# Archaeology in Turkey: The Stone, Bronze & Iron Ages, 2001

Türkiye'de Arkeoloji: Taş, Tunç & Demir Çağları 2001

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2001 yılı, tüm Türkiye'de birkaç arkeolojik projenin sürekli ve bilinçli devamlılığına sahne oldu. Bu yılki kazılarda medyanın ışıklarını üzerine çekecek birkaç şaşırtıcı buluntu vardır. Fakat asıl aynı derecede memnunluk verici olay ise gene medyanın dikkatini çekecek büyük felaket ve tahribatın olmamasıdır.

Türkiye'deki arkeolojinin devam eden rağbetliliği, daha yaygın ve ulaşılabilir boyutlardaki bilginin yaratılmasını gerektirmektedir ve Miken'den Kalkolitik Cağ'lara kadar ilk devirleri içine alan Atlas Dergisinin arkeoloji özel sayısı bu talebe başarılı bir cevap niteliğindedir. Anadolu Tarihöncesi arkeolojisi dersi veren veya bu konuya ilgi duyan herkes bu sayıyı ve kapsadığı büyük miktardaki renkli fotograf görselliğini çok beğeneceklerdir.

Türkiye'nin sınırlı arkeolojik kaynaklarına gitgide artan genel merak Mehmet Özdoğan (2001) tarafından Kültürel Mirasın Korunmasıyla ilgili, ortak bildirilerin toplandığı, kitapçıkta da yansıtılmaktadır. Halkın Türkiye'nin zengin arkeolojik mirasına olan ilgisinin bir merak boyutuna dönüşmesi ve koruma, kayıda geçirme gerekliliğinin yerleşmesi en büyük temennidir.

### Bibliography

Two conferences dealing with the Uruk impact on the Mesopotamian periphery were held in 1999, one in Manchester and the other in Santa Fe. Both conferences included contributions based on excavations in Turkey and are now available in print

(Rothman 2001; Frangipane 2001). Also dealing with the Uruk expansion, an analysis and critique of world systems theory, based on the Hacinebi excavations, has appeared (Stein 1999). Finally, another theoretical discussion of the Uruk phenomenon by a Turkey-based author that peripherically touches on Turkey, is (Algaze 2001).

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<sup>\*\*</sup>Deutsches Archäologisches Institut, Eurasien-Abteilung, Im Dol 2-6,D-14195 Berlin, Deutschland \*\*\*Türkiye'de bir yıl önce yapılan arkeolojik araştırmaların özetleri bu sayıdan itibaren, "Türkiye'de Arkeoloji" adı altında TÜBA-AR Dergisinde yayınlanacaktır.

A comprehensive discussion of the context of early metal-working activities in the Bolkardağ - Kestel area has recently been presented by A. Yener (2000) and a new volume of the *Reallexikon der Assyriologie*, with entries on the Turkish site Norşuntepe, was also published (Hauptmann 2001).

### Festschrifts:

Volumes of papers were dedicated to Hans Güterbock (Yener 2002), Volkert Haas (Kühne 2001) and Manfred Korfmann (Aslan, et al. 2002).

### Conferences:

In May 2002 the annual International Symposium of Excavations, Surveys and Archaeometry was held in the National Library in Ankara. The proceedings of the 2001 symposium are now published in the Kazı Sonuçları Toplantısı series.

The Second International Congress on Black Sea Antiquities was held at Bilkent University in early September 2001, covering a large area of studies on the Iron Age to Byzantine History of the countries bordering the Black Sea. Abstracts are available on the internet (http://www.bilkent.edu.tr/~arkeo/blacksea/blacksea.htm).

The papers discussed at the round table on the "Neolithic in Central Anatolia", held in the autumn of 2001, have been published with admirable speed (Gérard and Thissen 2002). The conference web site is now also operating as a discussion forum and provides radiocarbon databases and other research facilities(http://www.chez.com/canew/index.htm).

The proceedings of the highly controversial conference on Troy are also now published (Kolb 2002).

### EXCAVATIONS AND SURVERY

Paşalar: The 18th season of excavations at the 15 million year old Miocene site of Pasalar in the Değirmendere Formation was conducted by Berna Alpagut and her team from Ankara University. They extended the excavated area to the northeast, where in square T5 54 new fossil specimens were recorded, among them 4 primates. The site is remarkable for its abundance of primate/hominoid remains, mostly teeth, that so far form 7,6% of the total assemblage. The environment where these primates lived can be reconstructed as a mixed tropical - steppe lacustrine habitat surrounded by young forests. One indicator of such an open tropical environment is the analysis of herbivore teeth that provide evidence for a diet based on C3 plants. A rich fauna occupied the area, with 58 species identified to date. A preliminary report on the 2000 season can be found in Alpagut, Çelebi, et al. (2002).

Çankırı-Çorakyerler: The Late Miocene fossil bearing layers at Çorakyerler were the subject of further investigations by Ayla Sevim of Ankara University. The site produced the upper mandible of a new hominoid type last year and the matching lower part, with one tooth preserved, being found this year. Together with Paşalar, Çandır, and the Sınap formation Çorakyerler is the fourth find spot in Turkey to have early hominoid fossils.

The fossil bearing layers are about 8 million years old and document the final stage of a period when the tropical climate shifted towards a drier, continental climate, giving way to open forest - savannah, in which a rich fauna of bovidae, equidae, giraffae, suidae, elephants and rhinoceros existed.

For a preliminary report on the 2000 season see Sevim and Kiper (2002).

### PALAEOLITHIC

South Anatolia

Karain: Işın Yalçınkaya continued with excavations in Karain hall E, uncove-

ring layers of the Middle Palaeolithic period. At the base of the sequence, in the northern section, a rhinoceros mandibule was found associated with Mousterian points and sidescrapers. The lowermost level, period III5 is identified as Proto-Charentian, III4 represents the developed Charentian, and III3 the Karain Mousterian. The fauna associated with these layers consists mainly of wild sheep and goat.

Chamber B was also subject to further investigation, with excavations in squares C and D again providing a full sequence from Middle Palaeolithic to Epipalaeolithic here numbered P1-P4 from top to bottom. These were followed by traces of Neolithic and Chalcolithic occupation. The cave apparently served as a butchery place during the epipalaeolithic period P1. Complete prey were brought into the cave and divided. Cut marks are visible on the bones, and all parts of the carcass including horns are present. Herbivores appear to have been the preferred hunting prey. Lithic finds associated with these layers comprise endscrapers, blades and prismatic cores from radiolarite. Bone tools, awls, and pins are common. These finds allow a comparison with epipalaeolithic Öküzini. The underlaying layers can be divided into the Upper Palaeolithic (P2, dated c. 28.000 BC), the Karain Middle Palaeolithic (P3, correlated to III3 in chamber E) and the Charentian (P4).

A preliminary report on the 2000 season appeared (Yalçınkaya, Taşkıran, et al. 2002).

### Central Anatolia

Kömürcü - Kaletepe: Work at the famous obsidian source at Kömürcü-Kaletepe continued with an extension of the step trench in dere 3. Here, the Middle Palaeolithic can now be subdivided into three phases, overlain by Neolithic remains. Nur Balkan-Atlı of Istanbul University has reported that the material in the Middle Palaeolithic layers consists largely of core tools that are, despite the

abundance of obsidian, produced from rhyolite.

For Neolithic remains, see below. Southeastern Anatolia

Üçağızlı Mağarası: The excavations at Üçağızlı Mağarası continued in 2001 in two main areas. Erksin Güleç and Steven Kuhn reported that one of the objectives was to excavate the northern part of the main chamber down to the earliest layers, that is the Initial Upper Palaeolithic. A second objective was the investigation of a small chamber, illegally excavated in 1998. However, a small test pit dug here yielded no undisturbed archaeological contexts.

The cultural layers in the main chamber repeat the same sequence described in detail in the previous year's excavations. The bottom layer revealed hearths and ash accumulations associated with an abundance of artifacts and is dated to 41000-35000 bp uncal. Lithic material includes flakes and blades made in a Levallois tradition with more recent techniques such as burins. Again, the numerous beads made from shells were remarkable. More than 400 of these were found; most had a single piercing and some had traces of red ochre. They are found individually or in clusters and are among some of the earliest personal ornaments found in Asia or Europe. Faunal analysis by Mary Stiner proves that no marine resources other than the shells were being used. Instead, the occupants of Upper Palaeolithic Ucağızlı relied largely on the pig, deer and caprids that must have occupied neighboring valleys.

Investigations near the cave proved there had been an ancient beach, located 16 m above current sea level. This attests to the impact of neotectonic activities on the landscape in this region.

Post-excavation analysis is on-going but has already shown some general

trends in the 12-15000 year history of the cave. In terms of lithic technology, the Levallois tradition using flakes and blades as blanks was replaced by flat blades and platform cores. Bone tools, indicators of modern human behavior, occur only in the Upper Palaeolithic layers. A shift in foraging habits brought about an increase in the amount of small game such as tortoise, birds and hares, while caprids, the main prey in the earlier period, were slowly replaced by deer. Marine shellfish provided an addition to the diet in the upper layers. These changes are probably also related to changes in the local environment.

See Güleç, Kuhn, et al. (2002) for a report on the 2000 season and Stiner, Pehlevan, et al. (2002) for faunal analysis.

Ilisu Palaeolithic Survey: A survey project led by Metin Kartal, aimed at identifying traces of palaeolithic occupation on the northern bank of the Dicle River, revealed no evidence for palaeolithic occupation whatsoever. One reason for this could be the complex erosion processes that appear to have completely remodeled the landscape.

### EARLIER NEOLITHIC

Göbekli Tepe: On completion of the 2001 excavation season at the amazing pre-pottery Neolithic site of Göbekli Tepe, carried out by Harald Hauptmann and Klaus Schmidt of the German Archaeological Institute, four large circular enclosures (A-D) of the lowermost layer (III) had been uncovered. These represent the earliest occupation phase, dating to c. 9000 BC cal., and are stratigraphically distinguished from the later layer II where the architecture is characterized by smaller, rectangular structures.

