-profiles and outturning rims has increased (Fig. 42/13, 14). Vertically pierced cylindrical lugs now appear on some vessels (Fig. 42/13, 14), and there is one example of a large pierced lug applied immediately at the exterior of the rim (Fig. 42/15). These pierced lugs have not been encountered in the lower levels, and it is likely that they represent an innovation in EN Level 4; they become quite common in the later levels (Duru 1998: 720 ff., pl. 16/1-4, 21). Flattened bases continue (Fig. 42/16), but there is one example of a raised base (Fig. 42/17).

The pottery recovered in the 1998 season, while generally not primitive, cannot be considered particularly sophisticated either; it is somewhat dreary and monotonous. Typical of our two earliest levels of the Early Neolithic is a ware light in color, well fired, and burnished, with vessel forms characterized by spherical bodies and flattened lips. Even in the upper levels of Bademağacı -Early Neolithic Levels 3-1- this flattening of the slightly inturning rims remains in evidence (Duru 1997: pl. 15/7, 8) although it is a characteristic not often seen in the other sites in the Burdur region. The development of this feature in the Neolithic



sequence has received little attention despite the appearance of the feature at several other Anatolian sites: Levels VIII, XI and XII at Çatalhöyük (Mellaart 1962: fig. 9/23-25, Mellaart 1966: fig. 4/3, 8-10); among the B, C, and E wares of mixed material from Demircihüyük (Seeher 1987: pls. 2/5-8, 10, 3/1-3, 5/16, 11/4, 7); and as surface finds at Morali Höyüğü (French 1965: fig. 4/9, 11) and Nemrut Höyük (Meriç 1993: fig. 3/2) in the Gediz valley. In the Marmara area, moreover, examples of inwardly thickened rims flattened at the lips seem to have been very frequent (at Fikirtepe, cf. Özdoğan 1979: pl.23/1/a, b; and at Pendik, cf. Özbaşaran 1989: pl. 32/3).

Even though we do not yet know for sure just when the incurving flattened rim first entered the pottery sequence, it is a reasonable assumption that it was represented among the very earliest pottery -most likely in imitation of wooden vessels. The rectangular vessel in imitation of a wooden box from EN Level 4 at Bademağacı would support this theory. This type of ceramic vessel rim has also been recovered from the upper levels newly excavated at Çatalhöyük<sup>16</sup>. The use of the same vessel

forms from the earliest through to the late strata at Çatalhöyük may be explained as conservatism in the ceramic tradition at the site. An important point to note here is that ceramic parallels were not only on the increase between the Lake region and the Konya plain, but between the Lake Region and northwest Anatolia as well, as can be seen not only in the flattened lips but also in the antisplash bowls which appear at Demircihüyük (Seeher 1987: pls. 1/1-7, 5/7, 10/8, 10-12) and the Fikirtepe sites (Özdoğan 1979: pl. 23/2, Özbaşaran 1989: pls. 31, 32); thus relations within western Anatolia must have become increasingly warmer during Neolithic times.

EN Level 6 at Bademağacı now represents the earliest known Neolithic settlement in inland western Anatolia, and we suspect that the date of preceeding layers of Bademağacı 6 must reach as far back in time to the very end of the 8th millennium BC.

These latest finds from the lowest levels excavated at Bademağacı have raised our hopes of finding the very earliest levels of the 'Ceramic Neolithic' and completing the developmental sequence of the region.

<sup>16</sup> Adnan Baysal, a graduate student in our department, with the kind permission of Prof. I. Hodder, incorporated pottery from the 1993 excavations at Çatalhöyük into his thesis. A large number of bowl rims with flattened lips are included among the profile drawings. Although the stratigraphy of these may not be definite, the strata excavated in the 1993 season were all near the surface: A. Baysal, *Güney Anadolu Neolitik Dönem Çömlekçiliği*, Istanbul University Faculty of Letters Library, YLT-D 29 (unpublished master's thesis), 1995: pls. 57/5, 62/1, 4-10, 63/4, 5.



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## Ilıpınar, An Early Farming Village in the İznik Lake Basin

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**KEYWORDS:** *Ilıpınar, Neolithic Architecture, Northwestern Anatolia, Early Farming Community, Village Development.*

**ANAHTAR KELİMELEER:** *Ilıpınar, Neolitik Mimari, Kuzeybatı Anadolu, İlk Çiftçi Toplumu, Köy Gelişimi.*

### ÖZET

İznik Gölü'nün çevresinde tarihöncesi dönemlere ait 10 kadar yerleşim yeri saptanmıştır. Gölün batısında, Bursa, Orhangazi ilçesinin yakınında yer alan Ilıpınar höyüğü, bunların arasında en eskilerinden biridir; Ilıpınar'daki yerleşimin başlangıcı günümüzden sekiz bin takvim yılı öncelerine kadar inmektedir. Hollanda, Leiden'deki Yakın Doğu Enstitüsü ve onun bir kolu olan İstanbul'daki Hollanda Tarih ve Arkeoloji Enstitüsü adına, 1987 yılından bu yana sürdürülen kazılar, bize bu bölgedeki tarihöncesi yaşam ile doğal çevre ortamı yla ilgili ayrıntılı bilgi edinme olanağı vermiştir. Bulgular, tarihöncesi dönemlerde Ilıpınar'da yaşamış olanlar insan topluluğunun bu çevreye nasıl uyum sağladığını ve onun bu bölgedeki doğal kaynaklardan nasıl yararlandığını gösteren, 7 m kalınlığındaki tabakalanmış arkeolojik dolguda açığa çıkartılmıştır. Mimari olarak burada ilk olarak MÖ 6000-5400 tarihleri arasında geçen 6 yüzyıl boyunca, ahşap dikmelerin kullanılması ile yapılan tek odalı evler yapılmıştır. Bu yapılarda, doğadaki kil katmanlarından levhalar halinde kesilen parçalar da ahşap dikmeler ile birlikte kullanılmıştır. Bu dönemden sonra, yapı malzemesi olarak kerpiç kullanılmaya başlamış, tek odalı ev tipi yerini, zemin planları birbirlerinden farklı yapılara bırakmıştır. Ilıpınar'ın bulunduğu bölge, coğrafi konum olarak Anadolu ile Güneydoğu Avrupa arasındaki sınırı oluşturduğundan, buluntu topluluğunda da her iki bölgenin etkilerini görmek olasıdır. Ancak Balkan Neolitik kültürleri ile yakından benzeştiğini söyleyebiliriz.

Ilıpınar'da, yaklaşık olarak 60 bireyin gömülü olduğu bir mezarlık alanı özellikle dikkati çekmektedir.

1988 yılı kazı çalışmalarında, VB evresindeki külbelerden oluşan yapıların tabanlarının yer altına gömük durumda olduğu anlaşılmıştır. Ancak bu çukur evlerin, yalnızca sonbahar ve ilk yazda tohum ekimi ve harman dönemlerinde kullanılmış gibi gözükmektedir. Ayrıca Ilıpınar'ın daha eski evrelerinden bildiğimiz yapılara göre bu evler kış aylarında oturmak için pek de elverişli değildir.

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## ABSTRACT

Ilıpınar höyük, situated west of the lake near the modern town of Orhangazi, is one of the oldest settlements in NW Anatolia, and has an occupation record which dates back about eight thousand calendar years. A series of excavations at this settlement, carried out since 1987 under the auspices of the Netherlands Institute for the Near East in Leiden/Holland and its branch, the Netherlands Historical Archaeological Institute in Istanbul, have given insight into the relation of prehistoric men to their habitat. Data recovered in the up to 7m thick archaeological deposit demonstrate how the inhabitants of prehistoric Ilıpınar adapted to this specific environment and acquired its resources. The Neolithic village, which was inhabited during six centuries from 6000 to 5400 cal. B.C., first consisted of single-room post-wall houses and buildings made of sods cut in natural clay deposits. Thereafter, when mud-brick became the building material, the single-room dwellings were replaced by buildings with various ground plans. A special feature is the burial ground, which belonged to the earliest settlement, where more than 50 villagers were buried. Shortly after the early farming village was abandoned, the mound was occasionally resettled (phase VB). These newcomers reused the arable land and lived in semi-subterranean shelters during the harvest seasons. Their material culture shows strong affinities with the Neolithic cultures from the Balkans.

## INTRODUCTION

Until recently our perception of the prehistory of the eastern Marmara region was rather fragmentary. This is due to the fact that systematic investigations were absent. It is true that excavations at Fikirtepe (Bittel 1969-70) and later at Pendik (Özdoğan 1993), both on the northeastern Marmara coast, had added an important new element to the prehistory of the Anatolian peninsula, namely the Fikirtepe culture, and field surveys had provided basic knowledge on the spread of man in this region from the first settlers to the classical period (French 1967). But the overall picture remained quite incomprehensible. The investigations of Ilıpınar were undertaken with the intention to provide a context in which the different pieces of the puzzle would find their place. After a decade of field and laboratory work the results show that parts of the puzzle are starting to fit.

The trough shaped Iznik lake basin is part of a low, east-west running mountain range in the eastern Marmara region (Kayan 1995). Whereas mountain slopes delimit the lake shores to the north and south, small alluvial plains to the east and west gave rise to the establishment of prehistoric occupation. This occupation comprises roughly ten settlements. Chronologically these settlements fall into two

categories: their implantations go back either to the Late Neolithic/Early Chalcolithic (roughly the end of the 7th mill. BC) or to the Early Bronze Age (2nd half of the 4th mill.).

The mound of Ilıpınar, situated west of the lake near the modern town of Orhangazi (Fig. 1), is one of the oldest prehistoric settlements of NW Anatolia, and has an occupation record which dates back eight thousand calendar years. Here a series of excavations, carried out since 1987 under the aegis of the Netherlands Institute for the Near East, Leiden/Holland and its branch the Netherlands Historical Archaeological Institute in Istanbul, have given insight into the relation between prehistoric men and their habitat. Data recovered in the up to 7 m thick archaeological deposit demonstrate how the inhabitants of prehistoric Ilıpınar adapted to this specific environment and laid hold on its resources.

On this occasion I would like to enlarge upon Ilıpınar's earliest settlement, the Neolithic village, which showed a continuous development over six centuries. On the basis of changes in the material culture such as house building, pottery and other find categories, this development has been divided into seven phases running from phase X (the oldest) to phase VB (the youngest).

It is hard to believe that the eastern Marmara region with its variety of biotopes of wooded mountain ridges and valleys, lake and sea shores was neglected by Late Palaeolithic and Mesolithic hunters. Nonetheless, although signals of pre-Pottery Neolithic occupation grow in number (Özdoğan and Gatsov 1998) Ilıpınar, together with other sites such as Fikirtepe and Pendik on the littoral of the Marmara Sea and a few inland sites (Özdoğan 1983, 1986, 1989), constitute the earliest evidence so far of wide scale human activity in this region.

## HERDING AND FARMING

The first settlers of Ilıpınar were farmers, who, judging from the biodata, strongly relied on sheep and goat herding. What we next notice is that these farmers gradually shifted from ovicaprids to pigs and cattle. This means that in the course of a few centuries, pigs and cattle became dominant in the animal husbandry. This change in economic strategies can be interpreted as an adaptation to the woodland environment of the eastern Marmara region where pigs and cattle had a better chance to prosper than ovicaprids. Buitenhuis from Groningen University, recognizes in sheep and goat herding the sort of live-stock breeding that is more suited to the drier environment of the Central Anatolian plateau than to the rather pluvial lowlands of the Marmara region (Buitenhuis 1995).

On the basis of palynological research, Bottema, also from Groningen University, described the landscape of the Yenisehir Plain and its surroundings as being covered during this period by a deciduous tree forest with such taxa as: oak (*quercus*), hazel (*corylus*), beech (*fagus*), and pine trees which probably grew on the mountain ridges (Bottema and Woldring 1995). No doubt the landscape of the neighbouring Iznik lake basin was similar to this.

Next to animal husbandry, the inhabitants of Ilıpınar grew a wide array of food plants. Among them barley of the six-row type (*H. vulgare*), emmer wheat (*Trit. diccicum*), bread

wheat (*Trit. aestivum*), lentil (*Lens culinaris*), bitter vetch (*Vicia ervilia*) and flax (*Linum usitatissimum*) were the major crops. Additionally, wild fruits such as figs, blackberries, grapes, acorns and pistachios were eaten as well.

The discovery of a big charred grain sample of naked barley (*H. vulgare nudum*) collected in the burnt ruins of a house dated to the earliest habitation phase, strengthens Ilıpınar's link with sites on the Anatolian plateau such as Erbababa and Hacilar (van Zeist and Waterbolk-van Rooyen 1995).

From the above it may be concluded that the roots of the initial occupants of the Iznik lake basin are to be found in the more arid Anatolian highlands to the east and southeast. The region that comes to mind in particular is the lake district near Burdur, where Late Neolithic Hacilar together with other contemporary settlements of the 2nd half of the 7th millennium such as Kuruçay (Duru 1994), evoke parallels with the Marmara region in terms of economic strategy and material culture. There is for example an overall resemblance as far as the pottery and the anthropomorphic figurines from Ilıpınar's earliest phases are concerned. Conversely, the contrast in the concept of village planning and house building is rather striking.

## ARCHITECTURE

A curious thing is that three different construction modes were applied in the early farming village of Ilıpınar. Two occur simultaneously during the first half of its existence, recognized in the so-called post-wall and mud-slab buildings, whereas during the second half mud-brick was used as a construction material. An explanation for this unusual variety in building within one and the same village is not so evident. At first thought, factors like cultural adherence, function or adaptation to climatic conditions come to mind. But which one is right?

### Post-wall buildings

In outline it can be said that the post-wall buildings of Ilipinar were representative for the earliest village stage which lasted three centuries. As they were free-standing single-room houses with a standard-size living space of some 30 square meters, they were probably used as single-family dwellings (Fig. 2). Such houses were constructed with rows of timber posts (set in 50 cm deep or deeper ditches) which served as a frame for the external walls and as a roof support. The wall-posts were subsequently incorporated in 25-30 cm wide *pisé* walls. In some cases it was observed that posts were attached to each other with fibrous ropes, but impressions of genuine wattle were never recognized. Being best suited to such constructions, these dwellings presumably had reed-covered gable-roofs, like the ones known from Karanovo (Tezel-Zetter 1997). In some cases it was determined that posts placed in the rooms had supported the ridge beams of the roofs. Preservation of interior arrangements of post-wall houses occurred rarely. In fact there is only one good example (Fig. 3). There was a fireplace for heating and cooking (a real oven was lacking), and a corner where food storage and processing had taken place, as was evidenced by storage bins, grinding tools, obsidian knives and other artifacts. Along the opposite wall, there was a curious device which was recognized as a socle or table on top of which there had probably been a grinding slab (Roodenberg 1993a). Although wooden floor boards were found more than once in the interiors of buildings, the floor of this house was solely made of stamped mud. Spread on this mud floor, there were a big ox-like animal clay figurine, and bone and stone-cut beads.

### Mud-slab buildings

Next to post-wall buildings, so-called mud-slab buildings were unearthed in the deposit of the earliest village. Big mud-slabs of various sizes, probably cut from natural clay deposits, were used as building material for the outer walls. The walls were often set on a

foundation of wooden boards, which sometimes covered the total surface of the inner building space (Fig. 11). Whether these buildings were used for other purposes than the common post-wall houses has not been clarified, but size and lay-out hint at the same dwelling function. At the contemporaneous site of Menteşe, in the Yenişehir basin, similar mud-slab building material was observed; here the mud-slab constructions were accompanied by a building with genuine wattle and double walls. Both buildings had rectangular groundplans. The conclusion to be drawn is that in one and the same village different methods of construction were applied simultaneously (Roodenberg 1999).

### Mud-brick buildings

In one of the excavation trenches (S 13, Fig. 4), an abrupt change in construction tradition was noticed. On top of post-hole groundplans belonging to phase VII a mud-brick building was constructed. From that moment on (dated ca 5700 BC) mud-brick became the primary building material. While the first mud-brick houses were true copies of the previous post-wall houses, soon buildings having a different lay-out and size appeared.

The shift to mud-brick houses half-way through the Neolithic village of Ilipinar is rather surprising within a cultural context where ties with the Anatolian plateau obviously had diminished and similarities with the Balkans had grown. Therefore, since this change in building concept probably does not express an act of acculturation, it is more likely to be a reflection of a practical kind. Are we witnessing an attempt to cope with a climatic change -- a temporary drought?

Palynological evidence from the area reveals that lesser climatic changes had taken place during the Holocene: pluvial conditions interspersed by periods of relative drought. The same can be concluded from the level changes to which Iznik Lake was subjected (Kayan 1995). Yet the challenge we are faced with in relation to variations in climatic conditions is not to demonstrate them, but to have them

match the time scale of the archaeological events. To the question: "Does the shift from post-wall to mud-brick buildings reflect an interval of drought?", I would answer: "Possibly, but there is no proof". What we do know is that two millennia later, during the Early Bronze Age, the inhabitants of a nearby settlement, called Hacılartep, had turned back to the initial construction mode of post-wall houses (Roodenberg 1993b).

