

Archaeology in Turkey

MARIE-HENRIETTE GATES

In keeping with trends of this decade, the pace of archaeological research in Turkey (fig. 1) accelerated during 1993 with a notable sense of purpose and direction that is achieving excellent results.* For the past two years, and with the encouragement of the General Directorate of Monuments and Museums, regional surveys connected with established excavations as well as surveys investigating settlements in their environmental contexts are bringing precision to many aspects of the diachronic cultural map of Anatolia. This cultural inventory has prompted several independent projects, such as a complete catalogue of Miocene fossil finds in Turkey (E. Güleç and her associates), and a map of all Early and Middle Bronze Age sites (M. Korfmann). Others will doubtless follow.

Coordinated research on the topical concerns of the past few years is making good progress, precisely because a number of teams are investigating similar issues, discussing them regularly in conferences, and pursuing their surveys and excavations on the basis of fresh leads. For example, amphora production centers in a wide geographical and chronological spectrum (Sinop, Marmara area, Datça peninsula) are now receiving close attention, in tandem with projects on the other shores of the Black Sea. Thanks to the joint efforts of a comparable extended family of archaeologists, earlier Balkan-Anatolian links are also taking clearer shape, as reported in previous *AJA* newsletters. The pattern that emerged in 1993 from all the Neolithic–Early Chalcolithic northwestern Anatolian sites (Hoca Çeşme, Aşağı Pınar, Ilıpınar, Orman Fidanlığı, and even Kum Tepe) indicates that they were abandoned at the beginning of the fourth millennium B.C., and revived only centuries later (Late Chalcolithic–EB I transition). How can this gap be explained? Social pressures? Economic changes? New networks along the southern coast of the Black Sea? Similar questions, with less speculative answers, are also being asked at the great classical sites, whose Iron Age and Bronze Age foundations have become an integral part of their excavation programs. (Con-

ferences addressing Anatolia's relationships with her neighbors to the north and west are listed separately below.)

New directions in 1993 were taken in central Turkey, where research on the Hittites and their Iron Age successors is fast gaining momentum. The reactivation of work at two sites originally excavated by von der Osten (Alışar, Kerkenes Dağ) has increased the generous number started in 1992 (Gâvurkalesi, Külhüyük, Göllüdağ). New excavations at the two Hittite sites of Ortaköy and Kuşaklı already show exceptional promise, with Boğazköy the only peer for their monumental structures. Kuşaklı's 54-room temple, and a similar building still under excavation at Ortaköy, have in one season expanded the inventory of Late Hittite monumental religious architecture well outside the capital city. Early Hittite prototypes for these temples can be traced to Kültepe, as demonstrated by T. Özgüç (*IstMitt* 43 [1993] 167–74). Their central Anatolian successors in the Iron Age can be expected at Göllüdağ, which is now being interpreted as a pilgrimage sanctuary by its current investigator, W. Schirmer.

Given the energy devoted to most aspects of Turkey's cultural history, one should also stress that certain periods are being overshadowed, even neglected, yet need urgent help. While the Neolithic to Bronze Age phases in the southeast continue to receive systematic attention from salvage projects with problem-oriented agendas, the Roman and later periods are being overlooked. A potential victim is the frontier city of Zeugma, comparable to Dura-Europos in importance and its Anatolian counterpart for the meeting of Hellenism and the East. Zeugma will be flooded by the end of the century. Only a fraction of its rich archaeological remains will have been recorded by then, unless the current salvage efforts expand dramatically to the scale required by a 300-ha site. Archaeologists will otherwise find themselves obligated to express gratitude for the illicit digging that will have preserved mosaics, statuary, and portable treasures from destruction.

* This newsletter depends in large part on the 1993 fieldwork reports that were given at the 16th Annual Archaeological Symposium in Ankara (30 May–3 June 1994) under the auspices of the Turkish Ministry of Culture's General Directorate of Monuments and Museums. The Department earns the highest marks for organizing this com-

prehensive forum in which all of its researchers present their results. I am also grateful to the speakers, to the many colleagues who sent me summaries and photographs, to my associates at Bilkent University, and to Machteld Melink for her encouraging support. Liesbeth Wenzel is again responsible for the elegant map, with all my thanks.

The Byzantine period, discussed in a separate entry in this newsletter for the first time, is well served by survey and excavation projects along the coasts and on the plateau. In contrast, Istanbul's Byzantine monuments are suffering from neglect and, at times, deliberate damage. Their distress is vividly illustrated in figures 34 and 36 (below); but these are only two cases in an alarmingly thick file. The heightened tensions between the city's modern caretakers and this stage in its past resulted in the cancellation of a symposium, "From Constantine the Great to Sultan Mehmet the Conqueror," scheduled for August 1994 to celebrate the Sadberk Hanım Museum's exhibits. In a country that does not yet have a unified standard for cultural resource management, one can only hope that Istanbul will adopt a more protective approach. In this light, the independent initiatives of the Torbalı and Tarsus municipalities, and the lignite company at Seyitömer, to promote archaeological research in their districts are all the more admirable and merit the highest praise. Torbalı's mayor, Ertan Ünver, who launched the Metropolis excavations, expressed his "sincere affection and greetings to all those who appreciate the contribution of culture and art to peace and fraternity among peoples, and other universal values." May his ideals inspire others.

BIBLIOGRAPHY

Conferences. The 1992 annual reports on excavations, surveys, and scientific research given at the 15th archaeological symposium (May 1993) are to be published as *XV. Kazı Sonuçları Toplantısı I-II* (Ankara, forthcoming), abbreviated here as *KST* 15:1 and 15:2 (forthcoming); *XI. Araştırma Sonuçları Toplantısı* (Ankara 1994), abbreviated here as *AraşST* 11 (1994); and *IX. Arkeometri Sonuçları Toplantısı* (Ankara 1994), abbreviated here as *ArkST* 9 (1994). Reports for the 1993 season, the subject of this newsletter, were presented in June 1994 at the 16th archaeological symposium, but will not appear in print until 1995.

Reports presented at the annual meeting of Turkish museum personnel in April 1993 have been published as *IV. Müze Kurtarma Kazıları Semineri* (Ankara 1994), here *MKKS* 4 (1994). The museum excavations concern salvage and conservation projects.

Conferences addressing Anatolian issues, both directly and peripherally, were organized by institutes and universities in and outside Turkey. Anatolia's status within the Aegean world was among the topics examined at the Fifth Annual Aegean Conference (Heidelberg, April 1994), entitled "Politeia. Society and State in the Aegean Bronze Age." The Middle

East Technical University's Archaeometry Department hosted the 29th International Archaeometry Symposium (May 1994) in Ankara; abstracts, edited by A.M. Özer, were published as *Abstracts Archaeometry 94* (Ankara 1994), referred to here as *AbsArch94*. A three-day conference devoted to "the production and commerce of ancient amphoras in the Black Sea region" brought speakers from Russia, Greece, Romania, Bulgaria, France, and Turkey to the French Institute for Anatolian Studies (IFEA), Istanbul, in May 1994. The proceedings will be published. A NATO-sponsored conference on "Third Millennium B.C. Abrupt Climate Change and Old World Social Collapse" took place in Antalya (September 1994), to discuss worldwide climatological research from a broad range of specialist perspectives.

Earlier conferences have appeared in print: A. Çilingiroğlu and D. French eds., *Anatolian Iron Ages 3. Proceedings of the 3rd Anatolian Iron Age Colloquium* (Van, 6–12 August 1990) (British Institute of Archaeology at Ankara [hereafter BIAA], Monograph 18, Oxford 1994); and "Anatolia and the Balkans," held at the Dutch Archaeological Institute, Istanbul (November 1991), and published as *Anatolica* 19 (1993), edited by J. Roodenberg.

General publications. The "Arkeoloji ve Sanat Yayınları," a publishing house in Istanbul, specializes in reprinting venerable archaeological studies (such as O. Hamdy Bey and T. Reinach's *Une nécropole royale à Sidon*, 1892); and commissioning new guidebooks, site reports, and handbooks from archaeologists and excavation directors. Most (but not all) titles are in Turkish. Recent publications include O. Tekin, *Bibliography of Ancient Numismatics for Anatolia* (Istanbul 1993), and a series on Troy. They also publish the popular archaeological quarterly *Arkeoloji ve Sanat*.

An elegant publication with full reports on the Italian projects in Turkey has appeared in Italian and Turkish editions: F. Berti, D. De Bernardi Ferrero, M. Frangipane, and S. Lagona, *Arslantepe, Hierapolis, Iasos, Kyme. Scavi archeologici italiani in Turchia* (Venice 1993), abbreviated here as *Scavi*.

The Hellenistic, Roman, and Byzantine cultures of central Anatolia are the subject of an epigraphical and archaeological study by S. Mitchell, *Anatolia. Land, Men and Gods in Asia Minor* 1: *The Celts in Anatolia and the Impact of Roman Rule*; vol. 2: *The Rise of the Church* (Oxford 1993).

Museums, exhibitions. In Ankara, an exhibition of the 363 objects known as the "Lydian Treasure," which was repatriated from New York's Metropolitan Museum of Art, opened with great fanfare in November 1993 at the Museum of Anatolian Civil-

lizations. The collection, which includes sixth- and fourth-century B.C. metal vessels and jewelry, goldsmiths' tools, stone sculpture, furniture elements, and frescoes, can be assigned to at least three separate tumuli (Toptepe, İkiztepe, and Aktepe I) in the Uşak region, and a fourth (Harta) in Manisa province. It will eventually be displayed in Uşak, but in the meantime it forms the centerpiece of the museum's newly redesigned west gallery. A catalogue is forthcoming. The museum has brought out a third volume in the series devoted to its collections: *Metal Vessels* (Ankara 1992) by A. Toker, revised and translated by J. Öztürk. Its latest annual, *Anadolu Medeniyetleri Müzesi* 7 (1993), presents reports on the museum's excavations, epigraphical studies, and objects in the collections.

In 1993, the Istanbul Archaeological Museum was named the European Council's "Museum of the Year" in recognition of the elegant and informative redesigning of its galleries. The Sadberk Hanım Museum has opened a second building to exhibit its important Byzantine collections.

Festschrift and memorials. Over 60 scholars celebrated Peter Neve's 65th birthday with articles touching on aspects of Turkish archaeology, Hittite studies, and the ancient Near East, to which his discoveries at Boğazköy have contributed immeasurably. The festschrift has been issued as *IstMitt* 43 (1993), and marks Neve's retirement as excavation director. He was succeeded in the 1994 season by Jürgen Seeher.

The memorial volume honoring the late Alan Hall has appeared: D. French ed., *Studies in the History and Topography of Lycia and Pisidia. In memoriam A.S. Hall* (BIAA Monograph 19, London 1994).

Mahmut Akok, architect and archaeologist, died on 27 October 1993 at the age of 90. He came to archaeology during the early Republic, at the time when pre-Classical research in Anatolia developed into a systematic discipline. During a career spanning much of this century, his name was to be linked to most of the major excavations in central and eastern Turkey—Alaca, Pazarlı, Karaoğlan, Horoztepe, Altıntepe, Acemhöyük, and Maşat—whose drawings and plans all bear his elegant and unmistakable hand. He drew up the basic design for converting historic buildings into museums, which now stand as fitting monuments to his memory.