Work continued on the southeastern part of the site with excavations in six new trenches, aimed at the complete un-

covering of enclosure C. Enclosure C is a large structure of undecorated stone pillars arranged in an oval of c. 20 m diameter that must have centered around two central pillars which are, however, completely destroyed. The sculpture of a predator with fletched teeth has been found in front of one of the surrounding pillars (fig. 1). Next to enclosure C, another oval structure of similar type and dimensions was found. This new structure (enclosure D) yielded two central pillars of hitherto unseen height, exposed until a depth of 3,5 m and still continuing deeper. One of the pillars, of the by now well known Nevali Cori type, roughly T-shaped with human arms indicated in shallow relief, revealed two reliefs on the side: one is a fox and the second is a geometric pattern located on the narrow side below the "head" of the pillar, possibly a pictogram

For a summary on the first five seasons at Göbekli Tepe, see (Schmidt 2001).

Karkamish Dam Rescue Excavations

Mezraa Teleilat: Mehmet Özdoğan of Istanbul University reported on the ongoing rescue excavations at Mezraa Teleilat (fig. 3). These continued with further extensions of the trenches on the eastern part of the site. Immediately below the Iron Age building levels, three Pottery Neolithic building layers were encountered, overlying earlier Pre-Pottery Neolithic layers.

The uppermost PN layer consists of "corridor houses" with three parallel long rectangular rooms (fig. 4). The two side aisles were paved, while the central room is left unpaved, indicating that it may have been an open air space. Associated material shows that this layer probably ran until the beginning of the Halaf period. The second layer consists of "cell houses" comparable to Umm Dabaghiyah. Plastered hearths were found inside these houses. They contained a rich catalogue of

chaff-faced wares of Hassuna type, with impresso decoration or red slip, and with husking trays as a type fossil. Below this are more corridor houses, associated with chaff tempered pottery, some of which is painted. Finds from this trench are abundant. The lithics include Byblos and Amuq points. Other finds include stone vessels, stone stamps and bracelets, a rich bone tool industry and a collection of schematic figurines made from clay.

Another sounding was sunk in the southeast of the site in order to assess the extent of the Neolithic settlement. Here, below massive stone packing, a sterile layer was encountered which in turn overlay a layer with disturbed human bones, probably the remains of an ancient grave. No artifacts were found associated with the bones.

For a report on the 2000 excavations, see Karul, Ayhan, et al. (2002). The lithic industry has been discussed by Coşkunsu (2001).

Akarçay Tepe: Rescue excavations at Akarçay Tepe in the Karkamish Dam area continued with the investigation of a new area in the northern part of the site. Nur Balkan-Atlı of Istanbul University reports that the trench revealed a sequence of building layers documenting the transition from PPNB to PN. The uppermost layer consists of a round stone building with a circular corridor surrounding it. This 50-60 cm wide corridor yielded an abundant amount of pottery of the Akarçay II phase, among it impresso and beige-brown slipped pottery. The second layer is formed by a three aisle-house with two internal partition walls and two courtyards, apparently used as open air workspaces. For the walls, both stone and wood were used as construction material. The building ended in a conflagration. For layer 2, three building phases could be distinguished that fall entirely into the oldest PN period. Most characteristic is monochrome pottery with mineral temper and either untreated or polished surface. A characteristic form are deep bowls that can well be compared to material from Tell Halula. Below, four parallel mudbrick walls of mid-PPNB date were uncovered that must have belonged to a grill plan house such as they are typical in the PPNB.

Among the lithic finds, Byblos points occur alongside individual pieces that show use of the pressure flaking technique. The obsidian used derives from diverse sources, both from Eastern Anatolia and from Cappadocia The amount of Cappadocian obsidian used increases at the beginning of the PN.

Batman/Ilisu Dam Rescue Excavations

Körtik Tepe: Vecihi Özkaya extended the excavations of the Neolithic cemetery of Körtik Tepe across eight 5m by 5m squares. Preservation conditions were poor because a medieval cemetery had cut deeply into the Neolithic layer. Finds consist of numerous ground stone axes, some with incised decoration; incised stone bowls comparable to material from Hallan Cemi and Nemrik; and chlorite and serpentine beads and pendants.

For a preliminary report see Özkaya - San (2002).

Hakemi Use: Halil Tekin of Hacettepe University embarked on rescue excavations at the small settlement mound of Hakemi Use, on the southern bank of the Dicle River in the Ilisu Dam flooding zone. The site goes back to the PN period, with some later disturbance, representing what is so far the only known Pottery Neolithic site in the area. On top lies a cemetery with stone cist graves. No precise date can be established for the graves because they were looted in antiquity. More disturbance was brought about by neo-Assyrian pits that cut quite deeply into the levels beneath. Iron Age remains are restricted to some pottery finds from the surface, including grooved cooking pots typical of the Early Iron Age.

Although no obvious architectural structures have yet been uncovered, Neolithic find material is abundant. The pottery is chaff-tempered and can be distinguished into several groups: red slipped ware, dark faced burnished ware, and pottery with dark paint on a light ground comparable to Hassuna material, as well as husking trays. Obsidian blades and nose plugs complete the picture.

### Central Anatolia

Kömürcü-Kaletepe: Work on the PPNB obsidian atelier in the Kömürcü-Kaletepe area has reached a stage where a three-dimensional map of all artifacts found has been achieved. The material collected from the area consists of naviform cores and bipolar blades. Pressure flaking was used for the production of bladelets. A date of 8300 BC is indicated for the workshop.

The site was declared a protected cultural monument in 2001 and this will hopefully make it easier to further preserve this unique assemblage of early human activities in the future.

For the palaeolithic, see above. A preliminary report on the 2000 season is available, see Balkan-Atlı, Binder, et al. (2002).

Musular: Work at Musular has helped to confirm the chronological position of the site as being between 8400 and 7900, and therefore contemporary with the PPN B-C. As Mihriban Özbaşaran from Istanbul University reports on the results of 2001 excavations in the eastern sector, further effort was undertaken to sort out the stratigraphic situation that had previously been a problem because the site was founded on sterile rock and the subsequent layers were badly preserved. It can now be shown that the first occupation consisted of pits dug into bedrock. This was followed by a series of canals. Above, a rectangular one-room building was constructed. Its function is not

known yet but according to M. Özbaşaran it might have been used as a water reservoir.

Post excavation analysis has shown that the animal bones consist mainly of wild sheep and goat, and that the obsidian originated mainly from Göllüdağ.

A preliminary report on the 2000 season has appeared (Özbaşaran, Duru, et al. 2002).

Çatal Höyük: Ian Hodder of Stanford University reported on the ongoing excavations at Çatal Höyük, conducted by several teams on different parts of the mound, in the BACH area and the TP area, accompanied by detailed post-excavation analysis.

In the western part of the BACH area, the Berkeley team continued with excavations of Building 3. As before, a functional distinction for the different parts of the building was possible. Three child burials were found in an area restricted to the northern part of the central floor area. Detailed observation of these burials revealed traces of cinnabar and a rope around the waist of one child that had been used to bind the body together.

Excavations on the highest part of the east mound in the TP (Team Poznan) area aimed to clarify a large building structure of Late Roman/Byzantine date that had been detected using remote sensing and had been further investigated by surface scraping. A burial with a grave pit lined with tiles dates from the same period.

Among the different post-excavation analyses, the chemical analysis of residues found inside pottery vessels proved that animal fat, excluding pig fat and milk, had been stored in them. From these results a prehistoric diet that relied on both C3 and C4 elements can be reconstructed. AMS radiocarbon dates now date the earliest occupation of Çatal Höyük

East to 8300-8150 BC cal., and establish the average life span of a building at between 50 and 80 years, with a trend towards quicker rebuilding during the more recent periods.

For the dating of the earliest layers see Cessford (2001).

Southeastern Anatolia and Cilicia

# LATER NEOLITHIC TO CHALCOLITHIC

Arslantepe: Despite the short duration of the season due to Marcella Frangipane and her team having other obligations in the Karkamish rescue area, the four week season in 2001 at Arslantepe brought exciting new insights into the development of early complex societies in Eastern Anatolia. Most importantly, it is now evident that Anatolian-Transcaucasian interaction must have already begun in the early 4<sup>th</sup> millennium BC, as indicated by numerous examples of characte-

ristic transcaucasian features, such as

RBBW pottery and architectural details

that occur in Period VII contexts.

The excavations concentrated on an area between the two large Period VII building structures on the western part of the mound, east of Building XXIX. A huge mudbrick wall, dating to Period VIB2, with one row of rectangular rooms attached was uncovered and is apparently part of a fortification. It stood on top of a massive stone structure of the 4<sup>th</sup> mill. BC. The wall is set on a steep slope, and next to it, postholes and wattle- and daub structures were found that were covered by a burnt floor.

Two domestic rooms of period VIA were uncovered below the wall. They were built side-by-side in an agglutinative way and form the continuation of the elite residences quarter uncovered earlier on the north of the mound. Below, a surface with postholes and RBBW apparently represents the remains of an earlier settlement predating the building phase with monumental architecture in VIA.

Excavations in a side room of structure XXIX proved that that building was of tripartite layout, whereas previously it had been thought to represent a typical two-part structure familiar to Chalcolithic Arslantepe. Building XXIX stands on top of a platform made from mudbrick and stones and must have risen above the surrounding buildings. The side room yielded numerous examples of mass produced conical bowls with string cut bases, some of them with potter's marks, turned upside down. Numerous sealings were associated with them. Judging from the find position of the bowls that reach close to the walls a second floor above this room is highly likely. M. Frangipane interprets this assemblage as residues of a redistribution event, most probably in a ritualized form.

Fistikli Höyük: A preliminary report on the final excavation season in 2000 has been published (Bernbeck, Pollock, et al. 2002).

Tell Kurdu: Following trial trenching and magnetometric mapping in 1998/99, a new phase of research began at Tell Kurdu, part of the larger Amuq Valley Regional Project, with Rana Özbal and Fokke Gerritsen resuming excavation in 2001.

Most exciting were the results from the northern area, opened in order to confirm the existence of a large building structure of late Amuq C date. The magnetic anomalies thought to be large walls instead turned out to be alleys separating numerous small buildings forming a densely packed village neighborhood (fig. 5). Altogether 800 sq.m. of small, rectangular houses with one or more rooms were uncovered. A functional distinction between domestic units and houses with interior buttresses and architectural furnis-

hing is possible, suggesting that some of these buildings may have served different purposes. Find material includes Dark Faced Burnished Ware and painted Halaf related material, among them the characteristic lids. The lithic assemblage includes 30% obsidian. Among the small finds, finely carved stamp seals are noteworthy (fig. 6), one of which shows the rather extraordinary design of a fish-catching bird.