Whatever the reason for these shifts may have been, the introduction of mud-brick as a construction material had led to experimentation and changes in the architecture.

### VILLAGE DEVELOPMENT

For the sake of convenience, I shall now divide the Neolithic village of Ilipinar into two sub-periods: the earliest will be called the post-wall (building) village, dating from 6000 to 5700 BC, and the second, the mud-brick (building) village, dating from 5700 to 5500 BC (see chronological chart below).

#### The post-wall building village

The availability of fresh water has been a major attraction for settlers in all times. Hence, it is not surprising to find around the Ilipinar spring (Fig. 4) the remains of successive occupation totalling 6500 years of human activity reaching from Neolithic (Late Neolithic in terms of Anatolian archaeology) to Early Byzantine. Even nowadays, the spring basin is in daily use as a public laundry and bathing facility.

The investigations of the oldest village plan are hampered by the fact that these remains are covered by an accumulation of trash layers from different periods. In spite of this, the over 500 m<sup>2</sup> of the initial village, uncovered by excavations and soundings, is quite extensive compared to excavations of deep settlement levels in the Balkans, in particular in Greece.

For the reconstruction of the plan of the earliest settlement we have at our disposal a few data only. These data hint that the village had

a radial lay-out with the spring as focus point. There may have been a few rows of buildings positioned in a semicircle to the North and West of the spring. The number of houses at the very beginning may have been no more than ten to fifteen, but may have grown to twice this number or more during the 300 years of the post-wall village's existence. Each building stood on an average of 100 m<sup>2</sup>, communal village ground with paths and open areas included. When assuming that there may have been 30 buildings at the end, the village then would have covered a surface of 3000 m<sup>2</sup>.

There is no doubt that the village, with its free-standing, gable-roofed mud-and-wood houses, had an outspoken non-Anatolian appearance (Fig. 3). This strongly contrasts with a large component of its material culture, especially the pottery assemblage, which reflects its Anatolian roots.

Another non-Anatolian element is the burial ground of the post-wall village.

#### The burial ground

A common way of burying the dead during the Neolithic of the Near East, including Anatolia was to leave the body for decomposition in the open air before it was inhumated underneath house floors. Decomposition or excarnation is shown for instance by the frequently encountered burials of disarticulated or incomplete skeletons, or even of mere skulls.

In contrast, excarnation or secondary burial was not practised in the village of Ilipinar. Here the dead had been laid in crouched or Hocker position with flexed arms and legs, and were resting on their left or right side (Fig. 5). The ligaments of the corpse, limbs and skull were intact when the inhumation had taken place, as the bones in the burial pits were found in their anatomical position. The majority of skeletons were of young children and young adults, with fewer middle-aged individuals. An exceptional discovery was an adult lying on a wooden board (see arrow, Fig. 5).



Another characteristic distinguishes Ilipınar's deceased inhabitants. The burials were not found under house floors but outside, in a non-constructed area behind the houses. A total of more than 50 individuals allows us to speak of a genuine burial ground. The mere fact that the dead were no longer inhumated in the family house, but grouped in an area which was probably open to several families, no doubt reflects a change in the ancestral cult with respect to the above-mentioned oriental funeral practices.

#### The mud-brick building village

During its mud-brick building stage (phases VI and VA), the village shifted towards the west. Although the old mound is part of the agglomeration, the building horizon there is rather thin and badly disrupted by burials from the Late Chalcolithic and Byzantine periods. In fact the main part of the mud-brick village leans against the old post-wall village mound.

The principal characteristic of the mud-brick village is that it had abandoned the single-room house plan. Compartmentation and agglutination or clustering now became the fashion.

As an example for compartmentation, there is a house that was rebuilt several times at the same spot (Fig. 6). Instead of a single room, the creation of separate areas delimited by short partition walls can be seen; each area had its own function as there is cooking, heating and food processing. In front of this house there was a courtyard which had evidently been used for storage. A quantity of mud-lined baskets and vessels stood along a row of posts suggesting that part of the courtyard had been roofed with mattings, impressions of which were found in the burnt clay rubble. This house leaned with its back against a sort of bank or rampart. This feature, triangular in section, about 1.5 m high, was interpreted ini-

tially as an earthen wall which function possibly was to demarcate the village border\*.

On the west flank the earthen wall covered the ruins of an oblong building that was destroyed by fire. It consisted of three almost identical compartments or units, separated by double walls (Fig. 6). When the building collapsed, the ruins and the separation walls between the compartments had been cut in such way, that a long, rubble-filled structure, triangular in section, had remained. Whatever the reason for this curious occurrence may have been, it had saved quite a deal of the building's inner features. In each compartment there were storage bins, baskets of the kind we have seen above, and a variety of vessels (Fig. 12). The floors were built above a sanitary space: a layer of timber had been laid on transverse beams, which were fixed in the walls and were supported by socles of mud-bricks. The timber layer had been plastered with mud to constitute the floor surface. In the compartments on each side of the building there stood big square plan ovens with flat roofs. A large opening led to the inner oven chamber which had a flat, horizontal floor.

Most surprising was that on top of both ovens big pieces of other ovens were found. It was evident that they had crashed from a second storey. As a matter of fact, the inventory of an upper storey had tumbled down in each of the compartments together with a layer of burnt floor remains. At first it was thought that the inventory (among which there were more than 50 grinding slabs) originated from a flat roof. In hot countries flat roofs are used for all kinds of activities, including the grinding of cereals. But since last season's investigations we are convinced that there had been a sheltered upper storey, because it was genuine roofing material that sealed off the finds.

To summarize this building. Three small units, ca. 3.5 x 4 m, with a ground floor that seems to

have been fit up for the storage of food supplies (the ovens appeared to be in disuse). The upper storeys, with their ovens and grinding stones, had probably functioned as food processing areas.

Renewed study of the architectural remains of the mud-brick village elsewhere on the mound has led to the conviction that this curious building was not unique. However, compared to the single-room post-wall houses from the previous centuries, something in the organization of the community apparently had changed.

#### Phase VB

The horizon that concluded 600 years of continuous village life is phase VB, called phase V in previous publications.

Since the start of the excavations in 1987 we had been aware of dark burnished, rippled or fluted pottery sherds found in pits over the mound (Fig. 8). However, despite our efforts we could not track down the presumably existing habitation levels. Such levels were uncovered only recently down the western slope of the mound (Roodenberg and Gérard 1996). In the investigated area there were dome-shaped ovens, hearts, grinding slabs, baskets and a great many vessels. A fair number of the latter contained charred seeds such as barley, wheat, lentils and bitter vetch. It took some time before we understood what this was all about. Last year's discovery of an almost intact semi-subterranean cabin put us on the right track. This cabin consisted of an oval pit of 3x5 m and half a meter deep. On one side there was an earthen bench, on the other a grinding socle, as well as an oven and pottery vessels full of charred grains (Fig. 10 - 13 - 14). This discovery enabled us to recognize four clusters of features each consisting of an oven, grinding stones and a number of vessels. Evidently these clusters represented the same kind of half dug-in shelter.

The question that arose from the newly found evidence was what is the relation between the highly sophisticated two-storey mud-brick architecture and these pit dwellings? It seems that shortly after the village was abandoned,

people settled semi-permanently on the ruins and built these primitive shelters. As evidenced by the huge quantities of plant remains found in and around their shelters, they cultivated the fields around the abandoned village.

#### SOME ADDITIONAL REMARKS ON THE FINDS

In the course of six centuries the pottery underwent a steady transformation (Thissen, L.C. 1989-90, 1995, van As and Wijnen 1995). The pottery was of course hand made, moderately fired in tones from light- or grey-brown to dark-brown, and as a rule well burnished. Characteristic of the earliest phase (X) is the use of chaff-tempered clay, and globular pots and deep bowls with oval mouths (Fig. 17). Triangular, vertically pierced handles, present from the beginning, continued during the first half of the village occupation (phases X to VIII-VII), when vessel shapes tended to acquire more pronounced S profiles. Chaff was soon been replaced by sandy or gritty temper, while restricted bowls with plain rims and S-shaped pots became the most common vessel types. Decoration varies from finger and nail impressions to various geometric patterns made with incised and excised grooves, but most pottery is plain.

During the mud-brick building phases (VII-VA) a greater variety in shape and decoration can be observed. At that stage squat pots, often with simple excised groove decoration on the shoulders, were commonly used and found in large numbers among the debris of the above described compartment building (Fig. 10 - 13). Other typical forms are carinated open bowls with wavy line decoration (Fig. 8: 7-8) and nicely decorated square pots (Fig. 18).

There is a high degree of similarity between the pottery of Ilipınar X (also IX) and the Fikirtepe culture (Roodenberg 1995). Decoration may differ, but shapes and ware are for the most part identical. The same can be said about Menteşe, where shape and type

\* New evidence has shown that the earthen wall concealed the ruins of a ring of buildings which presumably encircled the village of phase VI to the south, west and north.

of ware display comparable similarities, whereas decoration may differ. It seems, therefore, that decoration patterns represented, to a certain extent, the identity of each village. As for the pottery of phase VB, its parallels with Southeast Europe have been discussed above.

Next to the pottery assemblage, there are two other find categories where the shift from the post-wall to the mud-brick construction is reflected: the bone and antler industry and the figurines. Among the abundant bone and antler implements comprising awls, needles, spatulae, chisels, axe sockets etc. (Fig. 19) two dozens of finely carved spoons (fragments included) were collected from post-wall building horizons (Fig. 9: 5-7), whereas none were extracted from the mud-brick village (Marinelli 1995). A comparable number of standing female figurines, a type well known from Early Neolithic Bulgaria, derived without exception from the mud-brick village (Fig. 9: 2-4).

## CHRONOLOGIES AND CONCLUSION

A decade of investigations at Ilipinar has given shape to the sketchy picture of the Neolithic period in the Marmara district. Furthermore, it has been demonstrated that prehistoric cultures of the two macro-regions, the Anatolian peninsula and the Balkans, met in this border area.

With regard to the chronologies, I propose juxtaposing Ilipinar with Karanovo using the recently published data from the excavations "im Südsektor 1984-1992" (Hiller and Nikolov 1997). Both mounds function as chronological and cultural yardsticks in their respective territories. Moreover, the volume of their older habitation layers and the excavated areas show equivalence. This makes these mounds more suitable for comparison than other, less explored settlements situated in the "Balkano-Anatolian culture zone" (Todorova 1991, Roodenberg 1993).

1. When looking at the pottery assemblage, there is little or no similarity between Ilipinar and Karanovo, with one significant exception:

*Ilipinar's Neolithic - Chalcolithic Sequence. Ilipinar's chronology is based on more than 50 radiocarbon dates (publication in preparation).*

years BC	Phase
5400	VB
5500	VA
5600	VI
5700	VII-VIII
5800	IX
5900	X
6000	

The appearance of black or dark burnished, rippled pottery is characteristic for Ilipinar's end phase VB and for Karanovo III. Radiocarbon dates confirm contemporaneity: 5500-5400 BC for Ilipinar VB (see chronological chart below), and 5500-5300 for Karanovo III (Görsdorf 1997: 377).

2. When considering the anthropomorphic figurines of Ilipinar, there is a clear cut difference between the ones from the post-wall village and those from the mud-brick village. Although rare, the former represent the Anatolian type of sitting "goddess" (Fig. 9: 1), whereas the mud-brick village yielded the E.N. Bulgarian styled standing female with pronounced bottom (Fig. 9: 2-4). From Karanovo I not much can be said, but the same type of standing figurine seems quite representative for Karanovo II (Hiptmair 1997: 255). This is another reasonable confirmation of contemporaneity. Ilipinar VI-VA (the mud-brick village) as well as Karanovo II can be dated from ca 5700 to 5500.

3. The problem of not fully matching contemporaneity, however, is related to the earliest stage of the chronological sequence. The beginning of Ilipinar's mud-brick village/end of the post-wall village is determined at ca 5700 BC. The post-wall village's occupation deposit measures 3-3.5 m including ca. 12 building horizons, and, according to the  $C^{14}$  determinations, represents 300 years of habitation dating from 6000 to 5700 BC. Karanovo I

(Südsektor), however, has a rather thin deposit: 90 cm representing 3 "Bauhorizonte". Therefore, its occupation cannot have lasted much more than a century. The conclusion should be that the short sequence of Karanovo I only matches the end of Ilipinar's post-wall village (phase VIII-VII) dated from 5800 to 5700 BC. This interpretation does not necessarily contradict the record of Radiocarbon determinations from Karanovo (Görsdorf 1997, Abb. 19, 1-3). On the contrary, the ones from Karanovo II and III horizons are well grouped, but those from Karanovo I don't show much consistency.

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# Northwestern Turkey: Neolithic Cultures in Between the Balkans and Anatolia

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**KEYWORDS:** Neolithic, Neolithization, Southeastern Europe, Ağaçlı, Fikirtepe, Hoca Çeşme, Yarımburgaz, Aşağı Pınar.

**ANAHTAR KELİMELEER:** Neolitik, Neolitikleşme, Güneydoğu Avrupa, Ağaçlı, Fikirtepe, Hoca Çeşme, Yarımburgaz, Aşağı Pınar.

## ÖZET

Anadolu ile Balkan kültür bölgeleri arasında yer alan Marmara Bölgesi, Kuzeybatı ve Doğu Trakya olmak üzere iki bölümden oluşmaktadır. Bölge, Balkanlar ve Anadolu'nun yanı sıra Ege ve Karadeniz kültürlerine de açık olduğundan, kültür tarihi içindeki yeri ve önemi sürekli olarak değişmiş, bazen coğrafi bölgeleri bağlayan köprü, bazen bunları ayıran bir engel oluşturmuştur. Ancak bölgenin kendine özgü bir kültürel kimliği de olduğu anlaşılmıştır. Bölgenin Üst Paleolitik Çağın ilk başlarına tarihlenen Klasik Aurignacien döneminden sonra, M.Ö. 7 bin yıllarında, avcı-balıkçı topluluklar tarafından yeniden iskan edilinceye kadar uzun bir süre boş kaldığı anlaşılmaktadır. Ağaçlı kültürü olarak bilinen bu topluluklar, Epi-Gravette gelenekli minik aletleri, prizmatik dilgi çekirdeklerinden oluşan yontmataş aletleri ile Kuzey Karadeniz Mezolitik kültürleri ile yakından benzeşmektedir. Bunun hemen ardından bölgeye, tümü ile farklı bir yontmataş alet teknolojisine sahip olan, Anadolu kökenli bazı toplulukların geldiği, Çalca gibi buluntu yerlerinden anlaşılmaktadır. Olasılıkla bunlar ilk olarak az sayıdaki küçük gruplar halinde Çanak Çömlek öncesi dönemde gelmişlerdir. Ancak bölgeye Neolitik öğelerin tam olarak yerleşmesi Fikirtepe kültürü ile başlamıştır. Monokrom çanak çömleği ile belirlenen Fikirtepe kültürü, Ilıpınar gibi iç bölgelerde tümü ile Anadolu özellikleri göstermesine karşın, Marmara'nın kıyı şeridinde, yerli Ağaçlı kültürü ile kaynaşmış olarak ortaya çıkar. Fikirtepe kültürünün oldukça uzun bir zaman dilimini kapladığı, kendi içinde en az üç aşama geçirdiği anlaşılmaktadır. Bunları, basit dar ağızlı kapların olduğu Arkaik Fikirtepe, S kıvrımlı kase ve çömleklerin görüldüğü, çizi bezeme ile dörtgen kapların yaygınlaştığı Klasik Fikirtepe ve gelişkin çizi ve kazıma bezemenin kullanıldığı, boyunlu kapların ortaya çıktığı Gelişkin Fikirtepe/Yarımburgaz 4 olarak tanımlayabiliriz. Kuzeybatı Anadolu'da Neolitik Çağın son evresi, Klasik Fikirtepe evresinden beri, koyu renkli kaplar ile birlikte görülmeekte olan kırmızı astarlı kapların yaygınlaşması ile başlar. Bu dönemde S kıvrımlı kaplar ile birlikte tüp biçimli tutamaklar daha yaygın olarak kullanılır. Edirne Enez ilçesinde, Meriç nehrinin Ege Denizine döküldüğü yerde olan Hoca Çeşme yerleşmesinde 4 kültür katı saptanmıştır. Bunlardan en eskisi olan 4 tabaka, anakayaya oyulmuş yuvarlak planlı yapıları ile dikkati çeker. Bu dönemde yerleşmenin bir sur duvarı ile çevrildiği ve bu duvarın varlığını 2. tabakaya kadar koruduğu anlaşılmaktadır. Yerleşmenin boyutu göz önüne alındığında oldukça anıtsal olan bu duvar, Hoca Çeşme'deki ilk yerleşimin bir tehtid altında olduğunu göstermekte-

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dir. En eski kültür katının parlak kırmızı ya da canlı siyah renklerde parlak açıkı olan ve tümü ile özenli yapılmış olan çanak çömleği İç Anadolu Son Neolitik Çağ buluntu toplulukları ile yakından benzeşmektedir; aynı durum küçük buluntular için de geçerlidir. Buluntuların arasında özellikle kemik kaşık ve mablaklar, kil basma kalıpları ile anadolu özellikleri gösteren heykelcikler ilginçtir. Aynı buluntu topluluğu 3. kültür katında da devam eder. İlginç olan 3. evresin sonlarına doğru astar bezemeli olan ve Teselya Ön Sesklo malları ile benzeşen bazı parçaların da görülmesidir. Hoca Çeşme 4. ve 3. tabaka çanak çömleği, Klasik Fikirtepe kültürü ile de bazı ortak özelliklere sahiptir.