MIOCENE ERA

Paşalar. In 1993, Berna Alpagut and an international, multidisciplinary team carried out their 10th season at the Middle Miocene fossil beds that lie exposed on one of a series of rifts parallel to the south coasts of the Sea of Marmara and the Black Sea. As in previous years, the two-month season produced

a typical variety of fossilized bones of ruminants (the largest category at ca. 43%) and carnivores (ca. 11%); the trenches showed only small variations in overall concentrations. Eight percent of the bones are again primates (including Sivapithecene), with the 1993 contribution increasing the number of fragments to 1,800. The Paşalar finds pose the essential investigative question of how Sivapithecenes made their way from Africa to northwestern Anatolia 15 million years ago.

Archaeometric analyses (including isotope analysis of bone specimens, and electron spin resonance spectroscopy [ESR] of tooth enamels), restoration of the bones, and training of students continued as major aspects of the Paşalar project. Specialist publications are in preparation. For the 1992 season report, see *KST* 15:1 (forthcoming). A.M. Özer's ESR analysis is summarized in *AbsArch* 94 120; see also *ArkST* 9 (1994) 55–65.

Özlüce/Muğla. Reports of fossil finds in the forested national park east of Muğla, on the Aegean coast, led Berna Alpagut to conduct a brief salvage investigation in 1993 in cooperation with the local museum. Excavations in Jurassic wash deposits recovered a dense concentration of large mammal fossils that include elephant and rhinoceros. An exhibit of these has been set up in a newly established cultural center in Muğla, and—on the strength of the finds—the park has been named the "Turolian National Park."

Çandır. Erksin Güleç, together with an international team that included Tim White and Clark Howell, University of California, Berkeley, pursued a fifth season investigating the Miocene deposits of Çandır, 80 km northeast of Ankara. Excavations in the two areas of the 1993 season produced an additional 436 fossil samples of equids, bovids, proboscidae, suidae, and other fauna characteristic of the swamp environment of 14 million years ago. The long-awaited discovery of one Sivapithecene maxilla confirmed the presence of hominid primates, as anticipated from earlier surveys (see *ArkST* 9 [1992] 333–56). The 1992 season's report appears in *KST* 15:1 (forthcoming). Güleç and her associates are also preparing an inventory of all reported Miocene faunal finds in Turkey.

PALAEOLITHIC

Karain and Öküzini. Işın Yalçinkaya and a large international team continued their concurrent projects at the Palaeolithic caves of Karain and its neighbor Öküzini. The chronology of the Middle Palaeolithic deposits at Karain will be assisted by the discovery of calcitic collapse from the cave's walls

that seals certain deposits, and which can be used for uranium-series dating. ESR dating is also producing good results. The stone tool kit, with radiolarite a favorite material, continues to exhibit standard Middle Palaeolithic features, such as Levallois scrapers and fine triangular points. Abundant remains of animals (both hunted, and those that took refuge in the cave) include hippopotamus, elephant, and bear (a lower jaw).

Excavations of the late Upper Palaeolithic/Epipalaeolithic levels at Öküzini, contemporary with the later occupation at Karain, intensified in 1993. A deep sounding to establish the depositional history of the cave encountered ground water at its lower levels, nonetheless consistently datable by ^{14}C to 15,000 B.P. Thick ash accumulations, the discovery of two hearths lined with upright stone slabs, and a midden dense with broken bones (especially from red deer) attest to the cave's long and active use. The tool industry (microlithic lunates and points, burins, blades, and prisms) matches that from Karain closely. The worked bone assemblage includes needles and handles for, perhaps, drills to manufacture stone beads. One such bead, again of radiolarite, has a diameter of 0.4 cm.

Continued geological study of the plain between Karain and Öküzini suggests that the region was swampy in Palaeolithic times. Twelve other caves were investigated in 1993. One of these, newly discovered and with splendid travertine deposits, has been named "Kılıç Mağara" (Cave of the Sword) because it contained a Bronze Age female burial accompa-

nied by pottery, a bead, and a large bronze sword of second-millennium B.C. type.

The 1992 seasons at Karain and Öküzini are discussed in *KST* 15:1 (forthcoming); for the stratigraphic sequence at Karain, see *Paléorient* 18:2 (1992) 109–22; for Öküzini, see G. Albrecht et al., *Paléorient* 18:2 (1992) 123–41.

EARLY NEOLITHIC

Hallan Çemi Tepesi. A third rescue excavation season at this predominantly aceramic site on a tributary of the Batman River was conducted in 1993 by Michael Rosenberg. It is now clear that each of its two architectural phases involves more than the two principal buildings of the previous seasons. Closer investigation of the upper level's circular stone structures (fig. 2) suggests that the stone feature in the center of their sunken floors acted as a socle for a post to support the roof. Other furnishings for these buildings, 5–6 m in diameter with a double-walled "vestibule," include plastered hearths embedded with stones, and semicircular exterior benches. Outside them, small round surface structures may have served as bins. There are no pits around the houses, nor any trace of burials that might be associated with them.

Excavations focused on the site's lower building level. Its house plans resemble the later ones, but they are built in a different technique, with cobbles set in plaster instead of the stone slabs and slots for upright posts characteristic of the succeeding phase. Surface structures are C-shaped rather than

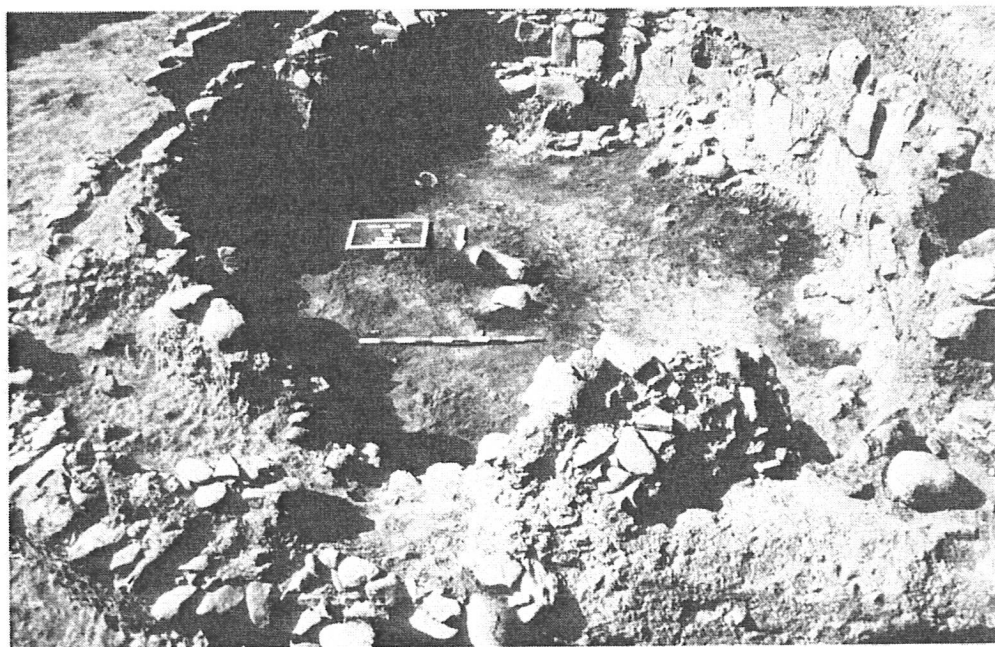


Fig. 2. Hallan Çemi. Circular structure from upper level. (Courtesy M. Rosenberg)



Fig. 3. Hallan Çemi. Chlorite pestles. (Courtesy M. Rosenberg)

round. Specialized functions are suggested by in situ finds. The large buildings contained obsidian cores and debitage, and copper ore; food residues were recovered from the smaller, presumably storage, facilities.

Besides further examples of sculpted chlorite pestles (fig. 3) already known from previous seasons, the 1993 excavations produced a new class of intriguing objects: soft gray stone batons of uniform type but incised with varying numbers of notches. Since they show no trace of wear, they may have served as counters. Other finds include small stone plaques resembling miniature bucrania; a fragmentary amygdaloid pendant incised with the figure of a snake; bone awls; and boar and pig tusks. For the first time, pottery was recovered in one area of the site throughout a 1-m deposit. It is as yet unparalleled, and may not follow directly on the site's two architectural phases.

Further study of Hallan Çemi's faunal and botanical remains has confirmed that, despite its hunter-gatherer economy, the site was fully sedentary as early as 10,000 B.P. Evidence for winter occupation is indicated by a deer cranium without antlers. The inhabitants' diet consisted of nuts, legumes, and thistles, but no cereals whatsoever. At least by the later phase, however, they were beginning to domesti-

cate the pig, as indicated by the skeletal remains of immature animals. Pig domestication at Hallan Çemi would date at least a thousand years earlier than previously attested, and reverse the usual priority of plant cultivation. The site may well illustrate the indigenous eastern Anatolian roots of the later Neolithic cultures of Çayönü and Nevalı Çori. For the results of the 1992 season, see *KST* 15:1 (forthcoming); for an overview of 1991–1993, *Anatolica* 20 (1994) 121–40.

Aşıklı Höyük. Salvage excavations at this remarkable aceramic site near Aksaray, in obsidian-rich central Anatolia, continued in 1993 under the direction of Ufuk Esin. Five large areas were investigated, combining stratigraphic soundings on the south and west slopes with broad horizontal exposure of the site's later phases on top. On the mound's south side at the edge of the river, the site's earliest settlement proved to be constructed in the same mudbrick slab architecture typical of later phases, and in strong contrast to contemporary Hallan Çemi (see above). The practice of intramural burials also appears this early, in one instance with a mother and child interred together under a floor. Other, later structures excavated in 1993 include a sanctuary; more of the large area with two postholes begun in 1990, and now consisting of two successive plastered floors painted red, and red and yellow; and a larger expanse of the enigmatic stone building with a cobbled court (previously thought to represent a cobbled road).

The 1993 season continued to produce an enormous quantity of obsidian tools, the material locally available but not—as a recent study demonstrates—restricted to the nearby Çiftlik source. Skilled craftsmanship is exemplified by a handsome bone belt attachment with three loops. Most unexpected was the discovery that some of the fine copper beads common to the site were heat-treated. There is still no evidence for animal domestication at Aşıklı.

For the 1992 season, see *KST* 15:1 (forthcoming); for a general architectural synthesis, see *IstMitt* 43 (1993) 123–28. X-ray fluorescence analysis of obsidian tools from Aşıklı and prehistoric sites in northern Syria is summarized by G. Schneider in *AbsArch* 94 73; for ESR studies, see A.M. Özer in *AbsArch* 94 119.

LATER NEOLITHIC

Yumuktepe/Mersin. In 1993, a collaborative project led by Veli Sevin and Isabella Caneva reopened excavations at Yumuktepe, first investigated by J. Garstang more than half a century ago. A trench at the lowest level (XXXIII) of his sounding on the northwest slope recovered the burnt plaster remains of wattle-and-daub structures dating to 7800 B.P. South

of these, a second trench produced three levels of mudbrick buildings with stone foundations. If the two construction types are precisely contemporary, they must reflect areas with different functions.