A smaller second excavation area was opened on the southeastern slope of the mound. This served to establish the stratigraphic relationship between trenches 1/6/9 and 2 with the Amuq E levels, excavated in 1998 and 1999. Interesting results can be expected from the ongoing micro-archaeological analysis of room contents that should allow to further proof of the functional distinction of the houses.

North of Tell Kurdu, the Maraş plain around Domuztepe has been subject to palaeoclimatic investigations (Woldring, Cappers, et al. 2001).

### Batman/Ilisu rescue area

Kenan Tepe: Since 2000, the large multi-period mound Kenan Tepe located on the left bank of the Upper Tigris within the Ilisu rescue area has become the main focus of research for the Upper Tigris Archaeological Research Project (UTARP) directed by Bradley Parker of Utah University. Soundings sunk into the high mound (areas A-D) and the slopes of the larger lower mound (areas E-H) revealed evidence for occupation from the 4th millennium BC to the Roman period. Apparently, the site reached its largest extent of 5-6 ha during the 4th to early 3rd millennia, i.e. the LCH-EBA periods. Pottery associated with mid-4th mill. structures uncovered in areas G and H. and with a large oven found in area F, consists of typical Syro-Anatolian LCH forms. Occupation in this part of the site appears to have come to an end at the beginning of the 3<sup>rd</sup> mill. (LCH 5 according to the new Santa Fe chronology).

Layers of the early 2<sup>nd</sup> mill. BC, radiocarbon-dated to 1800 BC cal. and characterized by red-brown wash ware, extend over a much smaller area to a maximum of 1.1 ha on the high mound. At this time, the area appears to have been an industrial workspace, as pits filled with slag and metal processing facilities were encountered.

See Parker, Creekmore, et al. (2002) for a report on the 2000 season.

Aşağı Salat Tepe: Rescue excavations at Asağı Salat Tepe in the Ilısu dam zone continued under the direction of Yücel Senyurt of Gazi University with further clearing of the south-western section cut by the river and an additional sounding. Here, it is now possible to distinguish 9 layers. Layers 4-6 produced EBA Ninevite 5 and layers 7-9 produced Chalcolithic to Late Neolithic material. Geoarchaeological work carried out by Uğur Doğan confirmed that there had been periods of abandonment in between. West of the main mound lies an EBA cemetery with heavily disturbed tombs due to medieval occupation and deep ploughing. Two tomb types are present: stone cist/chamber tombs, and simple inhumations in a stone lined pit with a pebble paved floor. 25 examples of this second type have been documented to date. One undisturbed stone cist tomb was opened, revealing a hocker burial on a pebble paved floor, accompanied by a bone figurine, a pin and a necklace made from black and white stones. In between the EBA graves, some Iron Age burials were found. The grave of an animal, probably an equid, appears to be of much later date, probably Achaeme-

See Şenyurt (2002) for a report on the 2000 season.

Eastern and Northern Anatolia Sos Höyük: A report on the 2000 se-

ason has been published (Sagona and Sagona 2002).

**İkiztepe:** For a report on the 2000 season see Bilgi (2002).

### Central Anatolia

Tepecik Çiftlik: Erhan Bıçakcı of Istanbul University continued with excavations at Tepecik Çiftlik where, with three new trenches, a total of six squares are now under investigation. In trench 16J, another single roomed house constructed from small volcanic tuff stones was uncovered. Trenches 17-18J revealed a 2m by 2m square structure constructed of stone. Judging by the material, a comparison with Köşk Höyük V, i.e. a date of around 6000 BC, is probable from this structure. Most noteworthy is the reliefdecorated pottery that shows bucrania and other motives, including figures in motion. Pottery of the Gelveri-Güzelyurt type occurs together with this material. The most remarkable find of the 2001 season is a male figurine, 17cm high. The lithic industry consists largely of obsidian, with leaf points and tanged points that reflect traditions otherwise observed on the Konya Plain. A rich bone tool industry can be noted, and initial results of the animal bone analysis indicate that wild horse and wild donkeys were part of the assemblage.

For a report on the first season, see Bicakcı (2001) and Biçakçı and Faydalı (2002).

Köşk Höyük: There were no excavations in 2000, but a preliminary report on the 2000 season appeared (Özkan, Faydalı, et al. 2002).

Güvercinkayası: See Gülçur, Endoğru, et al. (2002) for a preliminary report on the 2000 season.

Çadır Höyük: Excavations at Çadır Höyük, directed by Ronald Gorny, continued into their sixth season with investigations in four different parts of the mound. In Area 1 on the eastern mound, the oldest level of the Old Hittite occupation was reached. A new trench in the northeast unveiled a large, probably public, building of Byzantine date. Area 3 on the south slope revealed LCH remains below Hittite cobble accumulations. The material is characterized by pottery with *omphalos* bases, dating to around 3600 BC. Finally, the step trench below the Byzantine settlement and citadel revealed three building layers of the LBA-Hittite period. The lowermost of those is dated to 1360 BC.

Western and Coastal Anatolia including Thrace

Ilipinar: Work on the site directed by Jacob Roodenberg this year concentrated on the remains of Period VI, located at the eastern edge of the site. Here, a row of mudbrick buildings forming a semicircular radial alignment had been excavated in previous years. The structure extends over at least 90 m and seemed to form a boundary construction. This year's excavations aimed at filling a 20 m gap between the previously excavated areas. Four more buildings (H31-H34), forming part of the larger structure, were unearthed. For the first time, complete ground plans were obtained, providing valuable information about access to the houses and construction details.

The houses were constructed of mudbrick and had two storeys and a crawl space at the very bottom. Floors were constructed from crossed beams covered by planks, with the whole construction anchored in the walls. Two pillars must have stood on the interior of the rooms as roof supports, as can be seen from small round brick-platforms with wooden pillar imprints on one side. Access to the buildings was from the outside via a threshold in the outer wall, while smaller wall apertures allowed traffic between the rooms. Due to this easy accessibility, the

structure is unlikely to have been defensive in nature. According to Roodenberg, a desire to protect livestock may have been the reason for this unusual construction. A functional interpretation of the rooms and their upper storeys is possible based on their find inventory: The upper floor contained numerous grinding slabs, andirons, and occasionally an oven and some pottery. The lower floor held a large oven, and domestic installations such as bins. Assorted plaster-lined baskets and pottery was found along the walls of what is apparently a storage room. Occasionally, stone and bone tools occur. The crawl space appears to have served not as a room but as insulation from humidity from below.

The second volume of the final publication series has appeared (Roodenberg and Thissen 2001).

Menteşe: A report on the 2000 Mentese Höyüğü excavations has appeared (Roodenberg 2002).

Bademağacı: Refik Duru continued with excavations at Bademağacı in areas A and D. A deep sounding was sunk in area A to a depth of 8.9 m, where Building Layer 9 represents the earliest occupation of the site. It consists of a hard, terrazzo-like floor and dates to the early PN period, around 7000 BC. The fourth building layer revealed rectangular houses of a type previously seen at Bademağacı, single room houses with a hearth opposite the entrance. They are associated with material comparable to Hacılar VI. Layer 3 belongs to the EBA, where 3 further buildings were uncovered. EBA houses were also encountered in area D, below the Byzantine church. Until this point in time, 12 EBA houses of megaron type and an EBA glacis have been exposed on the mound. Preparations for their in situ conservation are underway.

Investigations in the outskirts of the Neolithic settlement revealed parallel stone rows, apparently part of an early fortification system.

For a report on the 2000 activities, see Duru and Umurtak (2002).

Kırklareli: In 2001, a study season was held due to the team's other commitments in the Karkamish rescue area. A preliminary report on the 2000 season appeared (Özdoğan, Karul, et al. 2002).

Menekşe Çatağı: For a report on the 2000 season, see Erim-Özdoğan and Işın (2002).

Herakleia Latmos: Documentation of the enigmatic prehistoric rock paintings from Mount Latmos continued in 2001 with several more paintings being located. A preliminary report has appeared (Peschlow 2002), and the findings will be subject of an exhibition in the winter of 2002 (Peschlow-Bindokat 2002).

Ulucak Höyük: Excavations conducted by a team from Ege University İzmir at Ulucak Höyük revealed, under three layers of EBA to Late Roman date, an extensive Late Neolithic occupation, thereby providing a long-desired insight into the Aegean Neolithic.

To date, 19 houses of the Neolithic village constructed in different techniques have been uncovered. Wattle-and-daub, pisé and mudbrick are used, often in combination. Houses consist of one to two rooms, and each contained an oven, grinding stones and storage pits. Besides, stone celts, stone and bone beads, sling bullets, weights and animal figurines were also found. Pottery was produced on the site, as is evident from large clay lumps found in one area, apparently ready prepared for further processing. Shapes include hemisperical bowls and biconical jars. Surfaces are decorated with red slip and fingernail impressions and black on red painting. The best comparisons for this material are found in the Burdur area.

For a summary on the 1999-2000 season see Derin, Abay, et al. (2002).

### BRONZE AGE

Southeastern Anatolia and Cilicia Batman/Ilisu rescue area

Ziyaret Tepe: Rescue excavations at Ziyaret Tepe in the Ilisu Dam area continued under the direction of Timothy Matney. While the mid-late Assyrian urbanization process and its impact on the environment remain the focus of the project, the earlier layers of the settlement have also been encountered.

A stratigraphic sounding on the eastern slope of the high mound (Operation E) yielded nine building layers covering a sequence from the end of the 3rd millennium BC to the Late Assyrian period. A burnt building dated to 2000-1800 BC with finds displaying good comparisons to contemporary Tell Brak.

The Late Assyrian period (8th to 7th cent. BC) saw the massive extension of the site to 29 hectares. Subsurface radiometry on the southern part of the lower town (operation G) detected systematically planned private residences, separated from one another by cobbled streets. A courtyard paved with a checkerboard pattern made from black and white cobbles was excavated here in 2000. This pavement was removed, and a box with animal bones was found underneath.