Hoca Çeşme'de 2. kültür katı ile birlikte yuvarlak planlı yapıların yerini dörtgen planlı mekanlar almıştır. Gene ahşap bir iskelete sahip olan bu yapılarda duvarların çit-örgü şeklinde oldukları ve üzerlerinin killi bir toprakla sıvandığı anlaşılmaktadır. Bu tabakanın çanak çömleği önceki evrelerin bir devam olmakla birlikte, daha kaba ve kalın kenarlıdır; yeni bir mal gurubu olarak yüzeyi kabalaştırılmış kaplar da bu evrenin sonlarına doğru görülmeye başlar. Gene bu evre ile birlikte kırmızı astarlı kapların üzerinde beyaz boya bezeme de görülmeye başlar. Bu dönem, Balkanlarda Neolitik kültürlerin de çok yaygın olarak görüldüğü, Karanovo I-II süreci ile çağdaştır. Büyük bir olasılıkla beyaz boya bezeme Batı Marmara ve Balkanlarda yayılırken, Doğu Marmara bölgesinde Yarımburgaz türü çanak çömlek varlığını sürdürür.

## ABSTRACT

The northwestern part of Turkey, lying between the Balkans, Anatolia, the Aegean Sea and the Black Sea, has been a melting pot of different cultures. It is also evident, however, that the region around the Sea of Marmara occasionally acted as a barrier, preventing cultural interaction among these regions. Following the early Aurignacian period, no sites are known in this region that can be dated to the later parts of the Pleistocene. The Mesolithic dune sites of Ağacli type, displaying traits similar to those of the northern Pontic Epi-Gravette industries, are —on typological grounds— dateable to the 7th millennium BC. The lithic industry used by the initial wave of Neolithic people, apparently in the Aceramic period as known from sites such as Çalca, displays a different type of assemblage, which later appears with the Pottery Neolithic cultures of the region. The Fikirtepe culture represents the Early Pottery Neolithic of northwestern Turkey; in inland Anatolia, at Ilıpınar for example, the similarities between the Anatolian Neolithic and Fikirtepe cultures are more evident. However, the coastal sites of the culture, though using the same type of pottery as the inland sites, display a number of elements derived from the preceding Ağacli culture, thus indicating that the latter went through a period of acculturation. Here on the coast distinct stages of evolution are apparent in the Fikirtepe culture. The latest stage of the Neolithic period in northwestern Turkey is characterized by the spread of red-slipped wares, soon to be followed by white-on-red pottery. This sequence can best be followed at Hoca Çeşme.

## INTRODUCTION

Northwestern Turkey, also known as the Marmara Region, incorporates East Thrace and the northwestern parts of Anatolia, lying in Europe and Asia respectively. The Sea of Marmara, together with the Dardanelles and the Bosphorus, defines the separation of Europe from Asia; more specifically, the sea channel between the Black Sea and the Aegean divides the Anatolian from the Balkan peninsulas. It is mainly due to this distinctive location that the Marmara Region has been attributed an active role in the transmission of ideas, commodities and people between Europe and Asia. Nevertheless, in spite of its unique geographical position, until about a decade ago there had been very little archaeological research here -not only in the immediate area of the Sea of Marmara, but in Western Turkey in general. The Balkans, on the other hand, have been the scene of intense archaeological investigation, with the number of excavated sites exceeding 300. This steady accumulation of data from the Balkans over a period when our knowledge of the Western Anatolian Neolithic was at a stand-still had serious consequences on archaeology in the Marmara Region. The most evident impact of this unbalanced data was the difficulty in drawing comparisons. The situation also led to an estrangement between the archaeological schools concentrating on Anatolia and those concentrating on the Balkans. With time, the study of the prehistoric cultures within each region became so specialized that the archaeologists working in either the one or the other became virtually unaware of the developments taking place in the other one. Needless to say, this isolation was furthered by politics. These narrow focuses have had such a lasting effect that, even now that our knowledge of the Marmara Region has grown, our colleagues have still not developed much interest in one another's regions. As will be mentioned in more detail

below, the difference between the archaeological approaches to the two regions has reached such a magnitude that there is conformity neither in the chronological systems nor in the definitions of cultures<sup>1</sup>. Rather paradoxically, in spite of the lack of interest and knowledge, a heated debate has been sustained on the consequences of possible relations between Anatolia and the Balkans.

This paper is therefore a brief presentation of the new picture emerging from this interim zone; it is an attempt to display both the similarities and the differences between the Neolithic cultures of southeastern Europe and those of Anatolia.

## PRELUDE TO THE PROBLEM

### Theories and Biases

As touched on above, very little, if any, interest has been shown in the early prehistory of the region bounding the Sea of Marmara. The reasons leading to the paucity of research in northwestern Turkey (e.g. the scarcity of substantial mound-sites and the existence of military restrictions) are beyond the scope of this paper; the principal explanation for the lack of interest, however, is simply that Thrace has never been considered an area of cultural formation, but accepted merely as a corridor transmitting people and goods between Asia and Europe<sup>2</sup>. Under the impact of traditional diffusionist views, Syro-Mesopotamia was taken as the principal center of cultural formation, with all regions to the west -including the Anatolian plateau- presenting a later reflection of the happenings occurring there. Such a stand inevitably influenced the dating of cultures. Thus, as recently as the early 1960's, the year 3200 BC was still accepted as a basis for the earliest possible settlement in southeastern Europe, including western Turkey and the Aegean realm.

<sup>1</sup> For further discussion on this issue, see also Özdoğan 1993, 1998a.

<sup>2</sup> For a brief discussion of these issues, see Özdoğan 1995, 1996a.



In earlier years the only extensively excavated prehistoric site within the whole of northwestern Turkey was Troy, where the main pottery type of the earliest level consisted of black burnished wares. This led to certain biases, the effects of which have survived to the present. First of all, the Vinča assemblage of the Balkans, which is also characterized by dark burnished wares, was taken as contemporary with the Trojan First Settlement. The fact that a bowl with inner-thickened rim existed -by mere coincidence- in the pottery repertoires of both groups was then interpreted as further support for this equation. This reasoning was next extended to date the Fikirtepe culture, which also had dark burnished wares. The bias was so strong that all other elements of the Fikirtepe assemblage (including the high proportion of red burnished wares) were ignored; Fikirtepe was also accepted as a culture related to the Vinča-Troy I group<sup>3</sup>. The impact of this approach has remained so strong that even now, in spite of the presence of Fikirtepe wares at the base of the Ilipinar sequence (with numerous C<sup>14</sup> dates), some of our Balkan colleagues are still clinging to the idea that the Fikirtepe culture is contemporary with that of Karanovo IV-Vinča (Nikolov 1993: 186). In this respect, J. Mellaart (Mellaart 1955) and D. French (French 1967) must be praised for daring to ascribe pre-3200 BC dates to western cultures, including that of Fikirtepe.

The traditional view of diffusionism was shattered by the widespread use of radioactive dating. C. Renfrew, taking the newly assigned C<sup>14</sup> dates from the Balkan cultures into consideration, redefined the relationship between the Balkan and the Near Eastern cultures (Renfrew 1969, 1970). However, in doing so he established the foundations for a new bias. Renfrew's main objective was to propose a new hypothesis contradictory to that of the

traditional diffusionism; his theory postulated the autonomous development of the European prehistoric cultures. His conclusion was that the prehistoric cultures of southeastern Europe were just as early as those of Anatolia and the Near East, and that the pace of their development -although simultaneous- was independent of any influences from the east. At its time this was a totally revolutionary approach; as such it led not only to a considerable incitement, but also to acceptance by a great number of students. The widespread excitement was understandable, as the C<sup>14</sup> dates had revealed that the new conventional dates for southeastern European prehistoric cultures were two- to three thousand years earlier than the previous estimates. What can be called the C<sup>14</sup> revolution had declared open war on diffusionism, also rejecting the influence of Anatolia on the development of Balkan cultures. Renfrew tried to prove the presumed connections between the two regions invalid, declaring that cultures once considered contemporaneous were actually millennia apart. However, Renfrew was comparing the traditional dates for the Anatolian cultures with the newly revolutionized absolute dates from the Balkans<sup>4</sup>. Even though no one considered questioning the validity of the Anatolian dates, a considerable debate arose on whether or not Near Eastern-Anatolian cultures had had an impact on the cultural formation of Europe, and if so, how. Here we should note that Renfrew's model of an autonomous Europe came just at the time when Europe was in search of a "European identity". Accordingly, this weeding out of "foreign" elements in its roots was most happily embraced. During the 1980's even the mention of alien influences in the formation of European cultures could be considered embarrassing.

Nevertheless, Renfrew's reactionary model is no longer in the limelight. With recent developments in the search for a "New European Identity", linear thinking has been abandoned, and there is now a tendency to accept more complex explanations. Thus the relationship between Anatolia and the Balkans is no longer seen as a linear development, but as a complex phenomenon with multiple explications. In summary, we can say that in evaluating the relations between prehistoric Anatolia and the Balkans, political prejudices contingent upon the definition of European identity have often been more influential than the data themselves.

### The History of Research<sup>5</sup>

Rather paradoxically, Fikirtepe and Pendik, the dating of which has remained controversial, were among the first Neolithic sites discovered in Turkey. Both were found in 1908 during the construction of the Istanbul-Baghdad railway, and the finds extensively published (Arne 1922). Yet another early discovery that has gone largely unnoticed is Karağağaçtepe, the so-called Tumulus of Protesilas excavated by the French Occupation Forces at the Dardanelles in 1926. The results of the excavation were fully published by Demangel (1926). At the time of excavation the presence of a Neolithic stratum was overlooked; our survey of 1981 (Özdoğan 1985: 54) clearly confirmed the existence of a Neolithic layer at the base of the mound.

In the late 1940's the sites of Fikirtepe and Pendik were re-located by Bittel, together with another site, Erenköy, of the same culture. The first significant contribution to the Neolithic of the region, however, were the 1952-54 excavations at Fikirtepe by K. Bittel and H. Çambel (Bittel 1969). These were followed by Ş.A. Kansu's soundings at Fikirtepe, Pendik, Yarımburgaz and Tuzla in 1965 and by N. Fıratlı's work in Yalova. Another major accom-

plishment was the surveys of J. Mellaart (1955) and D. French (French 1967), mainly in the southern parts of the Marmara region, but covering the Thracian littoral to some extent. The works of Mellaart and French are particularly significant in establishing a basic framework for the chronological and artifactual sequence of the region.

Our work in the region began in 1979 as a random survey within the immediate surroundings of Istanbul; by the following year it had developed into an extensive survey project (Özdoğan 1985a, 1986, 1996b, 1998b). Even though the scope of the survey included all of East Thrace, the most intensive work between 1980 and 1985 took place in the Gallipoli Peninsula and along the foothills of the Istranca Mountains in the provinces of Edirne and Kırklareli. The eastern Marmara Region was incorporated into the survey in 1984 and 1985, and the program was further enlarged in 1998 to include the southern Marmara Region as well. Between 1985 and 1990, the most intensively investigated areas on the Anatolian side were the plains of İzmit, Yenisehir, Bandırma, Gönen, Manyas, Balıkesir, İvrindi, Çan and Yenice. Although after 1990 surface survey no longer constituted the central focus of the project, some minor survey has continued annually in the Kırklareli-Edirne region.

Since 1981 a number of sites have been excavated within the framework of the project: Tilkiburnu (1981), Taşlıcabayır (1982), Pendik (1982), Yarımburgaz (1986), Toptepe (1989), Menekşe Çatağı (1993-1998), Hoca Çeşme (1991-1993), Aşağı Pınar (1993-present), and Kanlıgeçit (1994-present)<sup>6</sup>. Among these, Pendik, Yarımburgaz, Hoca Çeşme and Aşağı Pınar have all yielded Neolithic assemblages. In addition to our project, a significant contribution to our knowledge of the Neolithic in the region has been the excavations of J.

<sup>3</sup> Actually the foundation of this bias lies in a misinterpretation of K. Bittel's words. As the principal excavator of Fikirtepe, K. Bittel, at that time not having any grounds for an estimation, set the date of Fikirtepe as "pre-Trojan" (Bittel 1969), which was taken literally by most colleagues to mean as immediate predecessor of Troy I (Alkım 1968: 78).

<sup>4</sup> For further discussion on this issue, see especially Özdoğan 1994, 1996c.

<sup>5</sup> Sites published prior to our surveys are briefly described, with bibliographic references in Özdoğan 1983a.

<sup>6</sup> For a summary of these excavations, see Özdoğan 1996b, 1999.

Roodenberg (see Roodenberg in this volume) at Ilıpınar and Menteşe. Resumed work at Pendik by the Archaeological Museums of Istanbul (Pasinli *et al.* 1994), even though not yet fully published, also represents a welcome contribution to our knowledge of the Fikirtepe culture. Likewise, the work initiated by T. Efe further to the south in the Eskişehir-Kütahya region (Efe 1990a, 1990b, 1995a, 1995b) has considerably helped elucidate cultural affiliations among the prehistoric cultures of Northwestern Turkey. Even though the pace of research in the region has increased greatly over the last decade, it must still be regarded as being in an incipient phase (Fig. 2). Despite some problems within the main framework, however, the epochs represented in the sequences of Hoca Çeşme, Ilıpınar and Aşağı Pınar can now be reasonably well understood.

#### The Environmental Setting

Although Northwestern Turkey is the smallest geographical zone in the country, it is not homogenous, but comprises a number of distinct ecological environments. Because the environment has thus had a relatively more pronounced impact on cultural history here than in most other regions of Turkey, we consider a brief presentation of the basic environmental influences upon the Neolithic period worthwhile. The environmental setting of the region, like the geographical, is tangent to very diverse climatic zones: Mediterranean, continental steppe, Pontic and Alpine.

East Thrace is actually a peninsula that tapers towards the Bosphorus, which demarcates its eastern boundary. The north and south coasts of this peninsula are delineated by the low ranges of the Istranca and Ganos mountains. The land between the ranges forms a low depression, a peneplain consisting of eroded surfaces. Because the heights of the Istranca range, running parallel to the Black Sea coast, prevent the penetration of rain-bringing currents of air from the north, most of Thrace is endemic semi-arid steppe. The coastal strip along the Black Sea receives high precipitation on the other hand, and is densely covered with

broad-leaf forests. The rain-bearing northern winds penetrate to the south only through the Bosphorus, where the natural forest zone meets the Sea of Marmara.

The main drainage system of Thrace is controlled by the river Meriç (*Maritsa* in Bulgarian and *Evros* in Greek), which also constitutes the western boundary of East Thrace. Its tributary, the Ergene, flows through a broad flood plain across the center of the east Thracian peneplain, collecting the flow from the smaller streams draining the southern slopes of the Istranca mountains. The area of the confluence of the Ergene and the Meriç, near Uzunköprü, is covered with extensive marshes and swamps; it is traditionally an area of rice cultivation.

The eastern part of the Marmara Region, the narrow peninsula of Kocaeli and the basin of İzmit, is higher, elevated by the western extension of the Pontic Mountains. The region is broken by a series of intermontane plains tectonic in origin and the lakes of İzmit and Sapanca. The flood plain and broad delta of the Sakarya River mark the eastern limits of the region.

The extensive flat-lands of the southern Marmara Region are interrupted by the volcanic massive of Uludağ (*Olympus*); parts of the Bandırma-Gönen basin on its west are occupied by the Ulubat (*Apolyont*) and Manyas lakes. Although there are numerous small streams draining the area, only the Nilüfer is of much consequence. Further to the west towards the Dardanelles, the region becomes much more rugged; the massive Kaz Mountains stretch northward to the shores of the Sea of Marmara. On this vast massive are numerous small upland plains and hanging valleys. The southern part of the Marmara Region and the southern coastal strip of Thrace opposite it as well enjoy a climate more or less Mediterranean in type.