The pottery repertoire from this early level matches the Amuq A–B wares, and is restricted to bowls, of which a few are painted with brown lines. Faunal remains of sheep, goat, bovids, and pigs, all domestic specimens and butchered on site, indicate that Yumuktepe is one of the earliest known settlements in which all four species were bred.

At the top of the mound, reexcavation of the upper part of a Garstang trench uncovered two Byzantine levels dated by coins and pottery, together with an 11th-century A.D. church. A progress report appears in *Orient Express* 1994:1, 7–8.

Çatal Höyük. Thirty years after the close of J. Mellaart's excavations at the most famous of Near Eastern Neolithic sites, Ian Hodder reopened the project in 1993 with the goal of placing its phases and structures into their environmental and social context. In the first of two seasons devoted to intensive survey and pollen analysis, the east mound was investigated with a systematic surface collection to assess the topographic distribution of cultural material. Surface scraping over selected grids already shows dense architectural remains as far as the north end of the mound. Magnetometer remote sensing also gave good results, although the alignments recorded may correspond to the classical and post-classical occupation especially noted on the southern part of the mound. Finally, sections from the trenches dug in the 1960s were cleaned for study, and micromorphological samples were collected from floors to evaluate changes in use through time.

As a second aspect of the project, Trevor Watkins began a regional survey in the Konya plain, a dried Pleistocene lake whose alluvial fans attracted settlements such as Çatal Höyük (and, later, Konya itself). He reported locating a potential Epipalaeolithic site that could provide the fully sedentary and well-attested Neolithic phase with a central Anatolian precursor.

Bademağacı Höyük. In 1993, Refik Duru began excavations at this 120-m-long mound (misnamed Kızılkaya by Mellaart in *AnatSt* 11 [1961] 166) as part of his continuing project of research on the South Taurus Neolithic culture of the Burdur area. The mound is set in the middle of a high plain, and today rises 9 m above the surface; erosional fill has buried its lower levels, however, which promise to be deep. Soundings on the north and south sides produced Late Neolithic architectural remains directly below a shallow Early Chalcolithic level (on the north side)

and a transitional EB I–II level (on the south). The EB phase was particularly well preserved immediately below the surface, with good house plans, in situ pottery resembling Beycesultan and Karataş types, a bronze spearhead, and a gold earplug. It is hoped that the Neolithic occupation will eventually be traced back to its very earliest phase, as an open-air site complementing the Karain cave's latest use.

Orman Fidanlığı. In 1993, Turan Efe conducted his second season of rescue excavations at this site 6 km southwest of Eskişehir, where he is documenting the inland penetration of Balkan Late Neolithic–Early Chalcolithic cultures in Anatolia. Settlement remains were for the first time recovered in two separate quarry cuttings, overlying bedrock. The architecture consists of mudbrick buildings on stone foundations, and perhaps a stone terrace. It can be dated to the second half of the fifth millennium B.C. by ribbed black pottery with punctate decoration, and painted wares of Karanovo II and late Starčevo/early Vinča types. Terracotta figurines in standard Balkan style, marble bracelets, and fine bone awls were consistent with examples found in 1992. It is unfortunate that these levels are buried under 5 m of wash, making them difficult to expose horizontally.

From a third sounding, a new ware decorated in white paint recalls three complete examples brought from the site to the Eskişehir Museum in 1985. The closest affiliations are with Late Chalcolithic Beycesultan, suggesting a long gap in occupation at Orman Fidanlığı. The report on the 1992 season appears in *KST* 15:1 (forthcoming).

Aşağı Pınar/Kırklareli. A joint Turkish-German project led by Mehmet Özdoğan began excavations in 1993 at this Thracian site, in order to investigate further the bridge between the Balkans and north-west Anatolia during the Neolithic and Early Chalcolithic periods. The upper levels of the mound span the Bronze to Iron Ages, with a final Hellenistic occupation capped by a Hellenistic tumulus. Below these was a Late Chalcolithic architectural level of postholes for pisé and mudbrick structures. The anticipated Neolithic/Early Chalcolithic occupations were tested only in deep soundings, below a layer of sterile wash indicating a long hiatus at the site. The Neolithic pottery is affiliated with Karanovo III–IV, with parallels too at Fikirtepe and Yarım Burgaz. Later types relate to Vinča's Early Chalcolithic. Finds include Balkan-style terracotta figurines.

This excavation, like that at Hoca Çeşme Höyük, is part of a long-term program initiated in 1980 with extensive surveys, and followed by the sampling of selected sites. A brief summary appears in *Orient Express* 1993:2, 15–16. Mehmet Özdoğan discusses early

Balkan relations with Anatolia in *Anatolica* 19 (1993) 173–93.

Hoca Çeşme Höyük. In their final season in 1993, Mehmet Özdoğan's team opened 10 squares down to bedrock and the site's earliest architectural level. This initial settlement was enclosed by a large wall, carefully constructed with irregular fieldstones; it was traced along a curving circuit for a length of 20 m. Associated pottery consisted of the black/brown mottled and burnished ware known from previous seasons, and characterized by high-collared pots with spool-shaped handles. Bone and stone tools, and male figurines of stone, are typical of an assemblage with Anatolian and Balkan connections, the earliest phase bearing close ties with Hacilar IX–VI. Brief summaries appear in *Orient Express* 1993:2, 15–16 and *KST* 15:2 (forthcoming).

Ilıpınar. Arsenical copper finds from Ilıpınar level IV are assessed by F. Begemann et al. in *Anatolica* 20 (1994) 203–19.

Late Chalcolithic Balkan–Black Sea connections. The issue is discussed with particular reference to Dündartepe by L. Thissen in *AnatSt* 43 (1993) 207–37.

Kum Tepe. Three weeks of rescue excavations were conducted by S. Kılıç under the aegis of the Troia project. Building phases dating exclusively to the later Neolithic, or Kum Tepe Ia period, were dated by ^{14}C to the fifth millennium B.C.

Central Aegean hinterland. Neolithic settlement patterns are assessed by R. Meriç in *Anatolica* 19 (1993) 143–50.

CHALCOLITHIC AND BRONZE AGE

Southeast and East Anatolia

Arslantepe-Malatya. The 1993 campaign, under the direction of Marcella Frangipane, focused on three phases at Arslantepe: 1) the late fourth millennium Uruk-affiliated level VI A; 2) the succeeding Transcaucasian settlement called level VI B1; and 3) the late EB I village, level VI B2.

Continued excavation of level VI A's characteristic monumental architecture again illustrated the local features that coexisted with elements affiliated to Uruk/Protoliterate southern Mesopotamia. The largest of the four known public structures remains the elite residence or administrative Building IV (fig. 4), partly excavated in 1992. In 1993, a 35-m-long corridor starting at a monumental gate was followed into the complex; storerooms lined the corridor on either side. Of Building IV's two temples, Temple B (fig. 5), again the largest at Arslantepe (12 m long), was a two-room unit with interior niches and two altars that identify the cella. The dogleg entrance to the temple was decorated with lozenges stamped



Fig. 4. Arslantepe-Malatya. Building IV with monumental gate in foreground. (Courtesy M. Frangipane)

into the plaster; the same lozenge design occurs in paint on the cella walls, and recalls the ornamentation of Temple I, excavated in the 1970s. Despite superficial similarities with niched temples in southern Mesopotamia, the bipartite plan and dogleg entrance reflect local taste. The temple's floor was not reached by the end of the season; but a collapsed wall of 40 brick courses suggests that the temple's walls exceeded 3 m. The wood window frames were preserved in situ, and the fill was sealed by fallen joists and ceiling plaster with mat impressions. Near one of the windows was found a group of 38 clay sealings, stamped by six different seals, of which two were also represented on sealings in front of a storeroom. The abundant pottery is all of VI A type.

After the destruction and abandonment of these monumental buildings (perhaps the result of internal crisis), there followed a VI B1 phase of modest pisé houses, many ovens and pits, and open areas separated by fences. The highly burnished pottery recovered from floors points to a Transcaucasian origin for this phase's inhabitants. They eventually began to build with mudbricks, although the house plans maintained northeastern Anatolian styles, including an enigmatic round subterranean structure with interior benches and a base for a central post.

To the west of the succeeding VI B2 (late EB I) village excavated in 1992, a new area uncovered a



Fig. 5. Arslantepe-Malatya. Building IV: Temple B. (Courtesy M. Frangipane)

retaining wall that marked the edge of this later settlement. The wall was pierced at intervals to allow drainage. The slope outside it had been deeply cut back by the brick-mining activities of the VIB2 builders. Their light, wheelmade wares stand in sharp contrast to the pottery of the preceding occupation.

A report on the 1992 season appears in *KST* 15:1 (forthcoming); for the 1993 season, see *Orient Express* 1994:1, 3–5. M. Frangipane has also contributed a summary of the excavations to *Scavi* 30–103.

Tigris-Euphrates Survey. For the final report, see G. Algaze et al., “The Tigris-Euphrates Archaeological Reconnaissance Project: Final Report of the Birecik and Carchemish Dam Survey Areas,” *Anatolica* 20 (1994) 1–96.

Kurban Höyük. P. Wattenmaker discusses the economic basis of the third-millennium settlements in G. Stein and M.S. Rothman eds., *Chiefdoms and Early States in the Near East* (Madison 1994) 193–208.

Upper Euphrates, Early Bronze Age. A study of EB pottery (especially Transcaucasian types) is published by C. Marro, “Introduction à la céramique du Haut-Euphrate au Bronze ancien,” *Anatolia Antiqua* 2 (1993) 43–69.

Hacınebi Tepe. In their second rescue season at this site near Birecik, Gil Stein and Adnan Mısırlı, director of the Urfa Museum, assessed with more precision the impact of Uruk/southern Mesopotamian

contacts on a late fourth-millennium B.C. community in the Upper Euphrates valley. Excavations on the north, west, and south sides of the mound confirmed the occupation sequence determined in 1992. The Late Chalcolithic period consists of two phases, the earlier (A) characterized by local ceramics while the later (B) introduced Mesopotamian wares alongside the local repertoire. The local wares belong to a horizon that extended from the Euphrates (such as Kurban Höyük) to the Habur (Tell Brak); it is distinct from the western Syrian pottery of the Amuq.

The architecture of phase A, built on sterile soil, consisted of mudbrick buildings set on stone terraces. The structures are domestic, with several rebuildings. In the south trench, walls preserved up to 1 m were interrupted by a second building level. Phase B provided further evidence for monumental constructions on stone terraces/platforms, again with several building sequences. Uruk-type pottery and local wares were both in use, but were found in separate rooms. Pits and trash deposits included 60 sealings, 40 of them stamped with five seals only. A bulla, 7.6 cm in diameter and impressed with two Uruk-style cylinder seals, was found to contain 12 unbaked clay tokens (fig. 6). Among other finds is a stone eye-idol.