Operation A, on the high mound, yielded remains of a public building dating to the Late Assyrian period. The building consists of a large courtyard surrounded by a row of rooms, its walls are up to 2.5 m wide. Two ovens of rectangular outline, each of them 2 m long, and with rounded appendages, had been cut into a platform in the courtyard. These ovens must have been for processing metal. Complete and fragmentary copper and iron vessels, 13 in total, were found in a green slag matrix close to the ovens, apparently

representing scrap metal intended for reuse. A deposit of 2 stone vessels, 2 pottery goblets and an ivory, all with traces of burning, were found close to the platform and are thought to represent a ritual deposit.

Müslümantepe: Eyyüp Ay of Kırıkkale University continued excavations at Müsülmantepe in the Ilisu rescue area. The Late Chalcolithic architecture of the site's earliest occupation could still not be excavated, because it is cut by an early EB cemetery of stone cists and chamber tombs. A stone cist with a pebble floor contained Ninevite 5 pottery and examples of metallic ware. This metallic ware appears to be characteristic for the Diyarbakır region, where it has been documented at Uctepe. In addition to excavation, survey work continued in the Girgip valley. See (Ay 2002) for a preliminary report.

Birecik and Karkamish rescue areas and environs

**Tilbeşir:** The geoarchaeology of Tilbeşir has been published (Kepinski-Lecomte 2002).

Savi Höyük: The cluster of settlement mounds called Şavi Höyük is located on the left bank of the Euphrates, within the Karkamish Dam flood zone. Rescue excavations were carried out by Reinhard Dittmann from the University of Münster during 2000-2001. Two mounds were subject to test excavations: Şavi 2 yielded remains of a Halaf tholos built on virgin soil, overlain by a building that the excavator interpreted as a tripartite house. The step trench at Savi 1 revealed a long sequence of 20 occupation phases from late EBA to the Iron Age (phases 20-17 are EBA IV: 16-14 EB-MB transitional; 13-9 MB II; - gap-; 8-7 Middle Iron Age; 6-4 Later Iron Age; 4-1 medieval to recent). In the lowermost level, remains of a massive wall indicate that the EBA settlement was most probably fortified. Monumental

architecture is also present in levels 11B-9, in the Old Assyrian-Old Hittite levels.

Surface investigation at the remaining mounds indicated EBA occupation at Şavi 2-4 and 7, and a Late Hellenistic/Roman occupation at Şavi 5.

Zeytinli Bahçe Höyük: Continuing rescue excavations at Zeytinli Bahçe Höyük by Marcella Frangipane and her team helped to further clarify the occupation history of this complex site. On the slope, further investigations in the EBA I layers revealed a rectangular fireplace with long annex of a type known widely in the Middle Euphrates, albeit mainly from Uruk related sites.

A second operation aimed to clarify the history of the mound's acropolis, where Roman structures had been uncovered. A huge mudbrick wall of MB date was uncovered, standing on top of a massive EB III fortification wall. Apparently, the MB occupation ended in a conflagration, followed by the complete abandonement of the site.

Şaraga Höyük: Rescue excavations continued at Şaraga Höyük in the Karkamish Dam zone with several new trenches. Kemal Sertok of Gaziantep Museum reported that a sounding on the northeastern part of the site revealed the original surface below the mound, covered by alluvial sediments. Above these, mixed Late Uruk and EBA remains were found. A second new trench on the west of the mound revealed a sequence from the MBA to the Hellenistic/Roman period. Here, a fully equipped kitchen was unearthed in the Early Iron Age layers.

For an overview on the 1999-2000 seasons, see (Sertok and Fikri 2002, Sertok and Kulakoğlu 2001).

**Gre Virike:** Rescue excavations, conducted by Tuba Ökse of Hacettepe University, at the amazing site of Gre Virike

in the Karkamish Dam flood zone were completed in 2001.

Great attention was paid to the documentation of the surroundings of the graves on the summit of the mound. Two large pits were located next to the graves, and a clay plastered platform was located north of these pits. Narrow holes were dug next to the tombs and their interiors were plastered. As Tuba Ökse points out, this can probably be interpreted as remains of complex funeral and commemorative rites. The pits may have served as offering pits and the narrow channels for libations. Vessel bases with secondary holes in them could also be related to libation rites.

A funeral complex consisting of two disturbed chamber tombs, excavated last year in square K9, was further investigated. It has now become evident that small rooms had been deliberately annexed onto the main tomb chamber. Those rooms held cooking facilities, pot stands and one room had a floor with small concave depressions, possibly intended for burning things. An oval offering pit contained animal bones. It appears that the use of these rooms relates to commemorative rites at the tomb.

A bulldozer trench at the bottom of the mound offered the opportunity to investigate a wall and staircase leading to an underground well. Again, an offering place is associated with the staircase.

The importance of water to these funeral rites also led to the reinterpretation of a rectangular building structure, excavated previously on the eastern summit, as a water reservoir supplying a system of water channels that distributed water to different parts of the summit.

To summarize the results from the Gre Virike rescue excavations, the site has proven to be a highly complex funerary site in the EBA and may have served as

the central monument for several neighboring settlements. Located on top of a gravel hill, the surface has been shaped into several superimposed terraces. Graves of differing construction types were arranged on the terraces, often as part of larger complexes of rooms. Between the graves, installations such as small platforms of stone or mudbrick may have been used for libations and offerings. Cooking facilities, places to burn incense, and offering pits all seem to be related to funerary cult. On the summit, a water reservoir supplied the different installations. Finally, a staircase led to an underground well. With all these detailed observations, the site will greatly further our understanding of EBA funeral traditions, complimenting observations from Tell Ahmar-Til Barsip, Umm al Mara, Tell Banat, Karkamish, the Birecik, Lidar and Titris cemeteries and many more.

For a report on the 2000 season, see Ökse and Bucak (2002).

Mezraa Höyük: The settlement mound of Mezraa Höyük, immediately south of the Neolithic site of Mezraa Teleilat in the Karkamish dam zone, has undergone a second season of rescue excavation conducted by Derya Yalçıklı of Hacettepe University. The main occupation of the mound dates from the Late Chalcolithic to EBA II period, as demonstrated by surface finds of canaanean blades, moulds and beveled rim bowls. An overlaying medieval layer extends over the eastern and western slopes. Excavations revealed Late Chalcolithic layers in the southeastern part of the site, cut by pithos and stone cist tombs of EBA I-II date.

Surtepe: A preliminary report on the 2000 season has appeared (Fuensanta, Charvat, et al. 2002); as has a report on metallurgical analysis of samples from the site (Özbal and Turan 2002).

Tilbes Höyük: Preliminary report see Fuensanta, Rothman, et al. (2002) Tilvez Höyük: Metallurgical analysis see Özbal and Turan (2002).

### Kilis-Hatay-Cilicia

Oylum Höyük: The seventh season of joint Turkish-German excavations at Oylum Höyük continued with further investigation of the Late Chalcolithic layers on the western terrace and on the lower step of the eastern step trench.

On the western terrace in trench I31b. the northern excavations aimed to find the extension of a massive basalt terrace wall that had been found in a sounding in J31c to the south. Against all expectations, this wall did not continue to the north. Instead, further evidence of occupation layers of the later 5th millennium BC were uncovered, indicating the existence of more settlement layers at this level. The neighboring trench I32, excavated since 2000, yielded a Late Chalcolithic cemetery below two layers of domestic occupation. Nine burials, of both infants and adults, were documented. Bodies were laid in vessels or in organic containers such as wooden coffins. The burial chamber was usually dug into the side of a vertical shaft that was then sealed by a thin mudbrick wall. Even though most of the burials are without goods, the burial vessels allow us to date them to the LCH 2 period. The Oylum Höyük tombs represent the only site in Southeastern Turkey and Northern Syria with such regular burial patterns. They are best compared with a group of tombs at Gawra.

Continuing excavations on the lowermost step of the trench on the eastern slope revealed a second building layer of LCH 3/Late Uruk date. The outline and orientation of the buildings is similar to that of the upper building phase uncovered the year before. The full contents of a house were represented here, with complete vessels – some with their contents and tools lying on the floor. The pottery technology indicates a clear Syro-Anatolian tradition while the forms reflect close relations to the contemporary Euphrates Uruk culture.

In addition to excavation, a second season of survey work in the Kilis province continued with the investigation of the mountainous areas to the west and north of the Kilis plain. To date, 101 sites of different periods have been registered, and systematic surface collection was carried out at the middle palaeolithic site of Katirtepe on a basalt plateau above the Kilis Plain, where palaeolithic artifacts were found scattered over an area of more than one square kilometer.

Besides the annual excavation report (Özgen, Helwing, Engin 2002a), a second extensive report on the excavations of 1997-2000 has appeared (Özgen, Helwing, et al. 2002), as well as the first report on the survey (Özgen, Helwing and Engin 2002b).

Tell Atçana-Alalakh/Amuq Valley Regional Project: Aslıhan Yener from the Oriental Institute Chicago continued with preparations to excavate at Tell Atçana-Alalakh. The environement of Tell Atçana and Tell Tayinat was briefly surveyed, and with the use of Corona satellite images, three small previously unknown settlement sites of Hellenistic to Islamic date were found in the immediate vicinity. A second result of these investigations was the detection of another branch of the Orontes River running east and north of the modern river's course, dating to the Islamic period.

A new topographic map of Tell Atçana was drawn, on which the location of the old trenches could be established and corrections added. The deep sounding was cleared and datable material, pottery and radiocarbon samples, were taken, providing a date of 1530-1490 cal. BC for the layer V/IV palace. Material stored in the old excavation house was moved to the muse-

um's depot, thereby providing an opportunity to catalogue and photograph numerous objects. This catalogue of objects will be available on the internet soon.

The survey project in the Amuq plain continued under Tony Wilkinson's direction, recording 287 archaeological sites so far. A major focus of the 2001 season was the uplands bordering the plain to the southwest in the vicinity of Narlica, and the foothills of the Amanus mountains. It can be shown that these uplands, which appear to have been occupied by small dispersed settlements in the Roman-Byzantine period, did not form an isolated enclave but were part of a complex and coherent system reaching from the plains up into the mountains.

Analysis of Corona satellite images helped to further trace an ancient water canal system stretching throughout the central plain. The canals had been known before, but their early dating to the Late Iron Age could only now be established, comparing the ancient course of the Afrin river from which the canals were fed, with their course.