At present, attempts at paleoenvironmental reconstruction still prove difficult, but certain data now emerging provide clues to the conditions of the past. One factor involved here is

the intricate balance existing between the Aegean and the Black Seas and the Sea of Marmara in between (Fig. 1). As the details of the system are published elsewhere (Özdoğan 1985b) we shall only briefly summarize them here.

a) During the last stages of the Pleistocene, when the mean global sea level was 100-120 m below that of the present, an extensive continental shelf area lay exposed in the Northern Aegean, preventing a flow of water through the Dardanelles. At this time drainage into the Black Sea basin was also diminished due to the cold in eastern and northern Europe. Accordingly there was no flow of water through either of the straits; both the Sea of Marmara and the Black Sea became shallow brackish lakes. During this period of regression the area of the Sea of Marmara was considerable reduced, and the continental shelf just north of the present plain of Bandırma extended outward to include Marmara Island.

b) The first influx of water into the Sea of Marmara came from the Black Sea in the final Pleistocene, when the latter was filling with great quantities of water from the snow and ice melting in northern and eastern Europe. However, it seems that this overflow from the Black Sea was rather short-lived, followed once more by lacustrine conditions.

c) By around 6000 BC, with a global rise in sea level, the warm salty waters of the Aegean began penetrating through the Dardanelles into the Sea of Marmara, putting an end to the lacustrine situation. Neither a fixed date, nor the actual location of initial connection with the Black Sea is clear, but it seems not to have been later than 5000 BC, and may have come over the İzmit-Sapanca channel rather than through the present-day Bosphorus.

d) Still under debate are probable interruptions of the Marmara-Black Sea connection during the 3rd millennium BC, when the latter

went through another phase of regression (Özdoğan *in press*).

e) The present conditions were not established until the beginning of the 1st millennium BC, which is also the period likely to have seen the opening of the Bosphorus.

The implications of the system for cultural history are evident; one must take into account the rapid shifts of the Sea of Marmara from brackish lacustrine to cold fresh water and then to warm and salty marine conditions, and the effect of these on marine fauna as well as coastal topography. Changes in the sea level affected not only the topography of the former littoral but filled the deep valleys of the late Pleistocene as well, creating gulfs that penetrated far inland. Considering the conditions at the time of the Neolithic period, it is clear that these gulfs must have provided favorable habitats for early settlers. Thus all the coastal sites of the Neolithic must be submerged today, and those bordering the gulfs buried under a deep accumulation of alluvion. The Kara Menderes in the Troad represents the best studied of the coastal areas (Kayan 1996); archaeologically, however, the Meriç basin is perhaps the most significant, for the valley here provided access from the Aegean northward to the Plovdiv area<sup>7</sup>.

There are no pollen cores from Northwestern Turkey, but the cores from Greece would indicate that semi-arid steppe conditions prevailed up until early Holocene times, which witnessed the first introduction of the forest (Willis 1994). It is of note that in the faunal assemblage of the Aşağı Pınar Neolithic and Chalcolithic strata, fallow deer -implying dense forest conditions- prevail, later to be replaced during the Bronze Age by red deer, better adapted to open forest-steppe conditions (Benecke 1998). Likewise, the presence of large brackish marine species at Fikirtepe (Boessneck and von den Driesch 1979) demonstrate a change in the Sea of Marmara.

<sup>7</sup> As late as the 19th century boat service was still possible between Enez and Edirne. For the development of the Meriç delta, see Göçmen 1976.

## THE ARCHAEOLOGICAL EVIDENCE

### Setting the Stage

During our surface surveys in Thrace, we encountered certain lithic assemblages datable to the Upper Paleolithic<sup>8</sup>. These all represent surface sites with no secure means of dating; typologically, however, they all seem to belong to the Classical Aurignacian in the earlier part of the Paleolithic. Thus here in the Marmara Region -as is the case throughout most of Turkey- sites from the later stages of the Upper Paleolithic period seem to be missing<sup>9</sup>.

The earliest evidence of undeniable occupation is from the so-called Epi-Paleolithic period. Although no inland sites from this period have yet been recognized, a number of sites with microlithic industries, the Ağaçlı group (Gatsov and Özdoğan 1994), have been discovered along the littorals of the Black Sea and the Sea of Marmara. Most of these are either on fossil dunes along coastal terraces or on the slopes of coastal valleys. The type site Ağaçlı is an extensive dune area extending for more than a kilometer along the Black Sea coast. Here about 70 locations with lithic material were recorded, most of which yielded only Epi-Paleolithic material. The other principal sites -Gümüşdere, further east of Ağaçlı; and Alaçalı and Doğançalı on the Asian side of the Bosphorus- are also dune sites. The westernmost site of this period is also a coastal dune site, Değirmenlik on the Gallipoli peninsula (Özdoğan 1986: 56). The lithic assemblages of these sites (Fig. 3) resemble one another, consisting mainly of small blades or bladelets with the so-called "Gravette" type of lateral retouch. Among blade cores, single-platform prismatic cores are the most common. Even though there is no conclusive evidence to date the Ağaçlı assemblages, their typological resemblance to certain north Balkan industries -especially to that of Dikilitaş (Gatsov 1984)-

implies a date around the 7th millennium BC, which would correspond well with the formation of the coastal dunes.

The significance of the Ağaçlı assemblage in the Neolithization process of northwestern Turkey is evident, for it represents the indigenous population of the region prior to the arrival of the earliest Neolithic communities. Nevertheless, a number of questions remain open. Typologically, the Ağaçlı industries display traits distinct from that of Öküzini, the nearest known Paleolithic/Mesolithic site in Anatolia. As we know practically nothing about the interim zone, however, it is unclear whether the difference between the two groups reflects cultural diversity or whether the two groups merged somewhere on the plateau. At present we are more inclined to associate the Ağaçlı group with the so-called Epi-Gravettian assemblages of the circum-Pontic zone. Yet another challenge concerns the predecessors of the Ağaçlı group: whether or not they represent a southern movement from the northern Pontic area before the beginning of the Holocene.

### The Initial Neolithization of Northwestern Turkey

#### *An Overview of the Evidence*

In most of the Balkan Peninsula (excluding only certain parts of mainland Greece and some of the islands in the Aegean) a white-on-red painted pottery is considered representative of the earliest farmers. This type of pottery is found over a considerably large area extending from eastern Bulgaria northward to the Hungarian plain. Even though a number of different regional names such as Sesklo, Karanovo I-II, Kremikovci, Gradesnitsa, Starčevo, Körös, and Criş are used for the group of painted pottery, it is always found in association with a distinct lithic assemblage. However, with the exception of the Sesklo

sites -and possibly also some of the Starčevo ones- all occurrences of this painted pottery begin with a fully developed style repertoire, with nothing to indicate that it passes through developing stages in those areas. The similarity among the early painted pottery repertoires of the Balkan cultures is striking<sup>10</sup>. The presence of common elements as far north as the Hungarian plain indicates that these "painted pottery" cultures must have had a common origin and that their dispersal from the area of origin should have been due to a rather rapid expansion. Thus two questions must be asked: where did these cultures originate and why did they diffuse? The first query is difficult because they apparently did not originate within an easily definable area; they seem rather to have diffused from a considerably large zone, possibly including various parts of Anatolia. This would mean it was not a matter of migration from point A to point B, but a much more complex phenomenon, a diffusion from one general area to another<sup>11</sup>. The second question is more intriguing. A number of colleagues have been suggesting that with the arrival of farming communities, deforestation for fields and grazing might have led to a destruction of the ecological balance, forcing farmers to move on. Now, no matter how much the early farmers might have altered their habitat, they could still have happily sustained themselves on any terrain they occupied; even a small fraction of the Marmara or Aegean regions could have easily supported the whole of that population. Moreover, there is no evidence whatsoever suggesting such an environmental catastrophe during the Neolithic period, either in Southeastern Europe or in Anatolia (Willis and Bennett 1994). Accordingly, an alternative reason, possibly social turbulence, must be postulated as the trigger for migration of such amplitude.

### *The Problem of the Aceramic Neolithic*

Whether or not a Aceramic phase such as that of the Near East existed in southeastern Europe is a much debated issue. The discussion arose from V. Milošević's work in Thessaly; much has since been written to and fro on the subject<sup>12</sup>. It remained a problem because the evidence available was insufficient to support any hypothesis. Basically the same data was being used both to prove and disprove diffusion from the Near East. The diffusionists interpreted the data as influence from the east while the anti-diffusionists took it as the proof of an indigenous but parallel development taking place in the Balkans. While discussions were touting the Balkans and the Levant, Anatolia -the vast area lying in between and the obvious place to search for evidence- was once more overlooked.

Even though the Aceramic Neolithic period is still poorly known in both western and Central Anatolia, there is enough known to help resolve the above-mentioned argument. As some are relevant to the Neolithization of the Marmara Region, we wish to present a conspectus of the evidence.

a) The lithic assemblages of the Aceramic and the Ceramic Neolithic cultures are completely different from one another. The lithic assemblage of the Ceramic Neolithic of Anatolia is poor in both quantity and quality; it is totally lacking in microlithic elements: bullet cores, scrapers and the like. The large blade, occasionally with ventral retouch, stands as the main lithic tool. The same phenomenon is to be seen in the Early Pottery Neolithic of the Balkans, where the so-called "Karanovo blade" stands out as the only well defined tool type. Accordingly, the microlithic assemblages unaccompanied by pottery in the Balkans can neither be ascribed to the Aceramic nor be

<sup>8</sup> The final publication of the Paleolithic industries encountered in the Marmara region is currently being prepared by C. Runnels.

<sup>9</sup> In almost all of Turkey there is a general paucity of Upper Paleolithic settlements (see Özdoğan 1998c) the reasons for which is beyond the scope of this paper.

<sup>10</sup> We are conscious of the fact that there are some stylistic differences between sites and that certain elements might or might not occur in all of the sites. However still, the conformity within these assemblages is obvious.

<sup>11</sup> For further discussion on this issue see Özdoğan 1997 in particular.

<sup>12</sup> For a more detailed assessment and thorough bibliographical references, see Özdoğan and Gatsov 1998.

considered the ancestors of the Pottery Neolithic tradition.

b) Projectile points are among the significant tool types of the early stages of the Anatolian Pottery Neolithic period<sup>13</sup>. In Central Anatolia they seem to appear first at the very end of the Aceramic period and then carry on into the early Pottery period. However, in the second stage of the Anatolian Pottery Neolithic, at the juncture when red-slipped pottery becomes common, these points disappear. In the later stages of the Pottery Neolithic there is a conspicuous absence of lithic arrowheads and projectile points over a vast geographical expanse from southeastern Turkey to the Balkans; they seem to have been replaced by sling stones. Projectile points and sling missiles can thus be considered the fossiles directeurs of the subsequent stages of the Pottery Neolithic.

c) In Southeastern Anatolia chipped stone discs also appear in the later phases of the Aceramic Neolithic, beginning in the PPNB and increasing in number during the PPNC; they occur in Western Anatolia and the Balkans throughout the Pottery Neolithic. Polishers of bone (Fig. 23, 23) also begin to appear in the later stages of the PPNB, becoming exceedingly common in the Pottery Neolithic assemblages of western Anatolia and the Balkans.

Of the Aceramic sites excavated, Süberde in the Lake District is the westernmost. However, some new assemblages that typologically can only be dated to the Aceramic period have recently been recorded in Northwestern Anatolia. The most prolific of these sites are Çalca in the Çanakkale-Çan region (Özdoğan and Gatsov 1998) and Keçiçayırı and Kalkanlı in the Eskişehir region (Efe 1996: 212). These sites are all located on high plateaus rather

than in alluvial plains. They all lack microlithic compound (including micro-blades) but incorporate large blades. The lithic assemblage of Çalca in particular, though large in quantity, lacks clear-cut tool types. The presence of pressure-flaked points at Keçiçayırı<sup>14</sup> recalls certain traits known at Çatalhöyük and is suggestive of a stage immediately before the beginnings of the early Pottery period. Thus, with some reserve, it is possible to surmise that the initial westward movement of "Neolithic communities" took place towards the very end of the Aceramic period, a sparse and random migration following the mountain ranges rather than the alluvial plains<sup>15</sup>.

#### The First Pottery Neolithic: The Monochrome Phase

Disregarding the rather controversial presence of an Aceramic stage, the first definitely Neolithic culture of northwestern Turkey is the Fikirtepe culture. As it is the westernmost known Neolithic culture of Anatolia, the Fikirtepe group is of considerable significance in documenting the initial spread of "Neolithic" elements into Europe. The Fikirtepe culture, named after its type site in Istanbul, is generally known for its easily recognizable dark burnished and incised wares. Unfortunately, it was often considered a short-lived phenomenon restricted to the eastern parts of the Marmara Region. During the last decade, however, our knowledge of this culture has increased considerably. It is now evident that the Fikirtepe culture was not of short duration, but passed through a number of evolutionary stages during which other types of wares (including red-slipped varieties) accompanied the dark-faced wares. It has also become evident that sites of the Fikirtepe culture are to be found over a considerably large area, including not only western and north-

western Anatolia, but also some parts of southeastern Europe. At the present stage of research we can even define certain regional differences within the culture.

#### Stratigraphic Position of the Fikirtepe Culture

The Fikirtepe culture has been recorded in the excavations of Fikirtepe, Pendik, Ilıpınar, Menteşe and Demircihüyük. Ilıpınar has proved the most implemental in revealing the stratigraphical sequence of the culture; there, typical Fikirtepe pottery occurs in Phases X and IX, dated to c. 6000 BC, and stratified below the Yarımburgaz 4 pottery in Phase VIII. Accepting the Yarımburgaz horizon as 5530-5570 BC, it is possible to estimate the time range for the Fikirtepe culture as 6200-5500 BC. Even though there are complications in the stratigraphy of the basal layers at Demircihüyük, it is clear that the Fikirtepe group is the earliest pottery there and that it again precedes "Yarımburgaz 4" pottery. In Fikirtepe, the presence a "lower" and an "upper" horizon is evident, representing the archaic and classical phases of this culture. Study of the material indicates that there is no clear break between these two phases and that there change in the pottery gradual was. The main fill of 1982 excavations at Pendik belong to the archaic phase of the Fikirtepe culture; however in the 1993 excavations, a prehistoric cemetery with early Hoca Çeşme pottery was found above the Fikirtepe layers.

#### Sequential Development of the Fikirtepe Culture (Fig. 5, 7)

The Archaic Fikirtepe Phase (Fig. 32). The pottery found in the basal levels at both Fikirtepe and Pendik is quite homogeneous, composed of relatively well burnished dark gritty wares -although some reddish surfaces do occur. The surface tones of the red wares in this horizon tend towards a pale reddish brown. The predominant shapes are hole-mouth vessels with simple profiles. Heavy horizontal lugs, occa-

sionally pierced, are common. Rectangular vessels occur as well, but are rare and not well developed. Decoration is sparse, and when it occurs, is consistently executed with shallow incisions arranged in simple geometric patterns. Although infrequent, deep hole-mouth vessels with inward thickened rims occur as well.

The Classic Fikirtepe Phase (Fig. 29-32, 33-34). In the upper horizon of Fikirtepe, the same wares continue with only minor alteration. There is, however, a marked increase in the proportion of red sherds, which now comprise six to ten percent of the assemblage. Some of the red wares now occasionally take on tones of bright orange or reddish buff. A new ware type is represented by well burnished sherds with an almost jet black slip. Incised decoration and rectangular vessels are relatively more common in this horizon. There are also some oval shapes, usually with vertically oriented tubular lugs. Hole-mouth vessels diminish in number, being gradually replaced by typical 'S'-profile bowls and jars. Although rare, there are also a few vessels decorated with impressed dots.

The Developed Fikirtepe Phase. This phase is absent both at Fikirtepe itself and at Pendik, occurring at Demircihüyük, in Ilıpınar VIII and in Yarımburgaz 4 (Fig. 7, 35, 36). However, it should be noted that the transition from the Classic to the Developed Fikirtepe stage is not clearly defined. At Demircihüyük the so-called *Steingrusware* clearly depicts a more sophisticated version of Classic Fikirtepe shapes and ornaments, emphasizing the genetic link between the ware at the two sites (Seeher 1987: pl. 17: 1-20). Nevertheless, the typical pottery of Yarımburgaz 4 is quite distinctive, with complex designs executed in either excision or impression. Necked jars and textile-like designs are characteristic of this phase<sup>16</sup>.

<sup>13</sup> Such as those in Çatalhöyük (Bialor 1962), Musular (Balkan-Atlı 1996, Özbaşaran 1997), Ilıpınar (Kleinsorge 1940, and also the collection in Prehistory Department), Höyücek (Duru 1992: pl. 21.1) and Bademağacı (Duru in this volume).

<sup>14</sup> Even though the material has not yet been fully published, Dr. I. Gatsov and Dr. N. Balkan-Atlı who have both seen the material expressed the same view.