Hacınebi was then abandoned for nearly four millennia. It was resettled in the Hellenistic period, with the construction of a public building on the site's

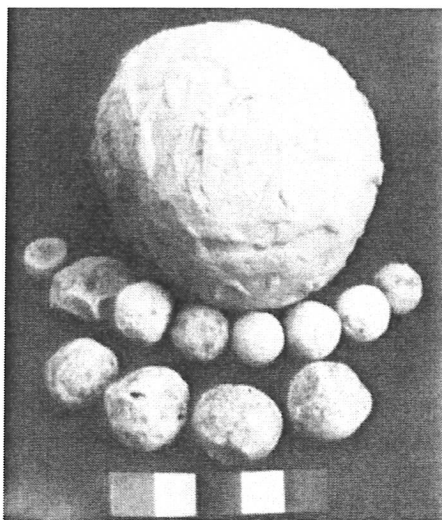


Fig. 6. Hacinebi Tepe. Uruk-period bulla and clay tokens. (Courtesy G. Stein)

south side; buildings also occupied the top of the mound. Near the public building was discovered a rich tomb with silver jewelry, a stone alabastron, and a scarab. The Hellenistic phase appears to be both deeper and more extensive than indicated by the 1992 soundings.

In addition to the excavations proper, the site was mapped with magnetometry and resistivity surveys. For the 1992 season, see *KST* 15:1 (forthcoming); *Oriental Express* 1993:1, 8–9; *Mar Şipri* 6:1 (1993) 1, 6–8; and *Anatolica* 20 (1994) 167–89.

Titriş Höyük. The third season at the largest EB site in the region, after Samsat, was devoted to remote sensing, excavation in the lower town, and object conservation. Guillermo Algaze, University of California, San Diego, who directs this project jointly with Adnan Mısırlı of the Urfa Museum, kindly reports:

“Remote sensing carried out again in 1993 has now mapped 60% of the 35-ha lower town, which encloses the high acropolis area on three sides. This area, together with some 10 ha of suburbs outside the main mound, was occupied during the mid-late EBA (second half of the third millennium B.C.). The magnetometry map shows a number of architectural features linked by roadways. The massive defensive moat traced in 1992 on the eastern edge of the lower town can be seen to turn a corner and extend for hundreds of meters along the north edge. A sounding here produced a well-built stone wall 1 m thick, with a cobbled passageway along its inner face, and a street paved with rubble, cobbles, and sherds outside it. Magnetic anomalies in the western part of the site proved to be grain storage silos and pits forming an extensive specialized-use area of the city.

“Excavations in three sectors of the lower town were intended to clarify the occupational sequence here, and to test the predictive powers of the magnetometry survey. In one 20 × 20 m exposure, and in a second small sounding, the earliest phase set directly on virgin soil was found to date to the early third millennium (Kurban V) with stone wall foundations and cobbled paving. At the base of the small sounding was discovered an intact stone-lined cist tomb (fig. 7), in which was buried an adult woman with six vessels, a bronze pin, and a bronze nail. After a hiatus noted in both trenches, the site was reoccupied with substantial architecture in the middle of the third millennium (EB III). A third excavation area, chosen because of magnetometer anomalies suggesting well-planned architecture, produced three building levels down to virgin soil. The lower two, of mid-third millennium date, consisted of several rooms of a large structure that was rebuilt and modified on many occasions. It was succeeded by a phase dating unexpectedly to final EB III/IV, or the last quarter of the third millennium (Kurban IVA). The area during this period was occupied by domestic housing with in situ deposits, on either side of a 2-m-wide pebbled street.

“The 1993 season demonstrated the existence of an early EB settlement at Titriş in the lower town, although its extent and importance cannot yet be assessed. The site’s expansion and urban character in the mid-third millennium have been confirmed, and remained in force until ca. 2100 B.C., when major buildings were abandoned and the lower town was given over to domestic use. Shortly thereafter, the settlement withdrew to the high mound, to occupy a site a tenth of its earlier size. The reasons for this two-stage contraction will be addressed more specifically in 1994. It will be especially interesting to determine whether the fortification system existed throughout the later EB period, or whether it was constructed in response to threatening circumstances just before the inhabitants retreated to higher ground.”

For the 1992 season, see *KST* 15:1 (forthcoming); the 1993 season is summarized in *Newsletter for Anatolian Studies* 9:2 (1993) 10–11.

Oylum Höyük. In 1993, Engin Özgen resumed excavations at the large multiperiod mound near Kilis where he has been working since 1989. Trenches on the mound’s east slope uncovered a late EB architectural level with mudbrick walls and a stone-lined silo. Finds include numerous terracotta animal figurines, a bronze spearhead, and a cylinder seal. Further investigation of the cemetery (much disturbed by illicit digging) produced more examples

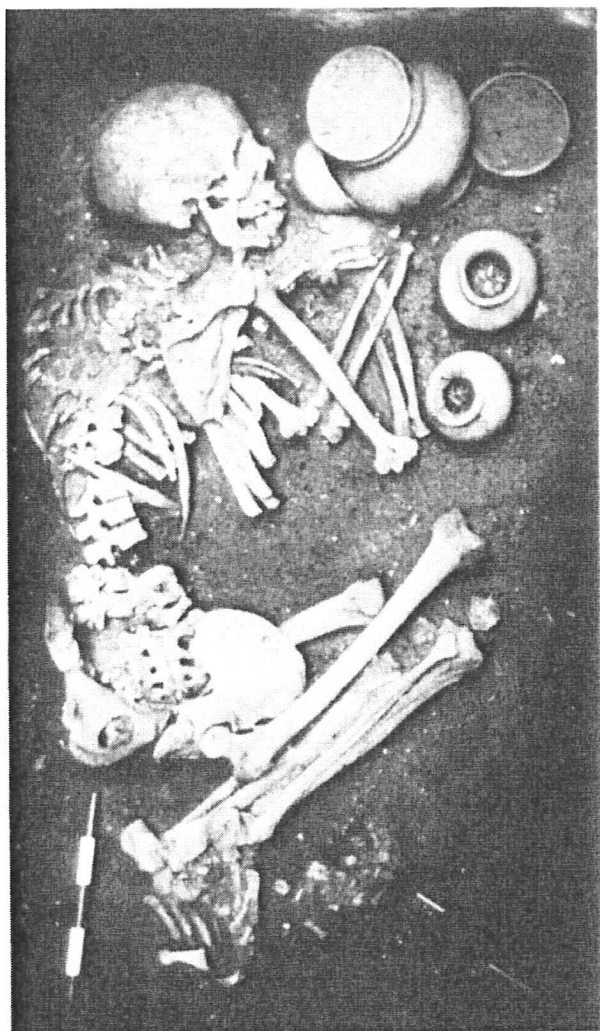


Fig. 7. Titriş Höyük. Female burial in cist tomb (early third millennium B.C.). (Courtesy G. Algaze)

of pithos burials for adults; infants were interred in small pots often capped with a broken jar neck. An MB tomb contained a fine bronze figurine of Hittite type representing a smiting god. Elsewhere on the site were excavated a well-built early Iron Age structure with capacious plastered storage jars in situ, and a Hellenistic architectural level dated by coinage to the reign of Seleucos I.

Kazane Höyük. In their second salvage campaign at this site on the outskirts of Urfa, Patricia Wattenmaker and Adnan Mısır continued to analyze material from the 1992 survey of the high mound and its lower city; trenches were also opened in the lower city to investigate its EB and MB occupational sequence.

The site's earliest phase is represented by Halaf pottery that was collected both at the base of the mound, and in the large channel cut as part of the Urfa irrigation project. This distribution would cor-

respond to an area of 9 ha, although it could involve two neighboring settlements. Occupation was maintained uninterruptedly on a similar scale until the Late Chalcolithic period, when the site expanded, without visible outside influence, to 15 ha. After a modest early third-millennium phase, Kazane abruptly enlarged its scope ca. 2500 B.C. to cover a 100-ha area enclosed by fortifications. A stray baked lexical tablet (9 × 9 cm), found in the winter of 1993 and brought to the Urfa Museum, can be assigned to this EB III period.

Excavations in the lower town, 200 m inside the city wall, came down immediately on early MB houses on either side of a street equipped with a drainage canal. The lower town appears to have been densely built up, and occupied without a break from the Early Bronze III/mid-third millennium into the Middle Bronze Age. The preliminary report on the 1992 season appears in *KST* 15:1 (forthcoming).

Tille Höyük. Two final reports on the 1979–1990 Tille excavations in the Lower Euphrates Ataturk Dam Project have been published: G.D. Summers, *Tille Höyük 4: The Late Bronze Age and the Iron Age Transition* (BIAA Monograph 15, Ankara 1993); and J. Moore, *Tille Höyük 1: The Medieval Period* (BIAA Monograph 14, Ankara 1993). *Tille 4* includes an appendix by P.I. Kuniholm et al. on the dendrochronological dating of beams from the LB/Early Iron Age city gate. Two volumes on the Hellenistic–Roman and Iron Age levels are forthcoming.

Kahramanmaraş Survey. Elizabeth Carter, University of California, Los Angeles, began the first of several projected regional surveys with the alluvial valley south of the city. She kindly reports:

"The 1993 survey located 127 sites in a triangular, 900 km² area bordered by the Adana road to the east, and the Gaziantep road to the west; of these, more than 100 sites were previously unrecorded. The earliest dates to the Palaeolithic period. Six Early Neolithic sites belong to the Cilician and Amuq A–B tradition. With the appearance of Halaf and Ubaid wares, however, the region allied itself with the Euphrates basin. Settlements increased both in number and in size at that time, and account for most of the high, multiperiod sites of the survey. This eastern tradition is maintained throughout the EB period (attested at 34 sites), although the transition from LC to EB appears to have been isolated from neighboring developments.

"The MB–LB and Iron Age sequences proved more difficult to identify securely, but can tentatively be assigned to 36 and 22 sites, respectively. It is likely that modern Kahramanmaraş conceals a large Iron Age city, although secure evidence is lacking. The

survey's most important Iron Age find, a basalt stele bearing a relief and a (probably) Phoenician inscription, was discovered outside a village house ca. 30 km south of Maras; it was said to come from the immediate region. The stele shows an Assyrianizing figure holding a staff and a mace or sword. The very worn and incomplete inscription may read "mlk dnnym" (king of the Danunites), and represent a boundary stone.

"A major population expansion during the Hellenistic and Roman periods led to the occupation of 77 sites, including large mounds, hillside farmhouses, and cemeteries. This was followed by a re-trenchment in Islamic and medieval times." The survey continued in 1994.

Büyüktepe Höyük. Antonio Sagona and his collaborators at the Erzurum Museum devoted their fourth season to a geomorphological study of the region and to analysis of the finds from the 1990–1992 excavations in preparation for publication. The mid-third millennium EB pottery consists of burnished bowls with black exteriors and brown interiors, and coarse chaffy jars with parallels at Karaz; they were decorated with white-filled incisions. The vessels were often made of superposed layers of clay. Rare MB pottery was invariably wheelmade. With the Iron Age, the ceramic repertoire becomes more varied, and was again wheelmade. Two main types, a micaceous brittle orange ware with high burnish, and a black burnished ware, differ only in their firing process. Another variety is von der Osten's fine "festoon ware" known from farther east. By the Late Hellenistic/Early Roman period, imports included true sigillata and "thorn ware." A second-century B.C. pithos was inscribed with the name ΕΥΑΓΓΙΑΝΟΣ.