There are several new publications on the Atçana - Amuq project: Yener, Harrison, et al. (2002); Yener (2001); Wilkinson, Friedman, et al. (2001).

Kinet Höyük: See Gates (2001, 2002).

Tarsus/Gözlükule: H. Özbal and E. Kuruçayırlı from Boğaziçi University sampled 260 metal objects of the 3rd and 2nd millennia BC from the old Tarsus/Gözlükule excavations stored in Adana museum. Results show a trend from the early use of copper and arsenic copper toward tin bronze in the Later Bronze to Iron Age. Of note is a seal of EBA II date (Goldman) that contains 10,32% antimony.

Porsuk Höyük: Renewed investigation of the important site of Porsuk Höyük

were carried out by Oliver Pelon in 2001. The site is now identified with the city TUNA or ATTUNA. The Assyrian campaign annals mention the destruction of the city in 836 BC. The site is known for its Hittite hieroglyphic inscription naming the god Sharma, studied by La Roche and Hawkins.

The Porsuk Höyük is now a mound on highly strategic high pass of the Cilician Gates, backed by the Taurus Mountains. It measures 400m by 180m, with a surface area of 40,000m² and, reaching to a height of 20-30 meters, it dominates the valley in which it stands. In antiquity, it served as a fortified Hittite stronghold, protecting both access to Inner Anatolia, and the silver mines at Bolkar Maden. That the site was indeed involved in metal processing is proven by finds of moulds and lead ingots.

Investigations of the fortification system revealed superimposed walls, with a mudbrick wall standing on Hittite foundations, followed by a stone wall in the Early Iron Age. In the Hittite levels, lead ingot moulds were found and evidence of Hittite occupation was found in the west and east of the site. Dendrochronology samples were analyzed by Peter Kuniholm and dated to the seventeenth century BC - the period of the Hittite Old Kingdom. The Hittites had clearly attached considerable importance to the site at an early date.

From the Iron Age, a wealth of decorated pottery was found from the Middle Iron Age but there is no evidence of a Phrygian power here, despite finds in the surrounding area.

Other Sites

Giricano. See below, under Iron Age.

Sos Höyük-Erzurum. A number of publications have appeared including the preliminary report on the 1998-2000 seasons (Sagona and Sagona 2000), the physical anthropology of the skeletons found (Parr et al. 1999), and a preliminary ethnoarchaeology report (Hopkins 1999).

Kusaklı Höyük - Sarissa. Work at Kuşaklı Höyük, identified with the Hittite city and administrative center Sarissa, directed by Andreas Müller-Karpe from Marburg University, brought new insights into the internal chronology of the Hittite city. Besides extensive restoration work in Buildings A, B and C, the focus of the 2001 excavation was Building D, a temple built by Kutsili or Hantili. Dendrochronological analysis by Ian Kuniholm now allows a date for the foundation of the temple of the weathergod, Building C, to be given as 1529 BC. The foundation of the Upper Town had therefore occurred at an unexpectedly early date. The most exciting find of the season was a large cuneiform tablet found near Building D that provides a detailed description of rituals to be carried out in the honor of Ishtar and Tannili. A 2 m high stone stele showing Kurunta on a deer was recovered from the old cemetery.

On the top of the acropolis is a circular defensive wall and small Iron Age houses, both inside and outside the walls, dating from the sixth century BC. Some poorly fired fragments of cuneiform tablets were found. The architecture and chronology of the temple is now linked to that of Boğazköy. The site was hit by an earthquake in the 14th century BC.

Eastern, Northern and Central Anatolia

Hüseyindede Tepesi. Tunç Sipahi and Tayfun Yıldırım from Ankara University proceeded with work at the Hittite settlement Hüseyindede by further clearing rooms of buildings I, IV and V. Excavation of Building IV recovered pottery from Rooms 8 and 9. The as yet largely unexplored Building 6 was also excavated. Here the most northerly part of the building

was cut into the bedrock and because the buildings are erected on uneven bedrock, differences of elevation of up to one metre occur within a single building. Terraces and steps were constructed to connect the different levels. On the summit of the hill was a rectangular building but this had been disturbed by the construction of a roman tomb.

In the pottery, parallels could be made with Old Hittite forms from Boğazköy, Inandık, Alaca Höyük and Osmankaya. A new fragment of relief vase was also found Building IV, similar to that from Inandık. It shows a cult scene with a human figure bending over a pot and can now be added to the other two cult vases from Hüseyindede.

For publication of the 1999 and 2000 seasons, see (Yıldırım 2001) and Sipahi and Yıldırım (2002), respectively. The first Old Hittite relief vase found at the site has also now been published (Sipahi 2000).

Küllüoba. The site of Küllüoba, 35 kilometres south of Eskişehir, is excavated by Turan Efe. In 2001, operations here resumed in the main east and west trenches.

The western trench is a deep sondage that has revealed a long stratified sequence stretching back from the Early Bronze Age to the Late Chalcolithic, and resting on natural. The architecture here consists of a bastion on the North-west corner and evidence of contiguous buildings. In places, mudbrick walls survive to a height of over two metres and the remains of doorways could be seen. The black and red pottery was found in typical EB forms such as one- and two-handled jugs and cups and has parallels at Beycesultan.

In the eastern trench, excavation of the East gate area, zig-zag defensive wall and associated buildings continued. A multi-roomed building complex around a courtyard has been identified here. From the gate, one would cross the court to the building. This arrangement parallels that at Troy 2c, and may be a feature of western Anatolian sites. The shallow bowls and depas cups found here also have parallels at Troy. In the North-east corner an oven with numerous in situ pots was found. Other finds included large and small pyramidal loom weights, toggle pins and needles. A foot-shaped stamp seal has parallels at Konya-Kara Höyük and Tarsus. With contacts ranging from the Troad to Cilicia, Küllüoba was a very well-connected site in the Early Bronze Age.

See Efe and Ay (2000) and Efe (2002).

Acemhöyük. To follow on from geophysical survey and excavations at, work under the direction of Aliye Öztan continued in 2001 with excavations in the centre of the mound.

From the first level of the site rectangular houses built of mudbrick were found. One of the buildings had a doorway with a socket for the hinge in the floor. In a corner of one room were found 21 pyramidal terracotta loom weights. Also found were sections of terracotta pipe from a drainage system. These pipes have parallels from the Hittite Imperial period at Boğazköy but this was the first time they had been found at Acemhöyük. Other finds included pottery and bone tools.

In the second level of the site the architecture again consisted of rectangular mudbrick buildings. Finds included pottery (cups, plates and two-handled cups), spindle whorls, bronze pins and a lead ring. In the remains of a broad burnt building, in room 9, a bulla with seal impressions was found and, in room 12, handled pithos jars and three bronze pins. Other finds include a rock crystal fragment and a 2.5m platform in the cent-

re of a room. From the timbers of the roof of this room dendrochronology samples were recovered.

For a report on the 2000 season see Öztan (2002). A report has also been published on a project to remove and conserve a wooden door found during excavations in 1999 (Kökten Ersoy 2002).

Ikiztepe. The focus of research for Onder Bilgi and his team in 2000 was the social anthropology of the numerous burials discovered across the 200m by 200m excavation area. Burials of male and female adults and children have included grave goods such as beads and rings made of bronze and lead. For the most part, the grave goods were modest, with one male grave accompanied by a bronze spear being an exceptional find. Other finds included spindle whorls, loom weights, fragments of figurines and bone and stone tools. The pottery included bowls and jugs and can be dated to the Early Bronze Age (c. 2700 BC). In general there were plentiful bronze artefacts across the site and research is being carried out into the use of arsenic in bronze-making. There is evidence of wooden architecture and no use of mudbrick at the site.

For a report on the 2000 season see Bilgi (2002).

Kültepe-Kanish. In 2001, excavations into the rich and ancient culture of the trade centre of Kültepe-Kanesh (Neša) continued under the direction of T. Özgüc. Here excavations centred on the first and second levels of the karum, the trading centre below the mound and a road with water channel. In the first level, a house was found with complete in situ pots and an oven. Beneath this in the second (older) level burnt wood, a hearth and two tablets were found. The tablets were in a good state of preservation, in envelopes with rolled sealings. Other finds include 4 cylinder seals and one stamp seal; faience figurines of a head and a lion; five bronze pins; a bronze bowl; and an axe head.

The most interesting development of the 2000 season comes from the pottery. A number of complete bowls, jugs and cups were found, including local forms and, for the first time, Hittite types. The type site for third millennium pottery is Alaca Höyük, typified by the gagara form of spouted jug, numerous examples of which were found here. A painted krater, fruit-stand and typical Hittite animal head rhyton were also found.

Recent publications include a number of pottery studies including Syrian bottles from the Karum (Emre 1999), animal representations on the Kültepe pottery (Kulakoğlu 1999), kantharoi (Emre 1998) and ring-shaped vases (Kulakoğlu 1998).

Kaman-Kalehöyük. The objectives of the 2001 excavations, under the direction of Sachihro Omura, continued to be the stratigraphy of the north trench, the architecture of the south trench and the investigation of the west trench.

On the north side, four levels have been identified. In Iron Age (Levels 2 a-d), excavation of the well preserved Building 14 uncovered pottery, fibulae, and a bronze arrowhead. In the Middle Bronze Age (levels 3 a-c), small finds typical of the period included burnt pottery, a seal, bullae, gold ornaments and Hittite Imperial pottery. From the Early Bronze Age (level 4) pottery and gold earrings were found. Resistivity survey was conducted around the base of the mound. Excavations here have so far shown this to be a typical Anatolian settlement.

The most significant find of the 2001 season was the first written text from the site. The tablet, found in level 3c, measures 5cm by 4cm by 1.5cm. It is covered completely with writing on one side, with only two lines on the reverse; 14 lines in

total. It is comparable with Old Assyrian texts of the 18<sup>th</sup> and 19<sup>th</sup> centuries BC. This significant find shows that the site at Kamen-Kalehöyük was a part of the Assyrian trade network in Anatolia and promises to tell us a great deal more about the site.

Reports on the 2000 season excavations and on geo-archaeological research at the site have now appeared (Omura 2002; Omura and Kashima 2002).