<sup>15</sup> For detailed discussion see, Özdoğan 1997, Özdoğan and Gatsov 1998.

<sup>16</sup> For a more thorough description of Yarımburgaz 4 pottery see Özdoğan *et al.* 1991.



### *Geographical Distribution of the Fikirtepe Culture (Fig. 2)*

Sites with typical pottery of the Fikirtepe type are known from the eastern parts of the Marmara Region southward from the Bosphorus down to the region of Eskişehir-Kütahya<sup>17</sup>. It is not yet possible to define the southern border of the Fikirtepe culture. In the Lake District, most particularly in the early levels of Bademağacı (see Duru in this volume) there are a number of common elements, such as deep hole-mouth jars with thickened rims, but whether or not both cultural groups merge in an interim zone remains unclear<sup>18</sup>. In the southern Marmara Region the culture occurs in the plains of Bandırma (Özdoğan 1990) and Manisa (Dinç 1996: fig. 20), and the presence of Fikirtepe elements at Agios Petros (Efstratiou 1985: fig. 37) indicates that it must also have spread to at least some parts of the Aegean.

Due to lack of evidence the distribution of Fikirtepe pottery in Thrace remains problematic. There are at least four sites where the Fikirtepe type of pottery has been recovered: Kaynarca on the Gallipoli peninsula (Özdoğan 1986: 57); Buruneren<sup>19</sup>, west of Tekirdağ; Bulgarkaynağı near Kırklareli, and Aşağı Pınar. Actually, only three sherds were recovered at Aşağı Pınar in 1998, seemingly intrusive in the fill of layer 6 (Fig. 43), but their presence is indicative of a Fikirtepe stratum at the site. In both ware and shape, the pottery from Bulgarkaynağı (Fig. 43: a-e) and Aşağı Pınar (Fig. 43: h-l) resembles the Archaic Fikirtepe tradition, whereas the material from Kaynarca (Fig. 43: f-g, m-n) and Buruneren is more closely related to the Classic Fikirtepe

pottery; at none of the four sites, however, do we see the typical Fikirtepe ornament.

The occurrence of Fikirtepe pottery in Thrace must inevitably be considered within the framework of the Bulgarian "monochrome phase" (Todorova 1989). The material from sites such as Koprivets and Krainitsi (Stefanova 1996), as well as that from Kazanlık<sup>20</sup>, is strongly reminiscent of Archaic Fikirtepe pottery, demonstrating the same traits as the material from Bulgarkaynağı, mentioned above. However, it is clear that our knowledge at this stage is still in its incipency. The presence of a monochrome stage prior to that of the white-on-red painted pottery in Bulgaria was only recognized within the past few years. Likewise, the Archaic Fikirtepe pottery remains poorly understood in East Thrace. The recovery of the sherds at Aşağı Pınar have raised the anticipation of discovering material of this phase in context within the next few years.

### *Regional Differences*

As mentioned above, the Fikirtepe culture is best documented by the excavations at three sites: Fikirtepe, Pendik and Ilıpınar. At all three sites the pottery and the bone tool inventory are more or less the same. Between the coastal sites of Pendik/Fikirtepe and the inland site of Ilıpınar, however, there are striking differences in the architecture, the lithic industry and the subsistence patterns. The architecture at both Pendik and Fikirtepe consists of round or oval wattle-and-daub huts with semi-subterranean floors (Fig. 10). At Ilıpınar the structures are rectangular, built of mud or mudbrick reinforced with wooden posts; thus in architecture, Ilıpınar is more

Anatolian than the coastal sites of the Fikirtepe culture. The lithic material from Ilıpınar, like that of other Anatolian Pottery Neolithic sites, is poor, lacking clear-cut tool types, while the lithic assemblages of Fikirtepe and Pendik (Fig. 4) display a rich variety of tools, including bullet cores, micro-blades and scrapers. The genetic relationship between the lithic assemblages of the coastal Fikirtepe sites and that of the Ağacli group is clear. Yet another striking difference between the coastal and inland sites of the Fikirtepe culture lies in their subsistence patterns. Ilıpınar is a typical farming village where hunting, fishing and gathering were of only minor importance (Buitenhuis 1990). To the contrary, at both Fikirtepe and Pendik -in spite of the presence of domestic animals- hunting, fishing and mollusk collecting were of substantial importance (Boessneck and von den Driesch 1979; Buitenhuis 1995).

In view of these apparent distinctions between Ilıpınar and the Pendik-Fikirtepe group, it is evident that their populations were of different origins. Ilıpınar as a settlement is more Anatolian; the use of wooden posts there might be considered alien to the Anatolian tradition, but remains from the earliest horizons at Bademağacı in the Lake District strongly suggest the employment of wooden architecture there, too, during the Pottery Neolithic period. As our knowledge of the Neolithic of Western Anatolia is still extremely limited, it is not yet possible to pinpoint the origins of the Ilıpınar culture. Nevertheless, it is clearly not of local origin; settlers must have immigrated to the Marmara Region from somewhere in the west of the Central Anatolian plateau. The coastal sites of the Fikirtepe culture, on the other hand, display a number of traits that must have been of local origin. The endemic population of the Ağacli culture must have adopted some elements (domesticates, pottery and certain more elaborate bone implements - the ornate spoons, for example) from the new-

comers while retaining their traditional way of life. Thus it is possible to surmise that in the Marmara Region two alternative models of Neolithization were developing simultaneously, one through immigration and the other through acculturation.

### *Primary Elements of the Fikirtepe Assemblage*

Considering the above-mentioned variations within the Fikirtepe culture, to define one assemblage characterizing the whole of its geographic distribution is obviously impossible. Within each locality, moreover, the composition of the assemblage also underwent changes with the passage of time. It is also of note that none of the Fikirtepe elements is restricted solely to the Fikirtepe culture; on the contrary, most elements exist throughout the majority of the Anatolian Neolithic cultures. Not with standing, Fikirtepe can be defined as a culture on the basis of the relative abundance of certain elements within the assemblages. Among these, the bone spoons are perhaps the most striking. Although existent, they are rare among most Anatolian Pottery Neolithic cultures, whereas in the Fikirtepe culture not only are they very common<sup>21</sup>, but they display great variety in size and shape (Fig. 19-21). Because most of them are quite elaborate (Marinelli 1995: fig. 6), it has been suggested that they had been adopted as status symbols and were in most cases not meant for utilitarian purposes. Of interest here is that bone spoons constitute one of the basic elements of the southeastern European Neolithic and are found at all sites where the white-on-red painted pottery was in use. Later -as in Anatolia- they disappear from the artifactual assemblage.

Another bone tool abundant in the assemblage is the "smoother," or polisher (Özdoğan 1989: fig. 1, Pasinli and Uzunoğlu 1994: 14, fig. 23-24). Even though the function of these tools remains obscure, they do occur in all Late PPNB and Pottery Neolithic assemblages

<sup>17</sup> Besides Demircihüyük, typical Fikirtepe pottery has been recovered by T. Efe at Keskaya, Akmakça and Fındikkayabaşı (Efe 1989, Efe 1995a).

<sup>18</sup> Even though the geographical distance between Fikirtepe and the Lake District is over 400 km, now it is becoming apparent that the pottery of late Çatalhöyük (Last 1996), of Bademağacı, and to a degree, of basal Höyücek are more closely related to early Fikirtepe than early Hacilar.

<sup>19</sup> Recorded by M.A. Işık, Director of the Tekirdağ Museum, and yet unpublished.

<sup>20</sup> Personal observation. I am grateful to our Bulgarian colleagues for providing us the opportunity to see material from Koprivets, Krainitsi and Kazanlık. For an overall view on the monochrome phase in the Balkans, see especially Brukner 1997: 244-245.

<sup>21</sup> For example they number to 77 in first five campaigns of Ilıpınar (Marinelli 1995: 127).

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The occurrence of Fikirtepe pottery in Thrace must inevitably be considered within the framework of the Bulgarian "monochrome phase" (Todorova 1989). The material from sites such as Koprivets and Krainitsi (Stefanova 1996), as well as that from Kazanlık<sup>20</sup>, is strongly reminiscent of Archaic Fikirtepe pottery, demonstrating the same traits as the material from Bulgarkaynağı, mentioned above. However, it is clear that our knowledge at this stage is still in its incipency. The presence of a monochrome stage prior to that of the white-on-red painted pottery in Bulgaria was only recognized within the past few years. Likewise, the Archaic Fikirtepe pottery remains poorly understood in East Thrace. The recovery of the sherds at Aşağı Pınar have raised the anticipation of discovering material of this phase in context within the next few years.

### *Regional Differences*

As mentioned above, the Fikirtepe culture is best documented by the excavations at three sites: Fikirtepe, Pendik and Ilıpınar. At all three sites the pottery and the bone tool inventory are more or less the same. Between the coastal sites of Pendik/Fikirtepe and the inland site of Ilıpınar, however, there are striking differences in the architecture, the lithic industry and the subsistence patterns. The architecture at both Pendik and Fikirtepe consists of round or oval wattle-and-daub huts with semi-subterranean floors (Fig. 10). At Ilıpınar the structures are rectangular, built of mud or mudbrick reinforced with wooden posts; thus in architecture, Ilıpınar is more

Anatolian than the coastal sites of the Fikirtepe culture. The lithic material from Ilıpınar, like that of other Anatolian Pottery Neolithic sites, is poor, lacking clear-cut tool types, while the lithic assemblages of Fikirtepe and Pendik (Fig. 4) display a rich variety of tools, including bullet cores, micro-blades and scrapers. The genetic relationship between the lithic assemblages of the coastal Fikirtepe sites and that of the Ağacli group is clear. Yet another striking difference between the coastal and inland sites of the Fikirtepe culture lies in their subsistence patterns. Ilıpınar is a typical farming village where hunting, fishing and gathering were of only minor importance (Buitenhuis 1990). To the contrary, at both Fikirtepe and Pendik -in spite of the presence of domestic animals- hunting, fishing and mollusk collecting were of substantial importance (Boessneck and von den Driesch 1979; Buitenhuis 1995).

In view of these apparent distinctions between Ilıpınar and the Pendik-Fikirtepe group, it is evident that their populations were of different origins. Ilıpınar as a settlement is more Anatolian; the use of wooden posts there might be considered alien to the Anatolian tradition, but remains from the earliest horizons at Bademağacı in the Lake District strongly suggest the employment of wooden architecture there, too, during the Pottery Neolithic period. As our knowledge of the Neolithic of Western Anatolia is still extremely limited, it is not yet possible to pinpoint the origins of the Ilıpınar culture. Nevertheless, it is clearly not of local origin; settlers must have immigrated to the Marmara Region from somewhere in the west of the Central Anatolian plateau. The coastal sites of the Fikirtepe culture, on the other hand, display a number of traits that must have been of local origin. The endemic population of the Ağacli culture must have adopted some elements (domesticates, pottery and certain more elaborate bone implements - the ornate spoons, for example) from the new-

comers while retaining their traditional way of life. Thus it is possible to surmise that in the Marmara Region two alternative models of Neolithization were developing simultaneously, one through immigration and the other through acculturation.

### *Primary Elements of the Fikirtepe Assemblage*

Considering the above-mentioned variations within the Fikirtepe culture, to define one assemblage characterizing the whole of its geographic distribution is obviously impossible. Within each locality, moreover, the composition of the assemblage also underwent changes with the passage of time. It is also of note that none of the Fikirtepe elements is restricted solely to the Fikirtepe culture; on the contrary, most elements exist throughout the majority of the Anatolian Neolithic cultures. Not with standing, Fikirtepe can be defined as a culture on the basis of the relative abundance of certain elements within the assemblages. Among these, the bone spoons are perhaps the most striking. Although existent, they are rare among most Anatolian Pottery Neolithic cultures, whereas in the Fikirtepe culture not only are they very common<sup>21</sup>, but they display great variety in size and shape (Fig. 19-21). Because most of them are quite elaborate (Marinelli 1995: fig. 6), it has been suggested that they had been adopted as status symbols and were in most cases not meant for utilitarian purposes. Of interest here is that bone spoons constitute one of the basic elements of the southeastern European Neolithic and are found at all sites where the white-on-red painted pottery was in use. Later -as in Anatolia- they disappear from the artifactual assemblage.

Another bone tool abundant in the assemblage is the "smoother," or polisher (Özdoğan 1989: fig. 1, Pasinli and Uzunoğlu 1994: 14, fig. 23-24). Even though the function of these tools remains obscure, they do occur in all Late PPNB and Pottery Neolithic assemblages

<sup>17</sup> Besides Demircihüyük, typical Fikirtepe pottery has been recovered by T. Efe at Keskaya, Akmakça and Fındikkayabaşı (Efe 1989, Efe 1995a).

<sup>18</sup> Even though the geographical distance between Fikirtepe and the Lake District is over 400 km, now it is becoming apparent that the pottery of late Çatalhöyük (Last 1996), of Bademağacı, and to a degree, of basal Höyücek are more closely related to early Fikirtepe than early Hacilar.

<sup>19</sup> Recorded by M.A. Işık, Director of the Tekirdağ Museum, and yet unpublished.

<sup>20</sup> Personal observation. I am grateful to our Bulgarian colleagues for providing us the opportunity to see material from Koprivets, Krainitsi and Kazanlık. For an overall view on the monochrome phase in the Balkans, see especially Brukner 1997: 244-245.

<sup>21</sup> For example they number to 77 in first five campaigns of Ilıpınar (Marinelli 1995: 127).

within Turkey although they, too, are especially common within the Fikirtepe culture and the Early Neolithic cultures of southeastern Europe. Following this phase, these implements also disappear. Among the other relatively common implements of the Fikirtepe culture are the chipped stone discs. In Anatolia these also first appear in the later stages of the Pre-Pottery Neolithic and last till the end of the Pottery Neolithic. Very few of them are flint; they were usually crudely shaped on any variety of stone available. Thus inconspicuous, they have gone unnoticed in most excavations so that tracing their distribution is problematic. There are a few published from the Lake District (Duru 1994: 240-241), and they occur in significant numbers at both Fikirtepe and Pendik (Pasinli and Uzunoğlu 1994: 9). Among other tools of interest are bone fishing hooks (Özdoğan 1983b: fig. 6:4, Pasinli and Uzunoğlu 1994: 16) and harpoons (Fig. 22, 24); the latter, curiously enough, also appear at Ilıpınar (Marinelli 1995: 5) where there is no evidence for deep-sea fishing.

Figurines are conspicuous by their near absence in the Fikirtepe culture. In addition to a few crude animal figures and some horned protomes applied to the sides of bowls<sup>22</sup>, there one anthropomorphic figurine worth mentioning from Pendik (Fig. 27; Pasinli and Uzunoğlu 1994: 17) which is rather grotesque and represents a female in a standing position. Although no exact parallels are known, its relatively large size and naturalistic representation is more "Anatolian" than "Balkan".

The chronological and geographical distribution of the so-called "pintaderras" should also be mentioned. Such tools, totally absent in Pre-Pottery assemblages, make an appearance at Çatalhöyük, probably in its later stages. They are not known at Fikirtepe or Ilıpınar, and none were recovered in the early horizons at Pendik although there is at least one example from the Istanbul Museums' excavations at

that site (Pasinli and Uzunoğlu 1994: 18). Considering the presence of these tools at Hoca Çeşme (Fig. 25) as well as at most of the Early Neolithic sites in the Balkans, we are inclined to associate the Pendik example with the "Hoca Çeşme" cemetery horizon at that site.

#### *Chronology (Fig. 44)*

An absolute dating for the Fikirtepe culture is given by the C<sup>14</sup> dates from Ilıpınar and Yarımburgaz, which yield a range c. 6100-5600 BC. However, we have some reservations about Ilıpınar X representing the very beginnings of this culture. Considering the pottery of the earliest layers at Fikirtepe and Pendik, we are inclined to think that the Ilıpınar sequence begins somewhat later. Another question posed by Ilıpınar is the absence of certain features of the Fikirtepe culture; the typical incised decoration and the rectangular vessels of the Classic Fikirtepe phase are -if not absent- very poorly represented at Ilıpınar. This cannot be explained by regional differentiation as both these elements occur at sites further to the south, such as Demircihüyük. Thus the possibility of a hiatus in the Ilıpınar sequence, perhaps between Phases IX and VIII (or within VIII) should be taken into consideration.

It is too early to attempt exact correlation between the Fikirtepe culture and the Neolithic cultures of Central Anatolia. The presence of similar traits in the two regions is evident, but most such traits continue over long periods of time, and the assemblages of the earliest horizons at both Bademağacı and Çatalhöyük are just beginning to come to light. Nevertheless, the presence of a few distinctive forms such as the flattened-rim hole-mouth vessels<sup>23</sup> helps to some degree to establish chronological links. Likewise, the monochrome dark burnished wares of the Archaic Fikirtepe phase are strikingly reminiscent of the Dark-Faced Burnished Wares of Anatolia,

both in paste and in form repertory. At Fikirtepe crescent lugs -like those of late Çatalhöyük- are soon replaced by horizontal lugs, and then by tubular vertical lugs in turn. Altogether, this would suggest parallel developments taking place in both regions.