An ethnographic study of pottery manufacture in a nearby village produced some surprising and cautionary observations. Its vessels are all made in the coil technique; and the rims—for a final finish—are wiped with a cloth. The cloth produces striations indistinguishable from wheelmarks. For the 1992 season, see *KST* 15:1 (1994) and *AnatSt* 43 (1993) 69–83.

Aşvan-Keban Project. The Early Bronze Age sites from the BIAA's salvage project in the Keban have been published by A. Sagona and C. Sagona, *The Keban Rescue Excavations, Eastern Anatolia. The Aşvan Sites 3: The Early Bronze Age* (BIAA Monograph 18, Oxford 1994).

Sivas area. For a recent study of EB Transcaucasian pottery, see A. Tuba Ökse, "Die Verbreitung der frühtranskaukasischen Kulturen in der Sivas-Region," *IstMitt* 43 (1993) 133–46.

Sirkeli. In a second season at Sirkeli, where the Hittite Great King Muwatalli's rock relief overlooks

the ancient mound, Barthel Hrouda opened three trenches on the southeast and north terraces. Domestic architecture of early MB date produced characteristic Cilician painted wares. Soundings push occupation back into the EB period, as indicated by black-burnished pitchers. In Hellenistic times, the site was dominated by a large fort, already traced in 1992. A molded vessel with its collar in the shape of a female head has parallels at Faïlaka, Susa, and nearby Domuztepe.

A geomorphological assessment of the area has demonstrated that, during the second millennium B.C., the river Ceyhan flowed directly east–west instead of turning north along the outcrop on which the Muwatalli relief is carved. Thus the Hittite king would not have overlooked the river as he does today; and the ancient site, now divided in two by the river, extends well to the east of the further bank. The preliminary report for 1992 appears in *KST* 15:1 (forthcoming).

Kinet Höyük. The Bronze Age sounding is discussed below under "Cilicia: Iron Age."

Northern and Central Anatolia

İkiztepe. In 1993 Önder Bilgi continued to document the early metallurgical industry of this Black Sea site with the excavation of another EB I house that contained a typical inventory of bronze tools, as well as an exceptional sword with a human figure set in relief on the blade. A storejar with stylized relief figures may reflect the same decorative conceit in clay. The ceramic assemblage is characterized by vessels with "piecrust" rims.

Other projects involved a sounding from the highest point of the mound, through Byzantine, Hellenistic, and Late Iron Age levels. Burnt wood samples for dendrochronological analysis were collected from Iron Age architectural levels in two other areas. The 1992 field report is published in *KST* 15:1 (forthcoming); see too *AbsArch* 94 186 on metallurgy at İkiztepe and in the BA Pontus. İkiztepe's EB chronology is reassessed by L. Thissen in *AnatSt* 43 (1993) 207–37.

Bahçehisar. Turan Efe has published a detailed report on the EB III pottery collected at this site and others in the course of his surveys (1988–present) in the Eskişehir Plain. This period was previously undocumented in the region. See T. Efe, "Early Bronze Age III Pottery from Bahçehisar: The Significance of the Pre-Hittite Sequence in the Eskişehir Plain, Northwestern Anatolia," *AJA* 98 (1994) 5–34.

Acemhöyük. Aliye Öztan expanded her investigations of previous seasons in the northwest area of the Hatipler palace, dating to the Assyrian Colony/

early MB period. The third level, contemporary with the palace, consisted of courts whose well-constructed ovens were tiled with potsherds, and rooms with large storage jars. These may represent the palace kitchens. Below these, in the earlier level 4, a large residential complex was attached to a copper workshop, with an oven, a crucible, and stone pounders. Finds include bronze pins and a lead figurine. Level 5 below is also MB. Dendrochronological analysis of timbers from the level 3 walls indicates that they were recycled from burnt EB buildings, where they had probably served as posts.

On the strength of a jar burial found in 1992 in a garden 500 m from the mound, excavations there in 1993 uncovered for the first time a cemetery associated with the Colony period settlement. The 21 burials were placed in storejars and pitchers, with an inverted vessel serving as lid. Gifts include ivory plaques, bronze pins, and lead rings or links. Animal bones indicate that the dead were provided with a meal. A quarter of the burials were cremations; their gifts were also burnt. The 1992 season is reported in *KST* 15:1 (forthcoming).

Kültepe. In 1993, the Karum at Kültepe/Kanesh revealed further intimate details about the lives of Assyrian merchants transacting their business in Anatolia during the first quarter of the second millennium B.C. Tahsin Özgüç has now exposed three town blocks along a paved street with a covered drain. The names of every house's residents are known, their archives and household goods exceptionally preserved for both of the Karum's phases (II and Ib). Inventoried vessels in the Museum number 1,600, the majority of them local, with others imported from western Syria. Thousands of seal impressions are recorded on clay tablets and their envelopes, the cylinder seals ranging from local styles to Old Babylonian ones and Early Dynastic "antiques." Bullae preserve the impressions of the baskets and bags to which they were affixed. Unusual finds include a pin with an agate head, faience amulets, and a variety of animal figurines in bronze.

Further excavations were carried out on the mound, where the remains of King Anitta's city, palace, and temples lie (*IstMitt* 43 [1993] 167–74). For a new edition of Kültepe tablet seals, see B. Teissier, *Sealing and Seals on Texts from Kültepe Karum Level 2* (Leiden 1994).

Kaman-Kalehöyük. Excavations at this large site 100 km southeast of Ankara continued, under the direction of Sachihito Omura, to pursue the two-phased strategy of previous seasons. In the northern half of the mound, the systematic uncovering of architectural levels proceeded down to the LB/

Hittite Empire phase (Kaman III), which ended in a violent fire. Finds include bronze pins and tools, bullae, a stone cylinder seal with gold caps, pottery with relief decoration, and stray MB material such as a lead figurine head. This destruction was followed by a transitional period characterized by handmade pottery and casual pisé constructions heralding (as at Gordion) the arrival of the Phrygians. During the site's long Iron Age occupation (Kaman II), Phrygian domestic architecture was eventually replaced by a Persian level, whose formal nature is indicated by an official building with massive walling and a fine bone Achaemenid seal (a chalcedony one was found in 1989). The mound was then abandoned until the Ottoman period (14th–15th century A.D.), which is encountered immediately below the modern surface.

In the southern half of the mound, the excavators plan to expose completely the Ottoman and Phrygian architectural levels. By 1993, the fieldstone foundations and tamped earth floors of 61 rooms from the Ottoman town had been uncovered. For the 1992 season report, see *KST* 15:1 (forthcoming). The 1988 season and an archaeobotanical study (by M. Nesbitt) are published in *Bulletin of the Middle East Cultural Center in Japan* 7 (1993) 43–74 and 75–97.

Boğazköy. Peter Neve, Deutsches Archäologisches Institut, Istanbul, directed his final excavation season in 1993. His visionary work at the Hittite capital during the past few decades has recreated, through excavation and exemplary restoration, a fitting tribute to the ceremonial city conceived by Hattusha's Great Kings. He kindly reports:

"The 1993 season was devoted to completing excavation and restoration of the Sacred Lake complex in the upper city and the contemporary public buildings on Nişantepe; to reinvestigating the terrace and fortification system on Büyükkaya; and to the analysis of finds from previous seasons, especially the cache of 3,000 royal sealings from the archive building at Nişantepe (see *AJA* 96 [1992] 127–29), and pottery from the lower city.

"Probes along the north edge of the Sacred Lake now demonstrate that chamber 2 (the *hekur* or inscribed funerary monument dedicated by Šuppiliuma II to his father Tudhaliya IV) was built on top of the original water canal that served as an outlet for the lake. The very shape of the funerary monument thus mimics the earlier tunnel, to serve, in the words of its accompanying inscription, as a symbolic "sacred path into the Underworld." The entire complex, excluding chamber 2, can securely be assigned to Tudhaliya IV.

"The Hittite fortification system that defends Büyükkaya, the rock outcrop between Büyükkale and

Yazılıkaya, consists of three terraces rising up from the Büyükkaya stream north to the top of the plateau on which the citadel was constructed. Investigations in 1952–1954 concentrated on the middle terrace, where two postern gates and a terrace wall were uncovered, underneath the Early Phrygian housing that later occupied the slopes. The aims of the 1993 excavations in this sector were to delineate more precisely the architectural features of the terrace walls with their towers and gates, to link them to the defensive system on the other sides of the citadel, and to establish their chronological relationship with the defensive wall connecting the citadel to the lower city, ostensibly built in the time of Hattušili III's foundation of Temple I. Two gates were excavated on the west and north sides, with ramps leading respectively out toward the cemetery at Osmerkaya and the sanctuary at Yazılıkaya. They were built along the same plan as the north gate of the lower city enclosure, with a tower projecting only on one side. After a catastrophic destruction, the terrace wall was rebuilt. A new, tripartite gate like those of the upper citadel and the lower city's south gate was constructed on the east side, again leading to Yazılıkaya. Previous investigations on these terraces had also located two postern gates on the east side; a third was discovered between them in 1993, its stonework contrasting strongly with the other two. These would belong to a still earlier defense of the citadel, at the very beginning of the Hittite Empire. They had gone out of use at least by the later phase, or—in the case of the southern postern—were made to function as a drainage channel. Thus the postern gates demonstrate the early existence of a fortification wall that would have extended in a broad arc from the northeast corner of Büyükkaya down to the north side of the lower city.

"The soundings that were opened to investigate the Büyükkaya defensive works also revealed that the slopes preserve consistent evidence for occupation in the Chalcolithic and late EB periods, evidence that is completely missing from the top of the plateau. The terraces were then occupied without interruption from the Hittite Old Kingdom to the end of the Empire, and again during the earliest phase of the Phrygian period."

In 1993, Neve also carried out a spectacular photographic documentary of Boğazköy from a hot-air balloon. Jürgen Seeher took over the Boğazköy excavations in 1994.

Preliminary reports for 1992 appear in *KST* 15:1 (forthcoming) and *AA* 1993, 621–52 and 709–11; for 1993, see *AA* 1994, 289–325. For recent excavations, see P.J. Neve, *Hattuša—Stadt der Götter und Tempel: Neue*

Ausgrabungen in der Hauptstadt der Hethiter (Mainz 1992/1993); also H. Parzinger and R. Sanz, *Die Oberstadt von Hattuša. Hethitische Keramik aus dem zentralen Tempelviertel: Funde aus den Grabungen 1982–1987* (Boğazköy-Hattuša 15, Berlin 1992). Several contributions to Neve's festschrift, *IstMitt* 43 (1993), address issues pertaining to Boğazköy.

Ortaköy-Çorum. Ortaköy is located in a fertile valley 50 km northeast of Boğazköy, on a direct and easy route to the Hittite capital. In the late 1980s, highway construction and sporadic finds alerted the Çorum Museum to the presence of Hittite tablets here. Aygül Süel began a rescue campaign in 1990 that resulted in the recovery of over 1,800 tablets—the second Hittite archive (after Maşat) to appear outside Hattusha. She returned, after interruptions, in 1993.