Boğazköy. Excavations at the Hittite capital continued in 2001 under the directorship of Jürgen Seeher.

Excavations continued to focus on the pools, where resistivity survey and trial trenches had identified a fifth pool, north of pool number one. Geophysics in this area is impeded by the volcanic stone which interferes with geomagnetic survey, although resistivity works well, albeit at a slower pace. Sondages here revealed a rich very clayey soil. Computer visualisations of the pools demonstrate what an impressive arrangement they would have made with two pools (nos. 3 and 4) measuring 70 metres in length; another two pools (nos.1 and 5) measuring 40 metres in length; the a final pool (no. 2) being round in plan. In the centre of these was a rectangular silo, which parallels those found recently on Büyükkaya and could be seen to have had a stone floor and walls made of organic material.

In 2001, analysis of the pottery recovered from the pools began. A huge number of broken pots had been recovered from the bottom of the pools, yet no single complete vessel was found. A number of "libation arm" rhytons were found and a total of 60 spindle bottles. The pottery dates from the 14th to 15th century BC and has parallels at Kuṣaklı. This part of the site must have been enclosed by the city walls and geophysical survey was conducted to locate them.

Preliminary reports on the 2000 season have been published in Turkish and German (Seeher 2002 and 2001, respectively) and final publications on the architecture of the Upper City are also now published (Neve 1999, 2001).

Alaca Höyük. In 2001, excavations again focussed on the area to the east of the site behind the Mavi Saray (Blue Palace). Here was a long wall, of which 65 metres have so far been found, built of casemate masonry. Beside this wall was a range of rooms and understanding the stratigraphic relationship between these and the Mavi Saray was one of the key objectives for this year. In the smaller of the three rooms so far investigated, signs of timbers which once sat between the stone foundations and the mudbrick upper section could be seen, a typical feature of Hittite architecture. In the large room, a post setting was found in the floor. The rooms had layers of fill containing painted Hittite pottery, including part of an animal rhyton, and a burnt layer. The latest pottery was typical late Phrygian. Other finds included an animal head figurine fragment, crescentic loom weights, decorated bone, two silver pins and bronze nails.

On the 2000 season see Çınaroğlu and Genç (2002).

Ortaköy-Šapinuva. Excavations, directed by A. and M. Süel, continued across a number of areas in 2001.

In the western trench, architectural evidence in the form of walls and burnt mudbrick was found, as well as hearths and pottery, possibly suggesting the existence of a monumental building here. In the northern area, an oven was found with a burnt clay floor and high stone walls, possibly a pottery oven. In the eastern trench, a wide area was cleared and an extensive stone flagged road was found. Pottery included pithoi, cups, plates, two-handled pots and a double pot

with goat's head protome, similar to one found in 2000. Other finds included spindle whorls, bronze pins and a bronze bracelet.

In the south-east of the site, geophysics and sondages had identified a monumental building, now one of several found at Ortaköy. A stone relief of a male figure armed with bow and quiver and facing left was found. Unfortunately, the head is missing but it appears to have been a monumental door jamb. A hieroglyphic stamp seal impression was also found. It is known from letters that the Hittite Great King had a residence at Šapinuva and these new discoveries would appear to confirm this.

See Süel and Süel 2002.

Paphlagonia Survey: Roger Matthews from the University of London presented an overview on the results of the Paphlagonia survey, carried out between 1997 and 2001 in the Ilgaz, Merkez and Çergaz provinces of Northern Central Turkey. After completion of a general reconnaissance (extensive survey), ten areas were selected for intensive field walking survey using sample transects. Among the visible monuments recorded were hilltop sites, tumuli and flat settlements. To these can be added flint and pottery scatters that appear to be residue from temporary settlements.

To summarize, there is an almost complete lack of prehistoric sites, with only scattered Middle Palaeolithic finds recorded. Any evidence of Upper or Epi-Palaeolithic and Neolithic occupation is completely lacking. The Chalcolithic is sparse, and it is only in the EB period that extensive occupation begins in locations close to natural resources, such as salt or flint. The later Bronze Age occupation is represented by medium to large settlement mounds sited at strategic locations. Tumuli are constructed on the ridges of natural hills, in order to be vi-

sible from a distance. This also indicates that a high degree of deforestation had already taken place in the Iron Age. Intensive occupation during the Roman period appears to relate to the establishment of the pax Romana. Large flat Roman and Byzantine settlements are established close to Bronze Age mounds that were then used as cemeteries. Many Byzantine settlements continue into the Early Turkish period.

A report on the 2000 season has appeared (Matthews 2002).

Külhöyük: The Museum of Anatolian Civilizations in Ankara concentrated on cleaning and protection work at this fortified Hittite site in 2000 (Demirdelen 2002). Results of the 2001 season will be presented in the next newsletter.

Bulamaç Höyük: Investigations at Bulamaç Höyük, a site in Erzurum province that had formerly been excavated by H. Z. Koşay, were resumed in 2001 by Semih Güneri. So far, the pottery collected is red and black polished ware, typical for the Bronze Age in Northeastern Anatolia.

Black Sea Project: A report on the 2000 season has appeared (Ballard et al. 2001).

Western and Coastal Anatolia

Aydın and Muğla Survey: Sevinç Günel of Hacettepe University, Ankara, very kindly provided the following report on her new project:

"Research was carried out within the 'Aydın and Muğla Provinces Archaeological Survey' project area. This area is bordered by the Küçük Menderes (ancient Cayster River) and Aydın Mountains to the north, and includes the Büyük Menderes (ancient Maeander) plain and the Menteşe mountains range to the south. In the south and southeast the research area is confined to the limits of Muğla province. The two Meander rivers, surro-

unded by high plateaus to the north and south, and the geographical structure that they create represent a crucial natural passage connecting the Aegean to its west and Central Anatolia to its east."

"At present, information about the Prehistoric period in this region is very scarce because of the large number of Classical and later settlements, whose remains govern the appearance of the current land surface and have been the main focus of academic research in the region. Therefore, the main goal of the current survey project is to bring to light the preclassical cultures of the area and thereby fill in this cultural gap."

"Archaeological reconnaissance in 2001 started from the centre of Aydın Province, including Sultanhisar to the east, çine and its surroundings to the south and Incirliova, Germencik and Kuşadası to the west."

"The mound of *Dedekuyusu Höyüğü*, is west of Aydin and now, due to the rapid expansion of the city, forms part of its suburbs. The prehistoric settlement here extended north-south. From the site surface pottery sherds of Middle Bronze, Early Bronze and Late Chalcolithic date have been collected."

"To the east of Aydin, in the Sultanhisar region, 4 km south of Salavath lies the mound of Bahçetepe Höyüğü. This displays the features of an important Early Bronze Age settlement site. The surface treatment, decoration and forms of an important ceramic group composed of potsherds from the mound is representative of developments in the EB pottery of western Anatolia. Ceramic finds of the 2nd Millennium B C were also encountered in the olive groves to the north of the mound."

"35 km southeast of Aydın province, around çine an important settlement of prehistoric date has been discovered. Te-

pecik, which lies 3 km west of "ine near Karakollar village, has a höyük (mound) extending north-south. The ceramic and obsidian blades collected from Tepecik Höyüğü and especially from the flat plain to the south, display a clear settlement continuity from the Late Neolithic Period, through Chalcolithic to the Bronze Age. Pottery shows that this continuity of settlement extended to the Archaic and Classical periods."

"Research in the western Aydın province discovered new prehistoric centres. The first site of these centres is situated west of Aydın, beside the Incirliova-Tire road in Köprüova village. Besides pottery, great numbers of long narrow obsidian blades, unworked or partially worked obsidian pieces and rock crystal were found. Hand-axes made of different stone materials were also encountered. Undoubtedly, these finds denote the presence of a well developed and sophisticated chipped stone industry at Köprüova."

"Another site which provided prehistoric materials was Akçaavlu near Kırazlı village, 11 km east of Kuşadası in western Aydın. Çatalkaya, which takes its name from the fork-like steep rocks facing each other, has an acropolis-like character. On the acropolis, pottery sherds of the 2nd and 3rd millennium BC and obsidian blades were encountered. Classical painted sherds represent the latest material from the acropolis."

"Kırkayak Merdiven Tepe, which lies northeast of Çatalkaya, is another findspot. The site is remarkable for the long time span it demonstrates from the Hellenistic, through the Roman period and probably into the Byzantine. The steep natural rock with its north-south extension forms an even surface on its western side. The rock face has rock-cut niches and a staircase leading to the rock summit. In front of the rock, a Hellenic wall structure is also observable."

"The Bronze Age chronological development of the areas surveyed through the 3<sup>rd</sup> and 2<sup>nd</sup> millennia BC as well as the Chalcolithic and Late Neolithic periods has been rebuilt."

Gökçeada (Yenibademli Höyük). For a report on the 2000 season see Hüryılmaz (2002). A study of the terracotta hooks from the site, in Turkish with German summary, has also been published (Hüryılmaz 2001).

Troy (Troia). The fifteen year long Troia-Projekt is now approaching its end, and its director, Manfred Korfmann, can surely look back on those years with much satisfaction as final publications of those excavations begin and their impact begins to be absorbed by the academic community.

Fieldwork in 2001 included restoration and conservation work as well as some excavation. Excavations included investigation of the 'Troia Maritime Culture' (Troy 4/5 levels). In quadrant a 5/6 in situ pottery was found. On the mound a 13th century BC entrance, the oldest yet found, was investigated and a stone stele found. In the lower town geophysical surveys were conducted to trace the street plan of Troy 6. Examination and analysis continued in the water caverns, now dated by sinter analysis to the third millennium BC.

The results of the 2000 season are now published in Turkish (Korfmann 2002) and in English and German (Korfmann 2001). Most importantly, the results of the excavation of "Pinnacle" E4/5 is now published, providing important stratigraphic insights into phases Troy II to Troy V, and which largely confirms the original stratigraphy established by Schliemann and Blegen (Mansfeld 2001). An exhibition catalogue has also been published (Behr, Biegel, et al. 2002).

Panaztepe. Excavations continued at the cemetery of the important second millennium BC site of Panaztepe, on the north side of the Bay of Izmir, under the direction of Armağan Erkanal. The objectives for the 2001 season were to continue the investigation of the boundary wall and to further examine a stone platform found during the 2000 season.