A stratigraphical orientation for the final stages of the Fikirtepe culture remains for the time being rather problematic. The pottery typical of the Developed Fikirtepe/Yarımurgaz 4 type seems to be contained within Northwestern Anatolia. The C<sup>14</sup> dates available for this culture would indicate that was contemporary with the Karanovo I-II group of the Balkans. Accordingly, we may surmise that while painted pottery was developing in Southern and Central Anatolia and the Balkans as well, ornament in the Eastern Marmara Region was on a different track; the extensive use of incision and excision was popular, for example. The stratigraphy of the Fikirtepe culture revealed at Pendik by the excavation of the Archaeological Museums of Istanbul (Pasinli and Uzunoğlu 1994) is significant here. Trenches were opened on the eastern fringes of the site, quite far from our trenches of 1982. There, above the Fikirtepe horizon, a prehistoric cemetery yielding early Hoca Çeşme wares and a few painted sherds<sup>24</sup> was discovered. In conjunction with this we should also mention that the presence of a few scattered painted sherds at Ilıpınar<sup>25</sup> also demonstrates some contact between the eastern and the western areas of the Marmara Region. It is the recovery of the Hoca Çeşme material at Pendik, however, that confirms the position of the developed Fikirtepe phase in the general sequence.

#### **The Later Neolithic Cultures of Northwestern Turkey**

The final stage of the Neolithic period is best

documented at three sites: Hoca Çeşme, Yarımurgaz and Ilıpınar. Because the sequence of Hoca Çeşme provides correlation between southeastern Europe and the Anatolian plateau, we shall begin with the main sequence at Hoca Çeşme<sup>26</sup>.

#### *The Evidence from Hoca Çeşme and Aşağı Pınar*

The basal layers at Hoca Çeşme, that is to say Phases 4 and 3, have revealed a monochrome pottery (Fig. 37, 38, 41), thin-walled, with exquisitely burnished red or jet black surfaces. Its 'S'-profiles, tubular lugs and applied motives -both therio- and anthropomorphic- are strongly reminiscent of the Late Neolithic pottery of the Lake District. The lithic industry as well as the tools of bone and clay likewise display Anatolian features. An overall view of the assemblage testifies to the Anatolian origin of the Early Hoca Çeşme material. The architecture of the site, on the other hand, is completely alien to that known among the Anatolian Neolithic cultures; circular structures with wooden posts sunk into the bedrock (Fig. 11, 12). Although round and wooden, these constitute substantial architecture; they are by no means comparable to the flimsy "huts" of the Fikirtepe culture, which represent an altogether different tradition. One of the circular structures at Hoca Çeşme, larger and even more sturdy than the others, was located at the northwestern edge of the settlement (Fig. 14). The floor of the building, which had been renovated with minimal change at least three times, was neatly paved with small pebbles, then plastered and painted red and yellow. Another significant feature encountered at Hoca Çeşme was an enclosure wall, evidently constructed for defense purposes (Fig. 15, 16). It is apparently unique to the Balkans. The wall stood directly on the bedrock; prior to its construction the surface of the bedrock had been meticulously evened

<sup>22</sup> A few were found in the 1982 excavations at Pendik, for Demircihüyük see Seeher 1987: Tafel 18.

<sup>23</sup> The shape is common in Lake District, see Duru's paper in this volume.

<sup>24</sup> Personal observation during the excavation.

<sup>25</sup> Prior to Roodenberg's work, two painted sherds were found on the surface of the mound (Biernoff 1967: fig.1) and more have been recovered in the deep sounding at Ilıpınar (personal observation).

<sup>26</sup> For a more detailed discussion and a description of Hoca Çeşme, see Özdoğan 1998a, Parzinger and Özdoğan 1996.

and a 1.5-m-wide strip running along the inner face of the wall had been smoothed and polished. The wall measures 1.20 m across; in places it was preserved to a height of one meter. The stones of the exterior face, the largest just over 90 x 90 x 70 cm, are considerably larger than those on the interior. Along the inner face of the wall where the bedrock had been trimmed into a band runs a line of postholes cut deep into the rock. There must have been a wooden palisade here along the interior, possibly tied into the superstructure of the wall, which was presumably also of wood, for there were no traces of mud or mud-brick nearby. The existence of substantial architecture with paved and painted floors -as well as that of a defense system- are features alien to the region and therefore indicative of intrusion. Despite the seemingly "Anatolian" conception, the circular plans are puzzling; by this time the tradition of round buildings had long been abandoned in Anatolia. The pottery of early Hoca Çeşme, nearly identical to that of western inland Anatolia, most particularly to the wares of the Lake District, suggests an origin somewhere in the west of the Anatolian peninsula. The area of origin should then be close enough to the central plateau to share a common pottery, but remote enough to have followed distinct architectural traditions. Accordingly, with some reserve, we are inclined to suggest a hypothetical koine in the very west of Anatolia along the Aegean littoral<sup>27</sup>.

During the following phase (III) at Hoca Çeşme the assemblage and the architecture remain basically unchanged. In the pottery repertory, however, the fine wares of the preceding period are joined by other relatively coarse wares. A few sherds also display slip-decoration in simple geometric patterns.

By Phase II it is evident that some changes of significance have taken place at Hoca Çeşme. For the first time we see rectangular structures

similar in technique to those of the Early Neolithic - Karanovo I sites in Bulgaria (Fig. 17). The walls are thin, constructed of mud slabs reinforced by posts. Interior features such as clay platforms, bins and domed ovens appear for the first time. The fine red and black monochrome wares of the preceding phases still persist, but their walls are now considerably thicker, and their burnish less lustrous. New to the assemblage is a significant amount of coarse pottery, generally in tones ranging from pale buff through brown to dark grayish black. The surfaces of these coarse wares are usually wiped or only lightly burnished. By the end of the phase the so-called "barbotine" or "surface-roughened" wares of southeastern Europe have begun to appear. The inner surfaces of such vessels are smooth and usually burnished, whereas the exteriors have been intentionally roughened by scraping, scratching, incising or the like, often with a burnished band left along the exterior of the rim. Not introduced until the later stages of Phase II, these surface-roughened wares rapidly increase in proportion to represent one of the major ware categories of Phase I. The chronological and geographic distribution of this ware is thus quite important. Such surface-roughened wares, unknown in the Anatolian assemblages, appear in the Balkans from the Early Neolithic phase onward (with only minor changes) into the Bronze Age. In Karanovo I and in the regions of Starčevo, Körös and Criş, it appears together with the fine red-painted wares of the earliest phases. Its late appearance in East Thrace would suggest that this ware is an intrusive element entering Northwestern Turkey from the west. In the following stages, i.e. in the Toptepe phase, it becomes the dominant ware in East Thrace as well.

Another significant innovation in Hoca Çeşme II is the use of white-on-red painted pottery (Fig. 39). Although not numerous, the sherds

of this ware are identical in ware, technique and design to the pottery of Karanovo I. Because the painted sherds of Hoca Çeşme II also display a genetic link to the monochrome red wares of Hoca Çeşme Phases IV and II, the ceramic sequence at Hoca Çeşme now provides -for the first time in southeastern Europe- the possibility to trace development in the tradition of Neolithic painted pottery. It is also of note that the painted sherds at Hoca Çeşme represent the first known examples of this type, which harks from the coastal areas of the Aegean, thus revealing that the Balkan Neolithic cultures possessed southern and/or maritime links. Besides painting, incised decoration was also popular at Hoca Çeşme. The technique of the incision employed is rather special, however, similar to that of Yarımburgaz in that it was executed not by scratching, but by the consecutive impressions of a tool held at nearly a right angle to the surface. There are also a number of relief-ornamented pieces, some depicting anthropomorphic motives; applied animal protomes are relatively more common (Fig. 37). A few fragmentary anthropomorphic vessels are also significant, for they attest Central Anatolian tradition.

The most distinctive artifacts in the assemblage are the bone spoons and polishers, sling-stones and the so-called "pintaderras" (Fig. 19, 22, 24, 25). The latter are relatively more numerous and varied. Figurines (Fig. 26), rare, nonetheless display an interesting variety. From the early horizons come two seated figurines that are clearly Anatolian in style; an upright figurine from Phase I, on the other hand, more closely resembles the Karanovo I-II types. There is also an example of the 'M'-shaped amulets or figurines that are known over a widespread geographical region.

Most interesting at Hoca Çeşme was the mode of subsistence. Although no botanical remains were recovered, study of the animal bones clearly indicates that domesticates constituted a substantial proportion of the diet, while hunting and fishing were of minimal significance (Buitenhuis 1995). The collection of mollusks, however, remained a major occupation throughout the sequence of the settlement. In addition to extensive dumps with quantities of discarded shells on the slopes, special pits had been prepared within the settlement apparently to store the shellfish. The pits, occasionally more than a meter deep, measure about a meter across. The bottom and sides were coated with a thick layer of greenish clay. In these pits were found mollusks sorted by size and species, indicating not only the importance of shellfish in the diet, but also the invention of a system of preservation. We are not aware of any parallels to this practice.

The uppermost strata of Hoca Çeşme had been greatly disturbed by erosion and agriculture. The pottery from the latest horizon, Phase I, demonstrates that occupation on the mound continued -with or without interruption- until the Karanovo IV period. Detailed analysis of the late Hoca Çeşme pottery<sup>28</sup> reveals at least four distinct phases within this time span. Following Phase II, the influence of "Balkan" cultures gradually increased, so that by the terminal stage there is no more evidence indicating any further interaction with Anatolia.

Aşağı Pınar<sup>29</sup> is located further inland from Hoca Çeşme, near the foothills of the Istranca Mountains. There, Late Neolithic strata<sup>30</sup> have been revealed in recent excavation. A preliminary analysis of the material indicates that layer 6 of Aşağı Pınar must be contemporary

<sup>28</sup> A study of the late Hoca Çeşme pottery is being carried out by J. Bertram.

<sup>29</sup> For further information on Aşağı Pınar see, besides the annual reports in *Kazı Sonuçları*, Parzinger and Özdoğan 1996, Özdoğan *et al.* 1997.

<sup>30</sup> The discrepancy between the Balkan and Anatolian chronological systems is rather confusing, as Late Neolithic of the Balkans corresponds to the Middle/Late Chalcolithic of Anatolia. Throughout this paper, chronological terms have been used in their "Anatolian" sense.

<sup>27</sup> Recent surveys in the Aegean, mainly in the region of İzmir, has been revealing a number of Neolithic sites with Hoca Çeşme type of pottery (personal communication with R. Dinç, Profs H. Erkanal and A. Çilingiroğlu).



with the later part of Hoca Çeşme Phase II and Karanovo II. A large building complex, at least 16 x 8 m, has been partially exposed in this layer (Fig. 18). Because the remnants of the building, destroyed in an intense fire, had stood abandoned for some time before being built over, certain architectural features were relatively well preserved and yielded detailed information. In plan, organization and wall construction, the building is strikingly similar to the Karanovo II houses in Bulgaria<sup>31</sup>, but also bears a significant resemblance to the architecture of Ilıpınar 6. Even though not all the contents of the building have yet been exposed, two large rectangular tables (on four feet) with cylindrical chimney-like projections at the center are significant<sup>32</sup>. This sort of table, possibly used as a kind of incense burner, displays an unusual distribution in the Early Neolithic of the Balkans, the best analogies to those of Aşağı Pınar found at Prodin in Serbia Macedonia (Gimbutas 1991: fig. 7-53). Among the pottery, the presence of some white-on-red sherds is important in that this represents the easternmost known existence of this particular type of pottery (Fig. 40). Also from this structure come a group of loom weights (including some quite unusual in shape) and quantities of carbonized seeds, mainly almonds. Elsewhere in Aşağı Pınar 6 large quantities of burned seed have been recovered, including three species of wheat and lentils; this collection of seeds is the most substantial yet recovered within the context of the Southeastern European Neolithic.

Neolithic strata at Aşağı Pınar were also encountered in a second smaller exposure that revealed a long well constructed ditch running across the whole of the trench. The sides of the ditch had been meticulously plastered. Even though it is not yet clear whether or not this ditch encircled the Neolithic settlement, the plastering of its sides again recalls Ilıpınar, where similar features appeared in Phase VI.

As the Neolithic strata of Aşağı Pınar have been accessed only within the last two campaigns and the basal layers of the site have not yet been reached, our remarks here should not be considered conclusive. The presence of some sherds of Fikirtepe ware and a sherd with ornament characteristic of Yarımburgaz 4, albeit unstratified, imply that still earlier cultural horizons await excavation at Aşağı Pınar. Likewise, the end of the Neolithic period at the site, i.e. the transition from layers 6 to 5, is not yet clear. The fact that major changes took place in the settlement pattern, in building technique and in the pottery assemblage suggests that there was a hiatus here, at least within the areas so far excavated. The sequence beginning with Aşağı Pınar 5 and continuing uninterrupted through layer 2 runs parallel to Hoca Çeşme 1, apparently covering the time span of Karanovo III-IV. It is a period characterized by the absence of red-slipped wares and an increasing predominance of black burnished wares with channeled or fluted decoration, demonstrating the so-called process of "Vinçization". Even though this development is termed "Middle Neolithic" in the Balkans, it is contemporary to the Anatolian Chalcolithic period and thus beyond the scope of this volume.

#### *The Eastern Marmara Region: the Cultures of Yarımburgaz 3-2*

As briefly summarized above, the cultural sequence of Hoca Çeşme has been very helpful to our understanding the development of the Early Neolithic cultures in Bulgaria. Hoca Çeşme Phases 4 and 3 have revealed -together with Anatolian elements- the antecedents of the southeastern European cultures characterized by painted pottery. Later developments at that site (Phases 2 and 1) run parallel to those in Bulgaria. This stage is known in the eastern Marmara Region at both Yarımburgaz (layers 2 and 3) and Ilıpınar (VI - V). Despite the pres-

ence of so-called Vinça elements<sup>33</sup> such as the dominance of black burnished wares and channeled decoration at both sites, there are certain elements in Yarımburgaz 3 that are difficult to correlate with known sequence for Bulgaria. As these have some relevance to the early Neolithic culture of Europe, we find them worth mention here.

A gap in the sequence between layers 4 and 3 in the Cave of Yarımburgaz was evident. This gap has now been filled at Ilıpınar, mainly by Phase VII. Certain sherd material among the pottery of Yarımburgaz 3 has aroused curiosity since its discovery (Özdoğan 1989). This pottery, decorated with curvilinear lines occasionally terminating in impressed dots, is strongly reminiscent of the early *Bandkeramik*, most particularly of the *Notenkopf* group in Central Europe. Although aware that no such wares are known between Yarımburgaz and the Danube area where the linear wares are found, we recall that no antecedents for this linear style are known; one should at least consider the possibility that groups using linear pottery in the Eastern Marmara Region might well have moved northward along the Black Sea littoral. The architecture of Ilıpınar VII, more similar to the houses of the "Linear" / *Bandkeramik* cultures than to those of Bulgaria, would also support this premise. Whether or not the assumption is valid only future research will show, but for the present we can say that the course of developments to the east and the west of the Sea of Marmara were not on the same track.

#### CONCLUDING REMARKS

As noted above, our knowledge of the Neolithic cultures in northwestern Turkey is still in its incipency. However, in spite of the paucity of research and the minimal number of sites excavated, the results so far have revolutionized our understanding of the Neolithic cultures of southeastern Europe and empha-

sized that the traditional Bulgarian chronology adapted from Karanovo is not conclusive. It has also revealed that the Neolithization of Europe was not a simple process that can be explained as a linear development. To the contrary, this Neolithization involved a very complex series of events often taking place simultaneously. To conclude, a tentative chronological chart reflecting our most recent assessment is appended (Fig. 44).

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<sup>31</sup> The best preserved building of this period in Bulgaria is from Stara Zagora (Kaltchev).

<sup>32</sup> For detail of these finds, see Özdoğan 1999.

<sup>33</sup> Throughout this paper, the term "Vinça" is used to define a certain type of assemblage, not at all implying that it is derived from the Vinça culture of Serbia. On this issue see Özdoğan 1993 and Efe 1990a.

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# Concluding Remarks

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Some twenty years ago when J. Mellaart wrote *The Neolithic of the Near East*, it was quite a feasible task to assess the Neolithic cultures known in Turkey; there were only a handful of randomly scattered sites. Today, with the rapid pace at which Anatolian archaeology has been proceeding, the same task –presenting a conspectus on the Neolithic cultures of Anatolia– has become arduous, verging on the impossible. This volume has thus been designed to bring together the most recent evidence from the most significant Neolithic sites excavated during the last decade. Although the actual number of sites excavated in Turkey may still be few in comparison with those excavated in the Near East in general, the magnitude of recent achievements accomplished in the field is overwhelming.