This imperial Hittite city was founded on a previously unoccupied site, and laid out over seven parallel and artificial north–south terraces. Hittite wall foundations are visible on the surface, with a Roman cemetery representing the site's only reuse. The 1993 excavations were carried out in two areas. In the first was uncovered a monumental complex of rooms arranged around two parallel courts to form the outer wing of a very large courtyard. The building's limestone Cyclopean masonry follows the highest Hittite standards. The architectural layout is at present best matched by the temple at Kuşaklı (see below); its function may become clearer once the structure is completely excavated. The second focus of the season, the archive building partly excavated in 1990, seems to have been deliberately filled in after a destruction that left numerous ceramic vessels smashed on every floor. Some 600 tablet fragments concerning military and administrative matters can now be added to the previous archival finds, which include Akkadian literary texts, and religious texts in Hittite and Hurrian. Other notable finds consisted of bullae with hieroglyphic inscriptions, a stylus to write cuneiform, and stone inlays in geometric shapes for a wall or floor decoration. For a report on the first (1990) season, see *KST* 14:2 (1993) 495–508.

Kuşaklı. In 1993, Andreas Müller-Karpe conducted a first excavation season at Kuşaklı, a large mound and fortified lower town near Başören in Sivas province, 200 km from Boğazköy. The initial campaign concentrated on the north terrace, where constructions dated by Hittite Empire pottery were encountered immediately below the surface. The walls were built with limestone rubble foundations set on bedrock, and are in some places preserved to a height of 2 m. Geoelectrical remote sensing, which proved

more successful than geophysical, led to the choice of two areas for investigation.

In the first area, a building of 54 rooms was completely excavated. Its plan recalls that of Temple I at Boğazköy, with a double adyton and large open enclosure, as well as the newly excavated monumental building at Ortaköy (see above). Müller-Karpe would identify it as a *halentu* or cult building referred to in Hittite texts. It was entered through a gate with a central column, its stone base still in place. Wooden columns would also have supported the ceiling of individual rooms. In the well-preserved east wing, where mudbrick superstructures were still in place on the stone foundations, a stair led down to a basement containing bullae bearing the name Lassiti. Throughout the rooms a great variety of Late Hittite pottery was recovered, some of it fused by the heat of the fire that destroyed the building. Certain vessels were inscribed with royal hieroglyphs; an imported Syrian bottle was found inside one of two terracotta boxes. Just outside the side entrance to the sanctuary was a large oven, containing an assortment of foodstuffs (two types of wheat, pistachios, barley, chickpeas, lentils, and grape pits), and—surprisingly—a human skeleton.

Excavations in another sector of the north terrace exposed a residential district, occupied continuously from the Old Hittite period to the end of the Hittite Empire according to associated pottery. From one house was recovered a vessel stamped with a hieroglyphic inscription naming a local king (but not a Great King). It signals the presence in this city of a ruler who was vassal to the Great King in Hattusha, and thus gives a precious historical indication of Kuşaklı's relationship to the Hittite capital. For the pre-excavation survey in 1992, see *AraşST* 11 (1994) 259–64.

Alışar Höyük. H.H. von der Osten's excavations at Alışar, conducted from 1927 to 1932 for the Oriental Institute, University of Chicago, were reactivated in 1993 with a site-specific and regional survey led by Ronald L. Gorny. Two soundings were opened on the southwest terrace, through Late Roman/Byzantine burials down to a Phrygian building level dated by pottery to the seventh century B.C. Future seasons will focus on the LB/Hittite Empire period, when the site was probably named Ankuwa. A 1993 report appears in *Anatolica* 20 (1994) 191–202; the LB II period is also discussed by R. Gorny in "The Biconvex Seals at Alışar Höyük," *AnatSt* 43 (1993) 163–91.

Gâvurkalesi. A Hittite rock relief and corbeled chamber near Haymana, 60 km southwest of Ankara, led von der Osten to investigate this site for a few days in 1930. It commands a short valley off the cor-

ridor that links Gordion and Bozhüyük/Hacı Tuğrul with the Salt Lake (Tuz Gölü) of the central Anatolian plateau. Gâvurkalesi was thus one stop on the Hittite route from, ultimately, the western coast down into the Konya Plain, a route revived by the Phrygians who also occupied these sites.

In 1993, Stephen Lumsden, Bilkent University, Ankara, initiated a survey project here to place Hittite and Phrygian Gâvurkalesi in its environmental setting, and to study the diachronic use of its immediate valley. He kindly reports:

"The natural hill on which the relief was carved appears to have been modified with terraces and cuttings to accommodate a structure more complex than the single corbeled chamber that remains today. Hittite pottery from the south slope (below the relief) and terraces well beyond it suggest a settlement quite different from the isolated monument envisaged by von der Osten. Below the Phrygian hillfort, a larger area of stone enclosures on terraces extended to the base of the hill. The valley also produced evidence of Phrygian occupation. Finally, an EB site at the valley's north end and Hellenistic–Roman material extend the use of the immediate valley into earlier and later periods. The area in Roman times was apparently exploited for large sheepherding estates."

Kül Höyük. Rescue excavations were conducted in 1992–1993 by the Museum of Anatolian Civilizations (Ankara) at this multiperiod site 55 km southwest of Ankara. As at Gâvurkalesi, its neighbor to the west, the Hittite and Phrygian occupations are of particular interest. A Hittite fortification wall, with two postern gates on the west and southwest sides, was investigated in 1992. During the following season, trenches on the top of the mound exposed two Phrygian building phases of large rectangular structures and silos. Pottery from fills and from the postern cuttings indicates that the site was first settled in EB III (mid-third millennium B.C.). A report (with English summary) on the 1992 season is published by Doğu Mermerci in *Anadolu Medeniyetleri Müzesi 1992 Yılı* (Ankara 1993) 3–24.

Western and Coastal Anatolia

Marmara Region. Historical geography and MB–LB sites located during survey are discussed by M. Özdoğan, "The Second Millennium of the Marmara Region. The Perspective of a Prehistorian on a Controversial Historical Issue," *IstMitt* 43 (1993) 151–63.

Harmanören. Mehmet Özsait conducted salvage excavations at this EB I–II cemetery near Bursa. He uncovered nearly 40 tombs, all of them typical pithos burials set into pits and held in place with fieldstones.

Gifts included stone tools, metal pins, and black-burnished pitchers with incised or ribbed decoration.

Gâvurtepe Höyük. In 1993, Recep Meriç continued his research into the Aegean hinterland's Chalcolithic and EB cultural history with further excavations at the large mound overlooking classical Philadelphia, 90 km to the sea and, across the Tmolus range, 45 km from Sardis. Below the burnt twin temple (level 5) with the bones of three deer excavated in 1992 appeared an earlier version (level 6) with at least two rooms and a large court. It was cut into by the later temple's sacrificial pit. Both temples can be dated to the Kum Tepe Ib period (early third millennium B.C.) by associated pottery.

A sounding below the level 6 temple uncovered violently burnt architectural levels in conjunction with pottery of Kum Tepe Ia type, black-burnished wares with incised and punctate triangles, and plates with interior ledges best matched at Samos and Emporio on Chios. Other finds include miniature marble figurines. A report on the 1992 season appears in *KST* 15:2 (forthcoming).

Troy. The sixth campaign of the Troia project, under the direction of Manfred Korfmann with a team of heroic scale, focused again on defining the parameters of the Bronze Age city, both on the citadel and in the lower town, and on ascertaining the site's relative and absolute chronology.

Results of the magnetometer survey and selective soundings now set the MB Troy VI city at 20 ha, with the citadel and its public structures accounting for 2 ha. During the two LB Troy VII phases, when the upper and lower city were residential, the population is estimated at 6,000–7,000. A settlement of this size—large by Aegean standards—must have been supported by commercial interests between the Aegean and the Black Sea, as well as with the Anatolian interior. Korfmann suggests gold, copper, tin, amber, carnelian, horses, fish, and slaves as potential commodities marketed by Troy's inhabitants. The lower city was protected by a deep ditch or moat located at its southern perimeter in 1992 as a magnetometer anomaly. A segment of casemate walling excavated beyond it in 1993 indicates an Anatolian technique of defense, as indeed is the case for the Troy VII citadel fortifications. Further evidence for a BA cemetery outside the city perimeter came in 1993 with the discovery of two Troy V tombs cut into bedrock below a Roman level. After Troy VIIB was destroyed ca. 1040 B.C. by invaders from the Balkans, the lower city remained unoccupied until its refounding in the time of Augustus.

The EB town of 2 ha that formed the core of the later citadel is achieving precise chronological definition. Korfmann argues that Troy I began, according

to ¹⁴C and dendrochronological dating, ca. 2920 B.C., and overlapped by a few decades with the close of Kum Tepe Ib (3000–2900 B.C.). His chronological reassessment of the BA Troad, coauthored by B. Kromer, is published fully in "Demircihöyük, Beşik-Tepe, Troia: Eine Zwischenbilanz zur Chronologie dreier Orte in Westanatolien," *Studia Troica* 3 (1993) 135–72.

(The Greek and Roman periods at Troy are discussed below under "Classical, Hellenistic, and Roman: Troad.")

For the 1992 season, see *KST* 15:1 (forthcoming) and *Studia Troica* 3 (1993) 1–38. The 1993 preliminary report is published in *Studia Troica* 4 (forthcoming).

Liman Tepe. The Bronze Age harbor of classical Klazomenai was further investigated by Hayat Erkanal in 1993, with the opening of several trenches on the coastal side of the site. The latest LB architectural phase was much disturbed by bulldozing, but could be dated by Mycenaean ceramics. Elsewhere, a contemporary level with undisturbed walling produced a Mycenaean figurine head and a Mycenaean stone seal. Pits gave a preview of an earlier, 14th-century phase with wooden architecture, to be excavated in 1994. The MB period was followed through four architectural strata distinguished by domestic architecture of stone and wood, and a rich ceramic repertoire. Slag, ax molds, and a crucible recovered from a zone of small rooms with ovens identified them as workshops specializing in the metal industry. Finds included some 20 lead rings of identical size that recall the silver fixed exchange tokens found in a smith's cache at MB Acemhöyük.

For the early third-millennium settlement, which was protected by a massive wall located in 1992, a row of three more apsidal buildings of Troy I type was excavated alongside a large cobbled court with a stone-lined well. Associated material includes EB I pottery with incised figural decoration, Vasiliki ware from Crete, and a heavy bronze rod.

A report on the 1992 season is published in *KST* 15:1 (forthcoming).

Panaztepe. The 1993 season, conducted by Armağan Erkanal, focused on refining the chronology of the extensive LB cemetery with its significant combination of Aegean and Anatolian features; and on excavations in the earlier second-millennium settlement. The cemetery sequence is complicated by the frequent reuse of tombs, which occasionally included antiques among the tomb gifts. One such burial contained fine Mycenaean pottery together with a bowl made in EB III Samos. In an intact 13th-century tholos with a well-built stomion, eight individuals were found buried together with nine Mycenaean vessels,



Fig. 8. Uluburun. Bronze Canaanite dagger (l. = 31 cm). (Photo E. Greene and P. van Alfen)

three-handled pyxides in Minyan ware, stone and faience beads, a spearhead, and a lead vase.