The excavations uncovered four pithos burials and a stone cist grave, the first example of this type of burial at the site. Grave goods included pottery, in the form of two jugs, beads and a very corroded bronze pendant.

The most significant find of 2001 was a second *tholos* tomb, partially overlain by the stone platform. The *tholos* was oriented northeast-southwest and contained pottery, beads and a decorated spindle whorl. This tomb's discovery emphasises the unique importance that this site holds and its stratigraphic position under the stone platform points to there possibly being two phases to the Panaztepe cemetery.

For a report on the 2000 season see Erkanal, A. (2002).

Liman Tepe. Excavations at this multi-period site, which has levels from the Neolithic to the Late Bronze Age, were continued in 2001 under the directorship of Hayat Erkanal. Archaeological research was conducted in three areas: underwater survey of the submerged defensive wall, and north and south of the modern road that divides the site in two.

The underwater survey (directed by Michal Artzy of Haifa University) continued the topographic survey of the seabed below Liman Tepe and excavated a 1.5m deep sondage.

North of the road, Early Bronze Age walls were uncovered, including a series of three long houses and a road, reflecting an area of dense house. Finds included a bronze pin, bowls and a small quantity of gold.

South of the road, exciting finds were made in the area east of the EB3 ramp and gate construction found in the previous year's work. From a well in this area came a Mycenaean *psi* figurine and pottery. Here a corridor-like construction snaked along between walls with stone foundations and mudbrick upper sections and then down five steps to a well. In the corridor were found tripod bowls and cups and worked bone.

For published results of the 2000 season, see Erkanal and Artzy (2002).

Miletos. In 2001 work on the Bronze Age excavations continued with a study season. A report on the 1998, 1999 and 2000 seasons has been published in Turkish (von Graeve and Niemeier 2002). A general history of Miletos, which includes a chapter on the prehistoric and protohistoric settlement has also recently been published (Greaves 2001).

Latmos. A preliminary report on the Hittite inscription fund in 2000 has now been published (Peschlow-Bindokat 2001).

### Torbalı-Bademgediği Höyüğü:

Excavations at Bademgediği Tepesi including finds of Mycenaean pottery, gold-wash pottery and Middle Bronze Age pottery are reported in Meriç et al. (2002). Three LH IIIC Mycenaen vases supposedly found near Torbalı have also been published (Meriç and Mountjoy 2001).

Yassıkaya. For a report on the 2000 rescue excavations see Efe and Mercan (2002).

Çavlum Köyü Mezarlık: In 2001, eight new trenches were opened by excavator A. Nejat Bilgen. Sixteen new graves were found, bringing the total up to almost 60. Burial rites included *pithos* burials, which form the majority, as well as earth graves and cist graves. Finds include beads, earrings, knuckle bones, shells and bronze pins. Exceptional finds include: a stamp seal in grave M50; seven astragali bones and five bone rings in grave M58; and two bronze pins with small ram/goat terminals in grave M62.

Smaller pots were used for the burials of infants, whereas large *pithoi* were used for adults. *Pithoi* burials were sealed with stone slabs and the cist graves were made of large slabs, with smaller stones being used to cover them. Restoration work was also carried out on some of the *pithoi*.

For a report on the 2000 season see Bilgen (2002).

### Isparta-Harmanören Mezarlık:

Mehmet Özsait continued excavation of the EBA cemetery of Harmanören on the slopes of Tavuşantepe, bringing the total number of *pithos* graves uncovered to 48. Usually, the opening of the *pithoi* face east and are covered with a stone or vessel. For the first time, bowls were also found being used as lids. One of the tombs unearthed in 2001, C3, contained 3 skeletons and was covered by a large stone slab. Among the material collected are EB II-III pottery forms typical of the area. These include bowls with a painted red cross inside, and jugs of the "Atatepe type".

A summary on the 1999-2000 seasons has appeared (Özsait 2002).

Iasos. The Middle Bronze Age sequence at Iasos is no longer thought to date from the Middle Bronze Age, but dates instead from the Late Bronze Age (LM1B) period. Potters' mark on one pot fragment shows character L81 (81b) of the Minoan Linear A script, and is comparable to one from Keos. A 20 cm thick layer of tephra from the eruption of the Santorini volcano was also found (Berti 2002).

### IRON AGE

Eastern Anatolia

Anzaf Kalesi. Situated 11 kilometres north west of Van, the upper and lower towns of Anzaf have been the subject of research by Oktay Belli and Alpaslan Ceylan.

In the Lower Town, there was a large military complex. It is of early date and was built without bastions. It has a rectangular plan with walls four metres thick, built of mudbrick and supported on low foundations. In 2001 the first skeleton was found here.

The Upper Town was the more important of the two. Here, there were three city gates, a situation similar to Boğazköy. In 2000 and 2001, excavation focussed on the pithos magazines containing storage jars inscribed in cuneiform with their contents: oil, wine and sesame oil. Very little iron survives at the site but analysis has begun of the bronze items, and is being conducted by the German Minin, Museum Bochum.

At Karmir Blur the complete contents of the magazines were listed. Such list did not exist at Anzaf, although inscriptions on pottery and metal had been found. A lucky find in 2001 was a clay letter found in good condition, inscribed on the front and back. Its interpretation will be important for understanding the history of the site.

See Belli and Ceylan (2002) for a report on the 2000 season.

Ayanis. This high, defensible site, surmounted by a temple, has been excavated by Altan Çilingiroğlu, whose excavations in 2000 centred on the south side of the temple courtyard.

In the courtyard, the *cella* of the Temple of Haldi was surrounded by a roofed colonnade supported by piers of basalt and andesite blocks, topped by mudbrick and wood. The rooms leading off from the courtyard were of a standard 4m by 3.5m size, built of mudbrick and timber. A canal, the second to be found so far, beside the temple building may have been for rainwater. The building was destroyed in a massive conflagration, preserving the timbers of the building very well. This allowed for detailed study of the mortise-and-tenon joins used by the ancient carpenters. 98.6% of the timber used was pine, with a small minority of elm. These carbonised timbers were dated by dendrochronology to 673 BC. The dates from the whole of the site were remarkably consistent and show that there was no phasing to the construction of the site (see Dendrochronology, below).

In one room, 14 bronze shields were found on the floor, one of which was decorated with a central rosette flanked by lions. Urartian shields represent a new metal-working techniques. One shield bore an inscription naming king Rusa II. Other finds included a bronze quiver containing arrows, spearheads and possible carpentry tools.

Geophysical survey and trial trenching on the hill beside the acropolis showed evidence of terraces and buildings. For a report on the 2000 season see Çilingiroğlu et al. (2002).

Van Yoncatepe. Excavations at the Urartian castle and necropolis of Yoncatepe, continued in 2001, under the direction of Oktay Belli.

On the acropolis, the walls were up to nine metres thick in parts. Around the central courtyard were storage depots, containing sesame oil and wine, that were destroyed in a massive conflagration.

In the necropolis, analysis has continued to reconstruct the society and economy of the site. The pottery in the necropolis is different to that of the acropolis in that it contains only local red pottery and none from North-western Iran. There were remarkably few bronze artefacts found in the necropolis. Metal artefacts found here include: iron needles, knives, bronze rings, silver items. A lead ring, and the first example of gold earrings.

The 2000 season is published by Belli (2002).

Altıntepe (Van): Analysis has been carried out on a bronze sword, bent into a U-shape, which came from Altıntepe and which showed traces of organic remains on it (Tuğrul and Başaran 2002).

Elazığ/Bahçecik: Here, a new Urartian inscription has been found and published (Payne and Sevin 2001).

Tavium survey: The fifth season of survey work in Tavium concentrated on closer investigation of the Tavium - Büyükkale area. Christoph Gerber reports that the slope of Büyükkale revealed evidence for occasional landslides, despite successive terracing, attested by geomagnetic mapping. The oldest occupation of Büyükkale appears to date back to Chalcolithic times, with Chalcolithic and EB pottery being collected there. The material belongs to the Çınarderi and Mercimek groups and therefore represent a local variety of the Alishar intermediate painted ware.

A report on the 2000 season is available (Strobel and Gerber 2002).

Giricano. Excavations at the site of Giricano, in the Ilisu Dam area are directed by Andreas Schachner. In 2001, excavation of the Middle Assyrian levels continued, following the discovery here of 15 tablets in the Iron Age layer in 2000. Assyrian seals were found but no more tablets. From the Early Bronze Age, no in situ EB1 finds had been made up until 2001, but in this year the excavators had more

luck and two complete pots and a stone setting were uncovered.

Hakkari. See Özfirat (2002).

Central and Western Anatolia

Kerkenes Dağ: Geoffrey Summers writes that the 2001 season at Kerkenes focused on geophysical prospection, recording and finds restoration and conservation.

The Cappadocia (SE) Gate, the front of which had been cleared in 1999-2000, was digitally photographed and surveyed to produce a new architectural reconstruction. The group of hand-made burnished vessels, which had been found crushed and burnt in Structure C at the eastern end of the Palace Complex, was found to comprise a big conical bowl with a pair of drop handles and a small pithos, each provided with a large flat lid, and a fine trefoil juglet. A group of red slipped jugs found nearby were found to have a range of incised marks "reminiscent of alphabetic letters", suggesting the possible use of writing at Iron Age Kerkenes.

Very substantial progress was made with the geomagnetic survey of this 2.5 km² site, permitting completion in 2002. Experimentation with resistivity survey in the centre of the site, which is level and relatively stone free, proved that very detailed imagery can be obtained before the soil dries out in early summer. New plans reveal rows of cell-like rooms as well as two-roomed and tripartite buildings. Two large buildings, apparently with open porches and possible central hearths, are reminiscent of megarons.

Hydrological and geomorphological studies suggest that the reservoirs at the site were designed to be filled by underground seepage rather than by surface runoff. This may also have been the case at Boğazköy and such reservoirs might perhaps have been an Anatolian tradition which continued into the Iron Age.

In addition to the bibliography of recent publications (Summers et al. 2002; Aydın et al. 2002; Baturayoğlu 2002; and Baturayoğlu et al. 2002) unpublished reports, including a report on the 2002 season, together with issues of *Kerkenes News*, can be found at:

http://www.metu.edu.tr/home/wwwkerk/index.html.