Most excavations of Neolithic sites in Turkey have produced outstanding results. When the study of the Neolithic was limited to only a few scattered sites, the results from Hacilar, Çatalhöyük, Can Hasan and Çayönü, for

example, although hailed as sensational, were not fully appreciated. Now that the discoveries at sites such as Nevalı Çori or Göbekli Tepe have surpassed all possible expectations, the limit of our imagination has been stretched and the extent of the Neolithic in Turkey can no longer be ignored. It is most significant that despite the intense research in the Near East (with more than 400 sites excavated), the newly investigated sites in Turkey have been revealing new data which revolutionizes our whole concept of the Neolithic period. The sheer vastness of the areas which remained so long unexplored should make these new discoveries less surprising. Excavation strategies have also been implemental to progress; although many fewer sites have been excavated in Turkey than in the Syro-Levant, the average area exposed at the individual findspots is greater. Had the investigation of Çayönü<sup>1</sup> or Nevalı Çori, for example, have been limited to a few hundred square meters, the sites might have appeared very similar to other Near

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<sup>1</sup> The Çayönü excavations were planned to last only one or two seasons with the initial objective of testing the lithic and faunal assemblages of southeastern Turkey. If the trenches of the first campaign had been in the western part of the site instead of at the eastern edge where the best preserved of the grill-plan structures and the flagstone buildings are situated, investigation at the site would probably have terminated as planned. These structures looked so "different" in 1964, however, that it was agreed to continue for one season more; as each year revealed more outstanding remains, the excavations went on for 17 campaigns. If work had begun in the west (the east was chosen just because of a particularly cooperative landowner), only the flimsy remains of insignificant structures later found in a sondage there might have been exposed and excavation terminated with the belief that the Neolithic at Çayönü resembled that of many other sites.

Eastern sites with Neolithic occupation. However, it is apparent now that the Neolithic cultures of the Anatolian plateau were "different", not at all implying that they were "isolated".

It will take some time for the rather sudden influx of new data from Anatolian Neolithic sites during the last decade or so to "sink in"; it must be synthesized with our already existing knowledge of the period. As expressed by U. Esin in her introduction to this volume, the recent excavations have drawn a new picture of the Neolithic period. Previously undetected facets of the Anatolian Neolithic have been discovered, and certain aspects that were earlier overlooked have proved significant. Our conclusion here refrains from even attempting to present a synopsis; it is rather meant to bring up issues that will serve to stimulate and/or help orient future research. We are aware that many of the issues discussed here contradict certain conventional assumptions on the concept of the Neolithic period, and that some of our opinions may be controversial; our ideas remain open to debate. Nevertheless, the picture of the Neolithic of Anatolia that is emerging is so "different," to put it simply, that even if our conclusions are not conclusive, one factor has become clear: in the long run the conventional definitions of the period will have to be changed and new parameters be employed.

## ORIGINS

### 1. Antecedents of the Anatolian Neolithic Cultures

As mentioned by Esin in her contribution to this volume, there is a considerable lacuna in our knowledge of the cultural stage preceding sedentary village life. At present the earliest Neolithic sites known in Turkey are fully sedentary, even if not dependent on food production. In both Central and Eastern Anatolia the sedentary villages seem to appear all of a sudden, with nothing indicative of the transitional stage from a mobile or semi-sedentary hunting-gathering lifestyle. With the excep-

tion of the Mediterranean littoral, the later phases of the Upper Paleolithic period are either absent or poorly represented. Although the lack of data may in part be due to research bias, it seems more likely that during the later stages of the Upper Pleistocene, occupation on the Anatolian plateau really was scant and insignificant (Özdoğan 1988). This is striking, as the Middle and early Upper Paleolithic periods are well represented, but even in the most intensively surveyed areas (southeastern Turkey and the Marmara Region for example) there is a marked absence of Upper Paleolithic and Mesolithic/Epi-Paleolithic findspots.

The only region where a continuum from Upper Paleolithic to Neolithic can be traced is the Mediterranean coastal area. A similar phenomenon appears in Greece, where sites with Pleistocene-Holocene transition are best known in the southern parts of the peninsula while further to the north evidence from that period is scant. Curiously enough, the late and final Upper Paleolithic is better known both to the north and the south of the Helladic and Anatolian peninsulas, that is in the northern Balkans and the southern Levant. Considering the paucity of earlier sites and the rather sudden appearance of early Neolithic sites, we must surmise that there was a population movement into the Anatolian plateau from elsewhere. Another factor in support of this hypothesis is that all elements of the cultures of even the earliest sedentary sites—such as Hallan Çemi or Aşıklı—are already in a fully developed stage, implying a long tradition. This is particularly evident in settlement organization, architectural practices, art and craftsmanship. The scattered and insignificant occurrences of the Upper Paleolithic sites known in various parts of the Anatolian peninsular are simply not viable predecessors for the sophisticated cultures of the early Neolithic settlements. If there had been an Upper Paleolithic community with a high degree of sophistication anywhere in Anatolia, some indications of it certainly would have become apparent by now. Neither are the Upper Paleolithic-Mesolithic cultures along

the southern coast (Öküzini, Beldibi or Belbaşı) viable predecessors; above all, the lithic technology at such sites bears not even the slightest resemblance to that of the Anatolian Neolithic industries.

One must search for a potential koine whence the Anatolian Neolithic might have derived. Within a wide geographical perspective three prospective areas can be suggested.

- To the east, either in the Zagros region—as suggested in this volume by Rosenberg<sup>2</sup>—or in the southern Caucasus, where the Upper Paleolithic is better represented.

- To the south, where cultures such as the Natufian and Kebaran demonstrate continuity from the final stages of the Paleolithic into the Neolithic.

- To the north in the northern Pontic region, including the north of the Balkan peninsula, where a highly sophisticated Upper Paleolithic culture displaying accomplishments in art and iconography as well as a long-standing tradition in "architecture" is well attested. For the time being, this region with a marked level of sophistication in social organization, mobile sculpture and a Gravettian lithic industry with bullet core technology would appear to be the most likely source of an endemic movement<sup>3</sup>, for following the Upper Paleolithic period there remain no further traces of this "high" culture in the area. The first Neolithic in that area is obviously a very late and intrusive phenomenon. With such a high level of attainment during the Upper Paleolithic, one would anticipate some traces of its continuity into the Neolithic.

From this point of view, the Mesolithic industries of the Marmara Region like that of Ağaçalı as well as that of Dikilitaş in Bulgaria, both displaying Gravettian tradition in the early

Holocene, take on new significance. They hint at a movement from the North Pontic areas at least as far southward as the southern Balkan peninsula. Likewise, the sculpture of Lepenski Vir, obviously representing a "Paleolithic survival" of a sort, would also support the above-mentioned model.

In the present state of research, however, there is no firm evidence either to prove or disprove our hypothetical assumptions. It is indeed also possible that the Neolithic of Anatolia was derived from the amalgamation of distinct entities from all three directions. The question remains open.

### 2. The Early Stages of the Neolithic Period in Anatolia

Most regrettably, our knowledge of the initial stages of the Neolithic period in Anatolia is also extremely limited. Even though the Pre-Pottery Neolithic A levels at Çayönü were encountered in the very first campaign at the site in 1964 and an almost complete round structure was excavated there in 1978, it was only in 1988 that the early chronological position of the horizon became acceptable; until corresponding evidence appeared at Hallan Çemi, skepticism prevailed. By combining the cultural sequences of Hallan Çemi and Çayönü it is now possible to trace the development of the Neolithic period—at least in southeastern Turkey—back to the 10th millennium BC.

Our knowledge of the initial stages of the Proto-Neolithic and PPNA of southeastern Anatolia is dependent upon Hallan Çemi, the only excavated site of this early period in the region. The results from this site so far are of considerable importance, for they demonstrate that the later pre-pottery cultures of southeastern Turkey, Çayönü and Nevalı Çori

<sup>2</sup> Rosenberg bases his argument on similarities between the lithic technologies of Hallan Çemi and the Zawi Çemi/Zarzian industries. He points out dissimilarities with the Natufian and other Levantine traditions. Unfortunately, there are no other sites but Hallan Çemi in the region to substantiate his view.

<sup>3</sup> Also of note here are asymmetrical single-shouldered points, remarkably reminiscent of Kostienki points, from the basal layers of Aşıklı (Balkan-Atlı 1998: 89, Yıldırım 1999).



for example, do have roots in the region as far back as the 10th millennium BC. This contribution alone is significant because scholars had been routinely seeking the origins further to the south<sup>4</sup>. Hallan Çemi demonstrated that a hunting/gathering society had managed to sustain its presence in a fully sedentary village. Residing in simple round hut-like structures, the inhabitants had nevertheless established a "non-egalitarian, complex form of socio-economic pattern". The picture presented by Hallan Çemi illustrates pristine forms of the more complex elements later apparent at the sites of Çayönü, Nevalı Çori and Göbekli Tepe. The initial concept of the cult building can be seen in Level I, as a "special" structure with benches along the walls, displaying the basic concept of the later cult buildings at Çayönü. Some of the buildings in even earlier levels at Hallan Çemi may have had special purposes. Sculpted pestles, animal representations on stone bowls and the aurochs horns displayed in public buildings at the site reflect not only symbolism—cult-related artwork—but specialized craftsmanship as well. The obsidian that comprised 58% of the lithic assemblage had been brought over the mountains from the north; the presence of lime plaster and malachite at the site also imply a relatively complex social organization at such an early date. The time and effort dedicated to crafts, as well as this substantial quantity of imported goods, is indicative of an administrative force within the economy.

The twin sites of Biris Mezarlığı and Söğüt tarlası farther to the west in Urfa were excavated by B. Howe in 1964. The material from them should prove a major contribution to our understanding of this period when finally published<sup>5</sup>; the dominance of microlithic tools in the assemblage<sup>6</sup> strongly suggests a date contemporary with Hallan Çemi or perhaps even earlier.

It is now evident that the roots of southeastern PPNB cultures reach back at least as far as the PPNA, when the cultures in Turkey and the Levant must have been developing simultaneously on parallel lines. Despite the significant differences in the lithic industries pointed out by Rosenberg, the cultures of the two regions could not have been totally isolated from one another; similar trends in architecture, burial practice, settlement pattern and other small finds belie this. The resemblances outweigh the differences, and we may say with some certainty that by the beginnings of the Pre-Pottery Neolithic A period, active intercourse had been established between the sites in southeastern Anatolian and those in the Syro-Levantine region.

In Central Anatolia, however, the situation is different. No site that could represent the possible ancestors of the Aşıklı culture has yet been discovered. The fact that even in the basal layers, all elements of the Aşıklı culture are in a fully developed stage implies that earlier settlements should exist in the region. Significant here is the use of mudbrick, as well as the rectangular plan of the structures and the agglutinative characteristic of the site from the earliest levels onward. The study of the lithic technology employed in the obsidian workshops of this early settlement, undertaken by N. Balkan-Atlı and her team, is also promising; a diagnosis of the earlier stages of the lithic assemblages of Central Anatolia should contribute significantly to the solution of this problem.

The site of Öküzini constitutes a unique example in this respect because it is the only known Anatolian site with a continuum from the Upper Paleolithic through to the end of the Mesolithic period. As noted above, however, the assemblage here appears to be much more closely related to the Mediterranean sphere rather to that of the Anatolian plateau.

Accordingly, the relationship between the southern littoral and the Lake District remains to be defined.

## THE DEFINITION OF CULTURAL REGIONS

At the present stage of research, the existence of at least two distinct cultural regions is clear; whereas the cultures in southeastern Turkey developed parallel to those in Syria, Mesopotamia and the Levant, those in Central Anatolia display a different cultural identity. For the sake of clarity, we shall proceed by speaking of the "Near Eastern" and "Central Anatolian" traditions (Fig. 1). Distinctions are apparent in every aspect of the artifactual assemblage, some of which are discussed below.

### 1. Organization and Pattern of the Settlements

Near Eastern Neolithic architecture is basically comprised of free-standing structures with enough space left around them to accommodate daily tasks in the open air. This tradition continued throughout the Pre-Pottery or Aceramic Neolithic phase, after which it was abandoned and replaced by randomly agglomerated structural complexes. Central Anatolian Neolithic architecture, on the other hand, was characterized by large agglomerations of buildings forming districts with only narrow passages in between. This settlement layout persists from the time of Pre-Pottery Aşıklı up to the latest phase at Çatalhöyük, that is to say, at least through the middle phases of the Pottery Neolithic period.

Rigid planning is evident in the Pre-Pottery settlements of southeastern Turkey. Even more remarkable is that the settlement, once laid out, strictly retained the same plan throughout its existence. There are very few exceptions; not even annexes to the carefully

ordered structures were found within any given phase. The buildings must therefore all have been planned *a priori* and probably built all at once. All structures within a particular building phase were built on the same plan and with the same technique and materials, which reinforces the hypothesis of simultaneous construction throughout the settlement.

The evidence from Hallan Çemi, dated to the very beginning of the PPNA, clearly indicates that the Near Eastern concept of a pre-planned settlement began at quite an early phase. The most striking evidence, however, can be seen towards the end of the PPNA in the Grill-Plan Sub-Phase at Çayönü. We present here a brief revision of this sub-phase as an outstanding example of the undeniable regularity and order in community planning at this early date.

From the earliest horizon of the Grill-Plan Sub-Phase through the end of the Cell-Plan Sub-Phase at Çayönü, all domestic structures in the settlement were built on a given plan which varied from sub-phase to sub-phase. For example, all grill buildings in one sub-phase were of the "open grill type", and each exhibited the same orientation and the same subdivisions<sup>7</sup>; they stood, moreover, at a set distance from one another. In the following building level, each structure was rebuilt; the "open grills" were all replaced by "meandering grills", and the orientation of all changed by the same few degrees; the distance between the buildings remained the same. The next rebuilding saw a change in the orientation of all, and a switch to a "closed-grill" plan. Had such a thorough renovation occurred only once or twice, it might be attributed to a cataclysm or natural calamity; it was a phenomenon that occurred repeatedly, however, over a period of more than a millennium.

This system is not as evident at Nevalı Çori or Cafer Höyük because the area excavated at

<sup>4</sup> For further discussion on this issue and a full bibliography, see Özdoğan 1995, 1996c.

<sup>5</sup> A brief reconnaissance of the sites is given by Çambel and Braidwood 1980: 43-44.

<sup>6</sup> Personal observation.

<sup>7</sup> The single exception here is the grill-building GS, the walls of which display a different configuration; as a whole, however, the structure conforms to the pattern of the sub-phase.

those sites is more limited. The orderly appearance of the exposed areas suggests, however, that a similar system was in effect at these sites as well.

A striking aspect of the Southeast Anatolian system is the consistency among contemporary sites. The similarities between, for example, the buildings of Çayönü and Nevalı Çori are so apparent that they could have been designed and constructed by the same persons. Even more conspicuous is that the conformity is repetitive in subsequent layers, the architectural details changing in a similar way in both sites. Whether this can be explained by travelling craftsman, as was the case in Medieval Anatolia, is another question to be considered in the future.

Another significant factor in the layout of the Pre-Pottery communities of within southeastern Turkey is a prominent location for the cult centers. At both Nevalı Çori and Çayönü the cult buildings were situated on the fringe of the settlements. At Çayönü we also know that the location of the sacred area did not change over the millennia despite major rebuildings within the domestic area of the settlement.

No such phenomena can be detected in the layout of the sites known in Central Anatolia.

## 2. Cult Buildings and "Temples"

At Hallan Çemi, Çayönü, Nevalı Çori and Göbekli Tepe, cult buildings are architecturally distinct from the other structures and must therefore have been specifically designed for that purpose. They differ from the residences both in plan and technique, as well as size; they approach the monumental. The erection of such buildings certainly required an organized collaboration of effort. This is particularly evident in the construction of the Flagstone and Terrazzo Buildings at Çayönü or in the monumental Cult Building of Göbekli, with monolithic pillars more than four meters high. Considering the indications of unegalitarian and stratified social structure, the presence of these buildings can justifiably be considered the forerunners of Near Eastern temple architecture.

In the Neolithic settlements of Central Anatolia on the other hand –Çatalhöyük, Aşıklı, Höyücek, for example– the shrines or cult chambers were identified as such principally by the interior features and inventories. Architecturally they are nearly the same as the domestic structures; they display similar plans and construction, and by no means are they monumental. As demonstrated by the most recent work at Çatalhöyük, any room or building could be transformed into a shrine and used for ritual ceremony. This emphasizes a contrast in attitudes towards the divine; the difference between the Neolithic cultures of Central and of southeastern Anatolia is much greater than we had earlier envisaged and bears certain social implications, mentioned below. In the East the cult building was set apart from the houses, both in construction and location; it dominated the settlement. To the cultures of Central Anatolia it was sacred only as a symbolic concept, the structure being no different from a domicile/residence.