Excavations on the edge of the cemetery uncovered an MB building, cut into by the later tombs, and a large cobbled ramp in an adjoining trench. Both trenches produced quantities of recut sherd disks, and clay disks incised with an X or a dot, suggesting their use as counters. The associated ceramic inventory resembles MB pottery from Liman Tepe, including vessels with stylized faces in high relief.

Efforts are being made to construct a protective roof for the cemetery, so that the tombs can be permanently displayed. For the 1992 season, see *KST* 15:1 (forthcoming); the cemetery is discussed by A. Erkanal in *1992 Yılı Anadolu Medeniyetleri Müzesi Konferansları* (Ankara 1993) 129–40.

Kaş-Uluburun. The discovery of additional hull remains, and of artifacts fanning out beyond the wreck's perimeter, soon signaled to the 1993 divers recovering the spectacular LB ship off the coast of Kaş that the 10th campaign would not be their last one. The season's results were similarly rich in surprises, as Cemal Pulak, Institute of Nautical Archaeology, kindly reports:

"The two-month season carried out excavations and mapping in the central part of the site, as well as down the slope (55–61 mbsl) where some of the ship's contents had spilled out. A systematic metal-detector survey over the entire site also assisted in locating any items (both metal and ceramic) embedded in sand or wedged among rocks.

"In the center of the site, the last 15 copper ingots (for a total of 354) and two stone anchors were removed to clear the ship's hull. Progress was slow, since its surface was covered with a dense deposit of beads, wood and organic materials, pan-balance weights of hematite, stone and bronze (one in the shape of a bull), a blank scarab, a faience cylinder seal, a Canaanite dagger of unprecedented type (fig. 8), "quarter oxhide" tin ingots, and an intact Canaanite jar (fig. 9). The jar was found to contain terebinth resin, already known as one of the ship's trade goods. The discovery that the ship was also carrying processed purple or murex dye in pellet form was more startling. More glass ingots, another precious cargo, included a second fragmentary purple one along with the turquoise and cobalt colors common to the wreck.

To the finished luxury products from eastern workshops can be added an ivory cosmetic tube with its applicator, certainly a kohl-stick (fig. 10); and, in the spill, the missing wing, head, neck, and feet of the two duck-shaped boxes found in 1992. A tortoise carapace, no doubt the soundbox for a lute or lyre, suggests that the ship's passengers and crew occasionally turned to music for entertainment.

"The metal-detector survey along the outer edges of the site's visible boundaries produced, among other finds, a unique bronze trident for fishing (fig. 11), and a second Mycenaean sword. The sword is closely related, both in type and findspot, to the one found in 1985. They are probably of 14th-century date, although they are missing the pommel that



Fig. 9. Uluburun. Canaanite jar. (Photo E. Greene and P. van Alfen)

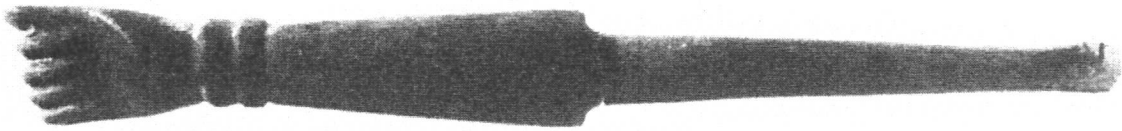


Fig. 10. Uluburun. Ivory cosmetic spoon (l. = ca. 10 cm). (Photo M. Fitzgerald)

would attribute them securely either to that century or the following one. The ship's stock of weapons thus illustrates equipment ranging from the eastern Mediterranean to the northern Balkans, a variety as cosmopolitan as the rest of the cargo, and suggesting a route that led up to the Black Sea.

"Once the final deposits were removed, it was at last possible to begin a close investigation of the ship's hull. cursory examination in previous seasons had

already proved that it was built in the 'shell-first' technique, a thousand years earlier than the fourth-century B.C. Kyrenia example that was otherwise the first documented one of this type. A new dimension to the hull's construction is the discovery of a rudimentary keel, or keel plank, projecting as the ship's spine by a few centimeters (fig. 12). It would not have assisted in directing the ship, but would have protected its planks and supported the ship during beaching.

"Because the ship's wood is spongy and fragile, it was decided to leave most of it in place until 1994, the excavation's final season. Once the ship has been completely lifted, a more detailed study of its construction will be possible. It is also hoped that the wood will respond to dendrochronological analysis successfully."

See *KST* 15:1 (forthcoming) for a summary of the 1992 season; the 1993 results are presented in *INA Quarterly* 20:4 (1993) 4-12.

METALLURGY

Göltepe-Kestel (Niğde). In a third season at the third-millennium B.C. mining center of Göltepe, Aslıhan Yener and her collaborators from the Niğde Museum were able to determine more closely the extent and nature of the site through remote sensing and excavation. The site's industrial zone covers an area of 60 ha, and was linked to the Kestel mine several kilometers distant. But it seems likely at present that dense settlement was restricted, at least by the EB III period (phase 2), to the 5-ha hill summit enclosed in a fortification wall that may also have served partly as a terrace. Houses scattered around the summit would double the area of habitation or workshops.

The structures consisted of pit dwellings with stone walls. Those of the two earlier phases 4 and 3 (EB I/II) were entirely subterranean, set in bedrock cuttings as deep as 4 m. In the four trenches worked in 1993, further details of the structures' inner furnishings emerged. Several early houses were equipped with decorated terracotta stands, somewhat like firedogs. In situ finds identify some structures as workshops with items ranging from crucibles and

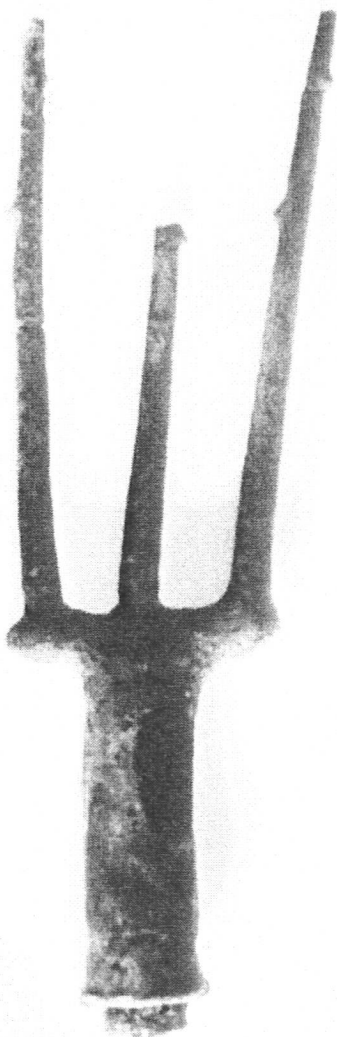


Fig. 11. Uluburun. Bronze trident (ht. = ca. 26 cm). (Photo E. Greene and P. van Alfen)



Fig. 12. Uluburun. Plan view of hull remains. White circles indicate pegged mortise-and-tenon joints. (Photo D. Frey)

pounders for crushing ores, to tuyeres and molds (the last enigmatic, since there is no evidence for copper working). The enclosure wall of phase 2 was flanked by a street, and widened into a large terrace, over 27 m long, up to a neighboring dump that produced over a ton of crucibles. Tin dust in the workshops and tin residue in the crucibles confirm the nature of Göltepe's metal industry. After the EB period, it was revived only in the Iron Age (phase 1), when some pithouses were reused.

The pottery, with many Cilician parallels, dates the earlier phases to EB I/II, and the fortified settlement to EB III. Karaz ware, Syrian bottles, and Cypriot streak-burnished ware point to contacts farther away. An exceptional EB III find was a torque made of an alloy of silver, tin, zinc, and copper.

Bryan Earl again replicated the manufacture of tin prills in a clay crucible from tin dust collected on site. He and H. Özbal reported on their analyses of the Kestel-Göltepe cassiterite at the 29th International Symposium on Archaeometry held in Ankara (*AbsArch94* 191).

The 1992 field report can be found in *KST* 15:1 (forthcoming); for the 1993 season, see *Newsletter for Anatolian Studies* 9:2 (1993) 9–10. P.B. Vandiver et al.

discuss the thermoluminescent dating of a Göltepe crucible in *Archaeometry* 35:2 (1993) 295–98.

Specialist studies. Several sessions of the 29th International Symposium on Archaeometry (Ankara, 9–14 May 1994) were devoted to ancient metallurgy. Studies on Anatolian metalworking included the EB bronze industry at İkiztepe (Ö. Bilgi); earliest metallurgy of copper alloys (C. Caneva, C. Giardino, A. Palmieri); the Lydian gold refinery at Sardis (N.D. Meeks, P.T. Craddock et al.); Phrygian manufacturing techniques (M. Özenbaş, L. Ercanlı); Chalcolithic–EB metallurgy at Arslantepe (A. Palmieri, A. Hauptmann et al.) and other Euphrates sites (Ü. Yalçın, A. Hauptmann); and the export of Anatolian metals to Bronze Age Greece (Z. Stos-Gale, N. Gale). The papers will be published. Summaries appear in *AbsArch94*.

Some of these reports were also presented at the annual archaeology symposium in Ankara in June 1994, and will appear in *ArkST* 10 (1995); for 1992 research results, see *ArkST* 9 (1994).

DENDROCHRONOLOGY

The 1993 efforts in the laboratory and on the summer excavation circuit in and outside Turkey expanded Peter Kuniholm's Aegean Dendrochronology Project (Cornell University) by several thousand years. He kindly made available the following report:

"Analysis of the Çatal Höyük charcoal from J. Mellaart's excavations 30 years ago gives an almost 700-year sequence for the Neolithic period (seventh millennium B.C.), to be supplemented now with the resumption of excavations there. The EB/third-millennium sequence is at present 1,761 years long, beginning in 2259 ± 37 B.C. Samples from Troy's level I and EB wood reused in Acemhöyük's MB Hatipler palace may eventually join it to form a Bronze to Iron Age chronology over 2,000 years long, and ultimately back to 2922 B.C.; but there is no overlap as yet. The new Afyon Museum excavations at Seyitömer Höyük northwest of Kütahya promise excellent samples for the EB and Chalcolithic periods, where synchronisms are few. For the MBA, the possibility of tying sites such as Kültepe (fig. 13) securely into Near Eastern historical sequences will resolve key chronological debates. Radiocarbon dates indicate a margin of error no greater than ± 37 years.

"Tree-ring sequences for the later periods are also being extended. Nearly 100 Late Antique/Early Byzantine specimens were collected during the 1993 campaign at Amorium, a site that should produce important further samples to be used in crossdating Byzantine monuments. Medieval monuments respond well to the same approach: a beam with bark



Fig. 13. Charcoal being collected for dendrochronological analysis from a hearth in the *karum* at Kültepe. (Courtesy P. Kuniholm)

from the Yıldırım Davuşşifası in Bursa (fig. 14) dates the building to A.D. 1400, and ends a long architectural debate."

For the 1990–1991 research results, see *ArkST* 9 (1994) 121–30; an overview of the entire project appears in *AbsArch* 94 134.