**Boğazköy.** There is a new publication on the Iron Age Phrygian pottery of the site (Bossert 2000). For recent developments in the Bronze Age, see above.

Gordion. Important new developments were made in the chronology of Gordion (Director, Kenneth Sams) in 2001, following a reassessment of the site by Mary Voig0t, conducted since 1993.

Carbonised seeds from the Early Phrygian destruction level were dated by radiocarbon analysis to 830-800 BC. This date is a full one hundred years earlier than had previously been thought and this destruction can now no longer be associated with King Midas and the Kimmerians.

Furthermore, timbers from the 'Tomb of Midas' mound at Gordion were dated to c. 740 BC. This is too early for this tomb to be the tomb of Midas himself, who was mentioned in Assyrian texts in 709 BC, and it may now be considered to be the tomb of his father Gordios.

Porsuk Höyük: See above, under Bronze Age.

### DENDROCHRONOLOGY

Many important new developments

were made in the field of dating in Anatolian archaeology in 2001, largely thanks to the work of the indefatigable Peter Kuniholm of Cornell University. Under his direction, the Eastern Mediterranean Dendrochronology project continued a large scale comparison of tree ring sequences from Italy, Georgia and Lybia, and compared them to German and Turkish oak sequences.

A total of 136 tree-ring sequences from timbers of pinus silvestris/nigra from Van-Ayanis were used to create a 347 dendrochronology sequence for the site. The date of 673 BC for the temple building coincides with the reign of Rusa II, named in inscriptions from the site, given in Assyrian texts (685-642 BC). This shows that the temple at Van-Aynis was built early in Rusa II's reign. Analysis of the timbers also showed that the building of the site all took place in a single phase. For details on the excavations at the site, see above. The Ayanis chronology has now been linked into the Aegean Dendrochronology Project's wiggle-matched Bronze Age-Iron Age master chronology.

Other important dendrochronology dates were also given for Ortaköy-šapinuva (see above), where a date in the early 14th century BC was provided by carbonised timbers, and at Acemhöyük (see above) a date of 1772 BC was assigned.

Very importantly, such detailed dendrochronological studies have been used to recalibrate radiocarbon dates across Anatolia, both up and downwards, with sometimes surprising results (see Gordion, above) (Kromer, Manning, et al. 2001; Reimer 2001).

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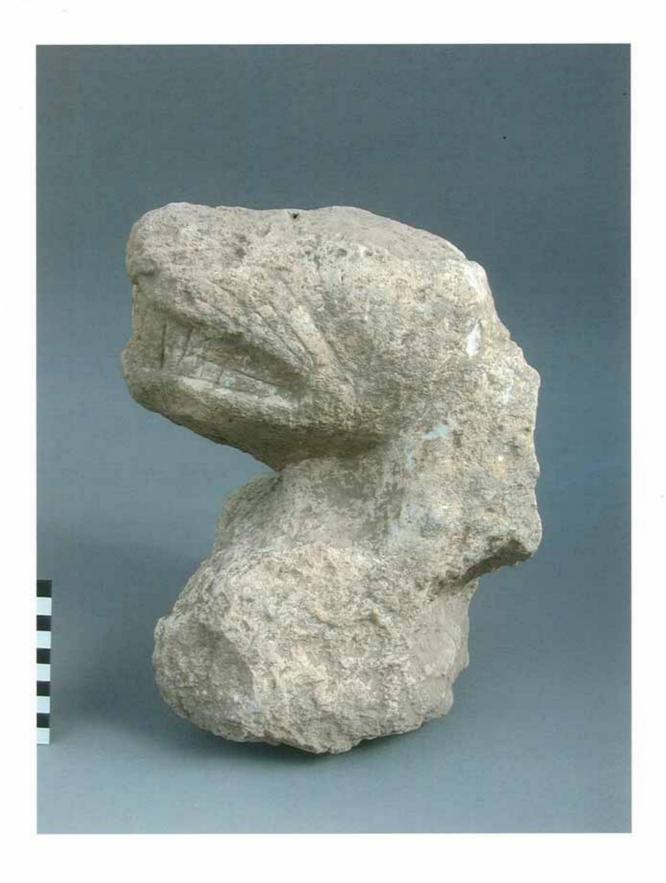


Fig. 1: Göbekli Tepe, layer III. Sculpture found in enclosure C (photograph courtesy Klaus Schmidt).

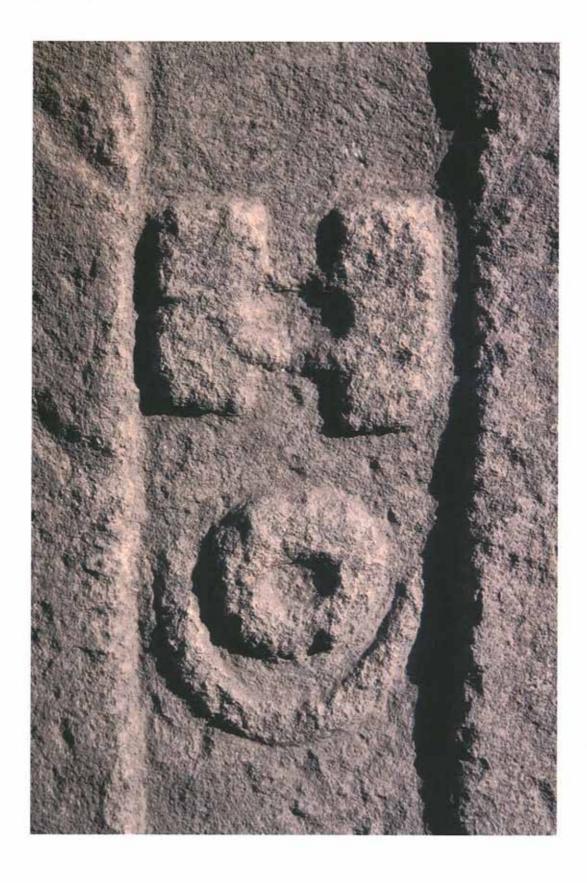


Fig. 2: Göbekli Tepe, layer III. Pictogram on the narrow side of one central pillar of enclo sure D (photograph courtesy of Klaus Schmidt).

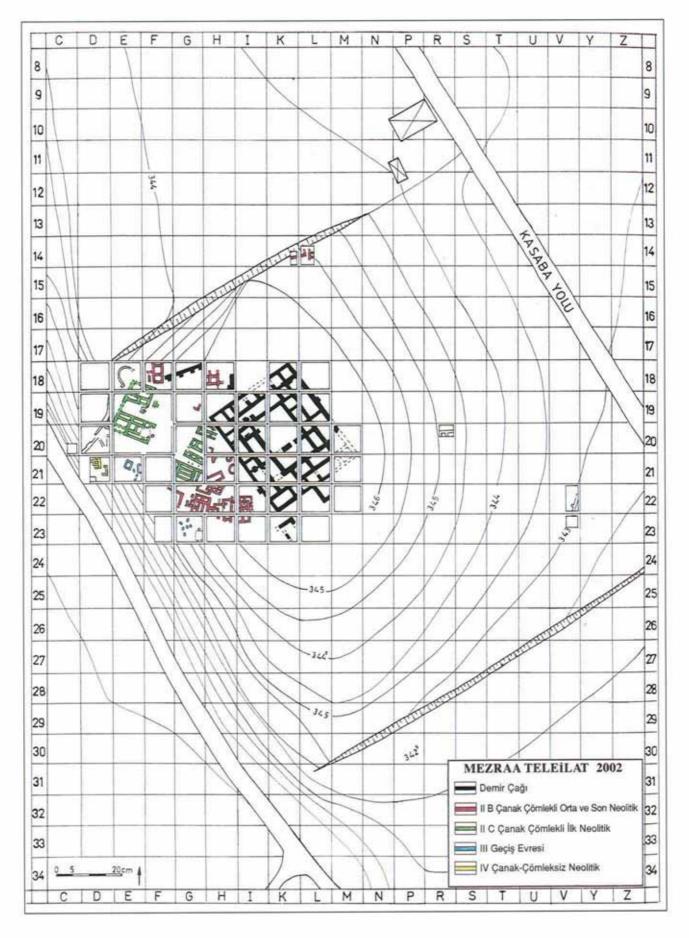


Fig. 3: Mezraa Teleilat. General plan of the mound (plan courtesy of Mehmet Özdoğan).

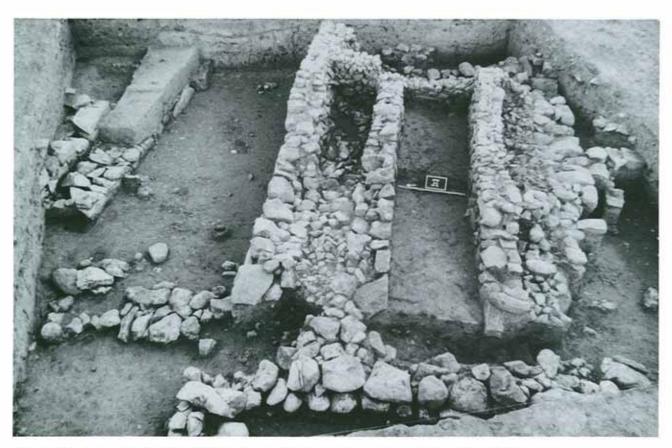


Fig. 4: Mezraa Teleilat. Corridor houses (photograph courtesy of Mehmet Özdoğan).

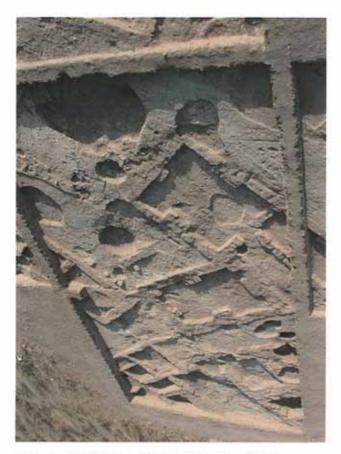


Fig. 5: Tell Kurdu. Northern area. Densly packed village houses (photograph courtesy of Rana Özbal and Fokke Gerritsen).



Fig. 6: Tell Kurdu. Stamp seals, Halaf period (photograph courtesy of Rana Özbal and Fokke Gerritsen).