## 3. Status Symbols and Specialization in Crafts

In making an overall assessment of the artifactual assemblages of the Neolithic in Turkey, the number of "status symbols" among the small finds decreases appreciably as one progresses from east to west. From the very beginnings of the Pre-Pottery Neolithic throughout the end of the period, non-utilitarian objects –as well as artifacts implying specialized craftsmanship– are found in great number. Even though one may argue that bowls, pestles, beads and bracelets of stone are found at any prehistoric site, certain examples of such from Hallan Çemi, Çayönü, Nevalı Çori and Cafer Höyük must be considered works of art rather than just "artifacts". They could only have been made by persons who not only had attained a high degree of skill in their specialized craft, but also had the time to practice it. At most sites where such objects have been recovered, significant amounts of "exotic" imported raw materials have also been found. The abundance of such material at the Pre-Pottery Neolithic sites in southeast-

ern Turkey cannot be explained as the result of larger areas exposed in excavation, for –with the exception of Çayönü– relatively limited areas have been excavated (e.g. at Cafer Höyük and Hallan Çemi). Moving westward, we see a marked decrease in the quantity of such luxury objects, or status symbols<sup>8</sup>. In northwestern Turkey and southeastern Europe, then, the number of such finds is minimal.

## 4. Social Structure

Briefly described above are some of the material differences apparent in the Neolithic cultures of southeastern and Central Anatolia; a reassessment of the tangible evidence implies that there must have been a considerable difference in the social systems and structures of the communities in these two regions. Although it still difficult to prove, there is growing evidence that a social group related to the cults and temples also controlled the economy. Evident at any rate is the existence of a stratified, non-egalitarian social structure. Trade, specialized crafts and some technological developments may have been stimulated, guided and monopolized by this privileged group. As we have suggested elsewhere (M. and A. Özdoğan 1998: 586), the temple-based socio-economic system of historic Mesopotamia must have its roots in the Pre-Pottery Neolithic period of southeastern Turkey.

To conclude, it is clear that the composition of the Neolithic cultures in Central Anatolia is distinct from that of the cultures in southeastern Anatolia. The Pre-Pottery Neolithic of Central Anatolia is so different that the terms such as PPNA or PPNB which, more or less signify the cultural happenings of southeastern Turkey and Syro-Levant, are inapplicable to this region. Thus, we suggest that for the Central and Western parts of Turkey, the term Aceramic should be used to avoid chronological confusion. Because we still have no evi-

dence from the mountainous region that lies between Aşıklı and the Euphrates, there is still a possibility that what now resemble two distinct models may merge into one another somewhere in the intervening plateaus or intermontane plains. In earlier times the very idea of a Pre-Pottery Neolithic site in the highlands of Eastern Anatolia would have been inconceivable. Then, however, Boytepe was discovered on the northern slopes of the Taurus range; now we know of Cafer Höyük and Çınaz as well. Preliminary surveys in the immediate vicinities of known sources of Bingöl obsidian suggest that many more Neolithic sites can be anticipated in that region. Indeed, yet another Neolithic koine may appear in the highlands. Such a discovery would bring new discussions onto the agenda, such as whether the "multicellular" plan at Cafer Höyük represents an interim between the free-standing structures of the southeastern Anatolian sites and the agglomerative structures of the Central Anatolian plateau.

## DEFINING CULTURAL REGIONS IN THE POTTERY NEOLITHIC PERIOD

With the beginnings of the Pottery Neolithic period, closer relations seem to have developed between southeastern and Central Anatolia; the distinctions between the cultures in these areas are at least not nearly as great as in the preceding Pre-Pottery stage. Ties between the sites in southeastern Anatolia and those in the Syro-Levant are less apparent: weakened, if not totally interrupted. Thus during the Pottery Neolithic, the principal interaction seems to be newly oriented in an east-west direction.

It is first at the beginnings of the Pottery Neolithic period that we have concrete evidence of occupation from the western parts of the Anatolian peninsula. As expressed by R.

<sup>8</sup> Even though sites such as Çatalhöyük, Hacilar and Can Hasan have yielded fabulous objects, it must be noted that most are figurines or vessels anthropomorphic or zoomorphic in character, i.e. cult-related. Finds that can be considered as representing 'personal' status are conspicuously rare at these sites.

Duru in his contribution to this volume, defining a clear boundary anywhere between the eastern part of the Central Anatolian plateau and its western peripheries, despite certain stylistic differences, is difficult. It would seem that there was a gradual –and distance-related– change in the assemblages along the way. However, the new period brings a completely new picture of architecture and settlement layout at sites far in the west, as the evidence from Ilıpınar and Hoca Çeşme demonstrates. Here we encounter free-standing structures built extensively from wood, wattle and daub, some –as is the case in basal Hoca Çeşme– with round plans. Despite the insufficient evidence at present, it is not impossible to surmise the presence of a separate (now merely hypothetical) center of Neolithization along the Aegean littoral.

## THE ELUSIVE TRANSITIONAL PHASES

Within the Neolithic period, there are at least two junctures representing substantial cultural changes within relatively short timespans. Despite their obviously great significance these are least documented stages within the process of Neolithization.

### 1. The Transition from the PPNA to the PPNB in Southeastern Turkey

Even though the transition from the PPNA to the PPNB can be traced in an uninterrupted sequence (not only in Turkey but throughout the Near East as well), the interim period is represented at only a very few sites, most of which have been excavated only within limited areas. The Grill-Building Sub-Phase at Çayönü is the exception here, for it provides all the details of this transition. The preceding Round-Building Sub-Phase is in all respects a typical PPNA settlement. Beginning with the "open-grill" plan, the first architectural representative of this sub-phase, it is possible to follow each step in the structural transformation

from a round hut to a rectangular house (Özdoğan 1996a). It is justifiable to say that within this transformation the basic form of later Neolithic architecture was established: a free-standing rectangular structure tri-partite in plan, with an elevated floor. The study of the Çayönü lithic assemblage also indicates that the principal elements defining the PPNB lithic industry emerged during the middle strata of the Grill-Building Sub-Phase (Caneva *et al.* 1998). It is not difficult to picture the changing "demands" of society during this sub-phase; daily chores relegated to the household –the house becoming a home (Özdoğan 1996a, Watkins 1990)– plus the new need for areas reserved for special tasks would have required larger houses divided into functional units. Whatever the reasons behind this change, it is clear that the momentum was great at this critical juncture.

### 2. The Transition from the PPNB to the Pottery Neolithic

The initial stages of the real use of pottery are, as explicitly pointed out by U. Esin in the introduction, rather elusive throughout the Near East. In both southeastern Turkey and the Syro-Levant a cultural climax had clearly been reached by the final stages of the PPNB; this is evident in the appearance of "mega-sites" (Gebel 1997), intensified trade, such major technological achievements as burning lime and smelting of copper, the concepts of art and the temple, and the division of labor. Following this climax came a collapse; many sites were deserted, and others shrank drastically in size. There was a decline in technology, a falling-off of trade in luxury goods, and a laxity in the organization and appearance of settlements. Possible reasons for this collapse in cultural development are too complex to deal with here. Climatic change and over-exploitation of the land are among the explanations proposed; we suggest that some form of social turbulence may have lain beneath this turmoil<sup>9</sup>. Whatever its cause, this period

of retrogression, denoted as the Final PPNB or the PPNC, definitely marked a break in tradition, putting an end to the flourishing communities of the Near Eastern PPNB.

We do not yet have enough evidence to visual what happened during this interim. Çayönü, again, is one of the few sites which survived the change, if considerably diminished in size. As at most other sites of the period, the utilitarian artifactual assemblage continued in use. The "orderliness" of the settlements was lost, however, as were the cult buildings and –perhaps most significantly– the traditional burial customs. All during the PPNB the dead had been buried within the settlement, either under the houses or in special buildings. Because no burials were found within the settlement of the PPNC, it is possible to surmise the existence of extramural cemeteries. This represents a radical change in concept, especially if one thinks of the cemetery as a settlement reserved for the deceased<sup>10</sup>. Of note here is that the custom of intramural burials continues in Central Anatolia through the middle stages of the Pottery Neolithic, at least at the sites of Çatalhöyük and Köşkhöyük.

The backdrop for the next stage typically includes farming communities using pottery in daily life, but lacking the "refined" touch of the PPNB settlements. At this juncture there seems to have been a marked increase in the number of sites in Central Anatolia and the Lake District, and more significantly, the first sedentary communities appeared in Western Anatolia and Southeastern Europe. Even a brief survey of the evidence should indicate that an endemic movement from east to west had taken place, first merging with the sedentary communities already existent in Central Anatolia and then moving on westward to influence a population still living by Mesolithic standards (Fig. 2).

Clearly, such a model is not without variants.

Excavations resumed at Yumuktepe (cf. Caneva in this volume) are revising our picture of that site; comparatively early dates are suggested for the use of pottery. Considering the proximity of Yumuktepe to the Mediterranean, it is possible to suggest that circumstances followed a different pattern along the coasts than on the central plateau. The presence of cardium-impresso pottery at Amuq, when taken together with the recently obtained (relatively early) dates for Neolithic communities in the western Mediterranean, suggests the existence of another zone of interaction: the "Circum-Mediterranean Zone of Action". Within this larger Mediterranean zone, however, there is no indication of endemic movement like that of the model proposed for southeastern Europe. While the evidence from western Mediterranean societies demonstrates the introduction of only certain commodities, the Neolithization of Southeastern Europe involved a new lifestyle including all the elements of the Neolithic.

The use of pottery in the Lake district would also appear to have begun earlier than previously believed, as revealed by R. Duru's excavations at Bademağacı. Considering, too, the dates recently published from Çatalhöyük –from levels underlain by still another 11 m of deposit– it now seems possible that the invention and adoption of pottery occurred earlier in the west than in the east.

## PROBLEMS AND PROSPECTS FOR FUTURE RESEARCH

### 1. The Mountains

Most of the research on the Neolithic has been restricted to river valleys and alluvial plains, partially because the concept "Neolithic" has become associated with the exploitation of cereals. However, the recent survey work in Turkey strongly suggests that the highlands

<sup>9</sup> Thorough discussion of this issue and a full bibliography is to be found in Özdoğan 1996b.

<sup>10</sup> The discovery of a whole settlement built expressly for the deceased in at Kfar HaHores (Gorin-Morris 1998) in Israel, dated to the PPNB, indicates that the cemetery concept did exist within the preceding period.

might also have played a significant role in the process of Neolithization. We should remember that sites such as Çayönü, Cafer Höyük, Boytepe and Çınaz are all located in areas above 800 m in altitude. Indeed, the surveys in the Ergani plain revealed more Pre-Pottery sites on slopes and in intermontane plains than on the flatlands. Given that the exploitation of the cereal grains is not as important to the Neolithic concept as previously assessed and that hunting remained the main dietary source throughout the Aceramic period, the association of Neolithic settlement with alluvial plains no longer seems valid. Let us remember that the obsidian which was transported to southeastern Anatolia –and to more southerly regions beyond– had to be carried over the East Taurus range; the more highly elevated areas here were by no means alien to the Neolithic communities. It also seems likely that domestication of sheep and goats, species native to mountainous terrain, might well have initiated in the highlands. Here it is worth referring to two Pre-Pottery sites that have recently been discovered in the highlands of Western Anatolia: Çalca and Keçiçayırı<sup>11</sup>.

Speaking of mountainous areas, consider the rock engravings of Tırşın, located at an elevation of some 3000 m on the border between the Van and Hakkari provinces of Eastern Anatolia recollected (Fig. 3-10, 13-16). This site has not received much attention due to the lack of evidence dating it. A similarity between some of the engravings and certain figures at Göbekli Tepe is apparent. No date was offered for a settlement in the vicinity of the rock carvings (Fig. 11-12) because the surface yield contained no sherds, only some obsidian bladelets. It now seems plausible that the settlement may be contemporary with the rock engravings. However, this and the mountainous regions must be left as future prospects.

## 2. Gods or Goddesses?

Since the recovery of numerous steatopygic female figurines at Çatalhöyük and Hacilar, there has been a tendency to associate Neolithic cults with the Mother Goddess. Almost all anthropomorphic figurines have been interpreted as female even though many of them, such as those from Çayönü, lack any indication of sex. When the first undeniably male figurine was recovered at Cafer Höyük, it struck many of us as strange. Now, however, after the more recent discoveries at sites in the Urfa region (Schmidt 1995, 1998) –most prolifically at Göbekli Tepe– it seems clear that the principal deity of the Pre-Pottery period, at least in southeastern Turkey, was not female, but decidedly male. Whether the shift from a male to a female deity took place during the PPNC, and if so, why, and whether a related phenomenon occurred in Central Anatolia are all questions left to future investigation.

## 3. What defines the Neolithic: Subsistence Models or Cultural Systems?

Having considered the recent evidence, we feel no doubt that new parameters are needed to redefine the term “Neolithic”. About two decades ago we seemed to have an answer ready. Most definitions were then based on subsistence patterns; food production based on agriculture and the domestication of animals were interpreted as prerequisites for a sedentary economy. Most of the theories based on food production, furthermore, accepted some sort of environmental restrictions as the trigger for this change in the pattern of subsistence. The general picture of life in the Neolithic period was that of communities struggling to survive.

It is now apparent, however, that these Neolithic communities were much more complex and sophisticated than we had previous-

ly envisioned. One most striking revelation was that the Neolithic communities were not at all uniform in nature, but astonishingly varied (as the evidence shows). Most particularly, their dietary habits were quite diverse. Thus new concepts such as “sedentary hunter-gatherers” and “mixed economies” have entered our vocabularies<sup>12</sup>. Such terminology does not imply that the cultivation of plants was not practiced, but simply that it was not the primary source maintaining the community, which –in most cases– it does not seem to have been. Even a simple survey of the literature would demonstrate the considerable diversity in dietary habit from site to site. Let us take the excavated Anatolian sites, not only in the southeast, but on the central plateau as well; in early Çayönü and at Hallan Çemi, at Nevalı and Aşıklı as well, the main dietary components came from hunting and gathering. Moreover, the recent work at Çatalhöyük emphasizes the retained importance of hunting even in the Pottery Neolithic period<sup>13</sup>. At Yumuktepe and Ilıpınar, on the other hand, the first settlers were already farmers.

A definition of the Neolithic based on subsistence patterns is therefore no longer viable. Also remarkable is the fact that settlements within a given zone of interaction could carry on with their own very different subsistence patterns; their individual *modi vivendi* did not seem in any way to have hampered cultural contact. In simple terms, it would seem that the socio-cultural structure of the community was more important to Neolithic man than what he ate<sup>14</sup>.

## 4. Ethnicity, Linguistics, Bioarchaeology and the Neolithic

Among some of our colleagues in the West, there is an apparent tendency to associate Neolithic communities of Anatolia with a certain ethnic origin. There has been fascinating

recent achievements in bioarchaeology, genetic studies and in linguistics; both the methodology and the consequences of recent research in these fields are highly stimulating. Nevertheless, there seems to be emerging a potential danger, not unlike ethno-genetic approaches of pre World War II times, of implying these sciences in search of Indo-European identity. It seems rather strange that the very same scholars who were advocating independence of European cultures in 1960's, thus refusing any impact of Anatolia in the formation of European Neolithic, are now bringing the entire European culture from Pre-Pottery Neolithic Anatolia-even to be more specific, from Çayönü. As a non-Indo-European, we have been somewhat disturbed in seeing that the efforts of some colleagues are being driven into a search for their origins in remote prehistory (Renfrew 1996, Zvelebil 1995). We only anticipate that the future concern of bioarchaeology will be on issues other than ethnic origins.

In conclusion, let us return to Gordon Childe's “Neolithic revolution” to ask when it occurred. Childe's concept involved the foundation of a new lifestyle based on farming. It also involved the social and economic institutions related to surplus economy resulting from intensive agriculture. What the papers in this volume present leads us to the conclusion, however, that the lifestyle of the Pre-Pottery or Aceramic Neolithic period –in spite of its relative complexity and the use of some domesticates– remained basically a hunting economy. The real change, the institutionalizing of farming into an economic system seems to have materialized –the way Childe wanted to see it– only in the Pottery Neolithic period. The Neolithic period still remains a challenge, and there is a greater need now than ever before to re-evaluate the evidence.

<sup>11</sup> See the paper on Northwestern Turkey in this volume.

<sup>12</sup> For further discussion, see especially Özdoğan 1995, 1996b, Bar-Yosef and Cohen 1991, Bar-Yosef and Meadow 1995.

<sup>13</sup> Personal communication from I. Hodder.

<sup>14</sup> The significance of cultural and/or social systems within the Neolithic cultures has only recently been appreciated; see, for example, Bar-Yosef and Meadow 1995.



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