IRON AGE

East and Southeast Anatolia

Anzaf. Oktay Belli's rescue work on the ninth-century B.C. Urartian citadel built by King Ishpuini extended, in 1993, to its northern part, unfortunately disturbed by medieval reoccupation. In the 6-ha walled lower city, 85–100 m below the citadel, excavations uncovered two gates, 4 m wide, that were linked by two flights of stairs set at right angles. Inscribed blocks attribute their construction to Ishpuini's father Sarduri. An inscribed bronze shield found in the gates' burnt debris dates the lower city's destruction to the reign of Argishti II, toward the end of the eighth century B.C.

Belli also pursued his survey of Urartian dams and irrigation systems. For the 1992 Anzaf report, see *KST* 15:1 (forthcoming); see also A.B. Tuğrul and O. Belli, "Cuneiform Inscriptions Made Visible on

Bronze Plates from the Upper Anzaf Fortress, Turkey," *Antiquity* 68 (1994) 347–49. Related monuments are discussed by Belli in *IstMitt* 43 (1993) 255–66.

Ayanis Kalesi. At the second and later Urartian fortress currently under excavation, Altan Çilingiroğlu investigated the south side of the citadel walls and successfully located a gate in the southeast. As at Anzaf, the gate led to an inner staircase paved with fine andesite blocks. Remnants of the wooden gatepost were found beside one of two pivot stones, as well as an iron nail for the door. An inscription proclaims Rusa II (accession ca. 673 B.C.) as builder of the gate and founder of the city. Housing ran up against the city wall outside the gate.

Excavations in the upper fortress extended to the back wall of the room with piers found in previous seasons. Its well-preserved mudbrick walls were painted blue. A large bronze shield and three bronze belts join a helmet found in the same room last year to illustrate a complete Urartian panoply. Further storerooms in the magazines on either side of a narrow cobbled corridor contained pithoi embedded in the ground, their capacities inscribed in cuneiform on the shoulder; numerous smaller containers for liquids; sieve-like plates; and jars coated with bitumen. Thirty-six stamped bullae bore inscriptions



Fig. 14. Drilling a core sample in the Yıldırım Davuşşifası, Bursa (A.D. 1400, plus bark). (Courtesy P. Kuniholm)

on their reverse face. A report on the 1992 season appears in *KST* 15:1 (forthcoming).

Karagündüz-Van. Eight additional tombs from this typical eighth-century Urartian cemetery northeast of Anzaf were located by Veli Sevin through remote sensing. They fall into three categories, all using formal stone construction. The first two types are distinguished by the shape of their chambers—rectangular, with an interior niche, and trapezoidal—but share the stepped dromos and monolithic slab blocking the entrance. Type 3 is a stone cist lined with orthostats, and covered with a single slab. These three types are now represented by over 100 burials, both cremations and inhumations; the individual tombs can contain as many as 50 individuals. Gifts include many iron weapons and jewelry, and bowls containing sheep bones. Large ovens located beside the tombs would have been used to prepare a meal for the deceased. Associated pottery places the earliest phase of the cemetery at the time of Hasanlu IV. For Urartian pithos burials at Van, see M. Taner Tarhan in *IstMitt* 43 (1993) 279–82.

Altintepe. An Achaemenid presence at Altintepe (Çimin Tepe I) and Çimin Tepe II is proposed by G.D. Summers, "Archaeological Evidence for the Achaemenid Period in Eastern Turkey," *AnatSt* 43 (1993) 85–108.

Büyüktepe Höyük. See above, under "Chalcolithic and Bronze Age."

Kahramanmaraş Survey. For the inscribed Iron Age boundary stone found near Maraş, see above, "Chalcolithic and Bronze Age: Southeast and East Anatolia." Related inscriptions from Zincirli have been reedited by J. Tropper, *Die Inschriften von Zincirli: Neue Edition und vergleichende Grammatik des phönizischen, sam'alischen und aramäischen Textkorpus* (Münster 1993).

Cilicia

Kinet Höyük. In the second season directed by myself at the harbor site often identified with Issos, north of İskenderun, four new trenches were opened to investigate the Iron Age and later levels. On the west slope, two rooms of a large, well-built mudbrick building were dated to the eighth century B.C. (Tarsus Middle Iron Age) by pottery that includes Cypriot and Greek Late Geometric imports. The building's architecture and prominent location facing the sea with its cooling breezes invite its identification as a palace. It was violently burnt, and replaced by a phase with Assyrian pottery that suggests a precise historical event. On the mound's east side, the later Iron Age level (sixth century B.C.) was represented by a massive mudbrick building, only partially ex-

cavated and of unknown function. A third trench exposed three successive phases of domestic architecture spanning the entire Hellenistic period. The latest appears to have been abandoned after an earthquake ca. 50 B.C. The mound was reoccupied briefly as a citadel during the 13th–early 14th century A.D., when the lower terraces were also settled.

The stratigraphic sounding down the mound's west (seaside) slope extended the history of the site through the entire Bronze Age, with EB I building levels at its 1993 base. Earlier periods are anticipated. A geomorphological study conclusively located Kinet's ancient harbor at the south foot of the mound, in an ancient estuary of the Deli Çay (which now flows 2.5 km south of the site). The 1992 season is summarized in *KST* 15:1 (forthcoming).

Karatepe and Domuztepe. In 1993, Halet Çambel concentrated her efforts on the continuing restoration of Karatepe's circuit walls. At nearby Domuztepe, the two lion sculptures (one of them unfinished) that once protected the south gate were replaced in their original settings. Excavations begun in 1992 on the citadel fortifications uncovered a second gate or tower; its plan, like that of the citadel's main entrance gate found in 1993, was much obscured by Roman stone robbing. A street leading in from the gate was lined with a row of well-trimmed orthostats whose function remains enigmatic. Soundings inside and below the fortifications uncovered Iron Age domestic architecture, again disturbed by Roman interference. It fortunately spared, however, a domed Iron Age oven, its stone cover still in place over the flue vent, and its intact floor thickly littered with finds and many pithoi. For a discussion of the restoration project at Karatepe, see *IstMitt* 43 (1993) 495–509.

Kelenderis. The Iron Age levels are discussed below under "Classical, Hellenistic, and Roman: Cilicia."

Central and Western Anatolia

Gordion. Geomorphological and surface survey carried out during the 1993 season brought a radical change to the known configuration of Phrygian Gordion. The city mound should now be viewed as one district enclosed by the 100-ha city that extended at its foot—thus the prominent element in a low-lying urban landscape. G. Kenneth Sams continued to address the future of the site through a conservation program and research to protect monuments as varied as stone and mudbrick megara, and the wooden chamber of the Great Tumulus.

Excavations carried out by M.M. Voigt's team on the city mound brought to light more of the "Post and Poros" building (period VIb, early eighth century), a puzzle inherited from earlier campaigns.

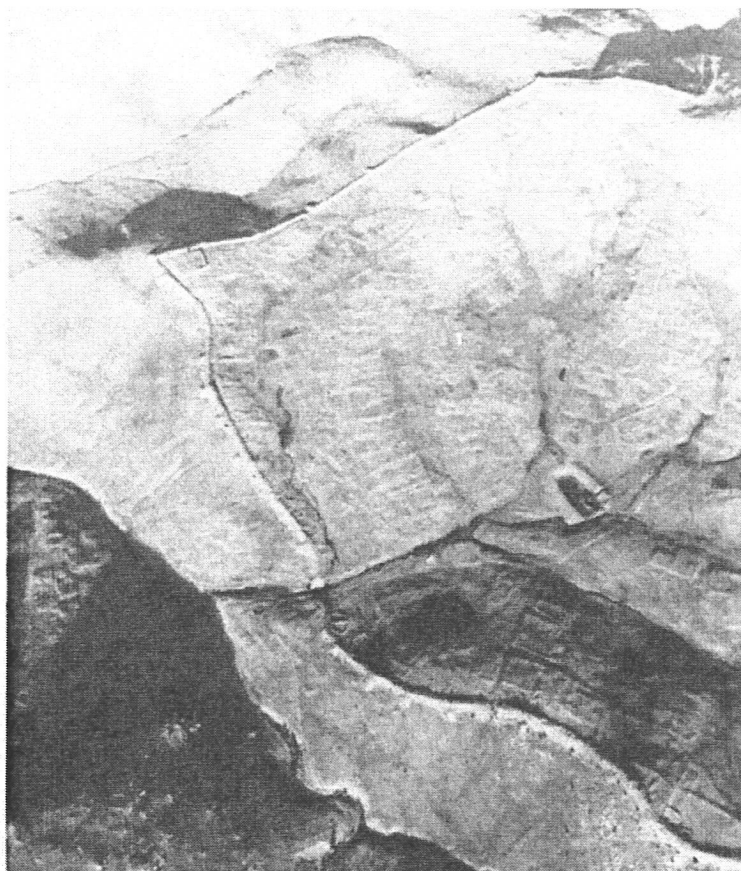


Fig. 15. Kerkenes Dağ. Northern half of site enclosed by defensive wall and towers, photographed from a hot-air balloon. (Courtesy G. Summers)

Its white slab floor and adjoining red and white checkerboard pavement reflect Phrygian decorative whimsy. Soundings on the western side of the city mound and in the outer town reached Early and Middle Phrygian levels at depths of several meters. A massive ashlar wall in the south slope sounding of the “Küçük Höyük” on the far side of the lower city belonged to a major building project of the Late Phrygian period IV.

In an allied long-term project, E. Simpson and her conservators continued the restoration of furniture from the Great Tumulus. Through their efforts, a low table/footstool has been added to the Gordion display in the Museum of Anatolian Civilizations in Ankara. The Museum has also installed a full-scale model of the tomb chamber. Another final report in the Gordion series has appeared: G.K. Sams, *The Gordion Excavations, 1950–1973: Final Reports IV: The Early Phrygian Pottery* (Philadelphia 1994). For the 1992 season, see *KST* 15:1 (forthcoming). E.-M. Bosseret proposes a low date for the Phrygian destruction level in *IstMitt* 43 (1993) 287–92.

Kerkenes Dağ. In 1993, Geoffrey Summers carried out the first of two projected survey seasons at this

fortified stronghold 1,400 masl, near Yozgat. Von der Osten's investigations there in 1928 had netted a plan of the circuit wall, and Late Iron Age pottery comparable to that from Alişar V. The new survey intends to map the entire site by means of overlapping aerial photographs taken from a helium blimp at altitudes of 60–360 m. A magnetometer survey confirmed that the photographic results correspond not only to walls, but that they represent a single construction phase, in some places violently burnt.

The circuit wall, 7.5 km in perimeter, was faced with towers and pierced by at least five gates. A 60° cobbled glacis protected the slopes. At the south end were located several monumental buildings on high ground. The rest of the site, 2.5 km long from north to south, was also entirely covered with buildings (fig. 15). A sophisticated water system with cisterns and reservoirs that tapped nearby streams would have ensured a stable supply. The size and short occupation suggest that the site may be Pteria, a Median fortress destroyed, according to Herodotos, by the Lydian king Croesus 25 years after its foundation. It was reoccupied only in the Byzantine period, when a citadel was constructed in conjunction with a small

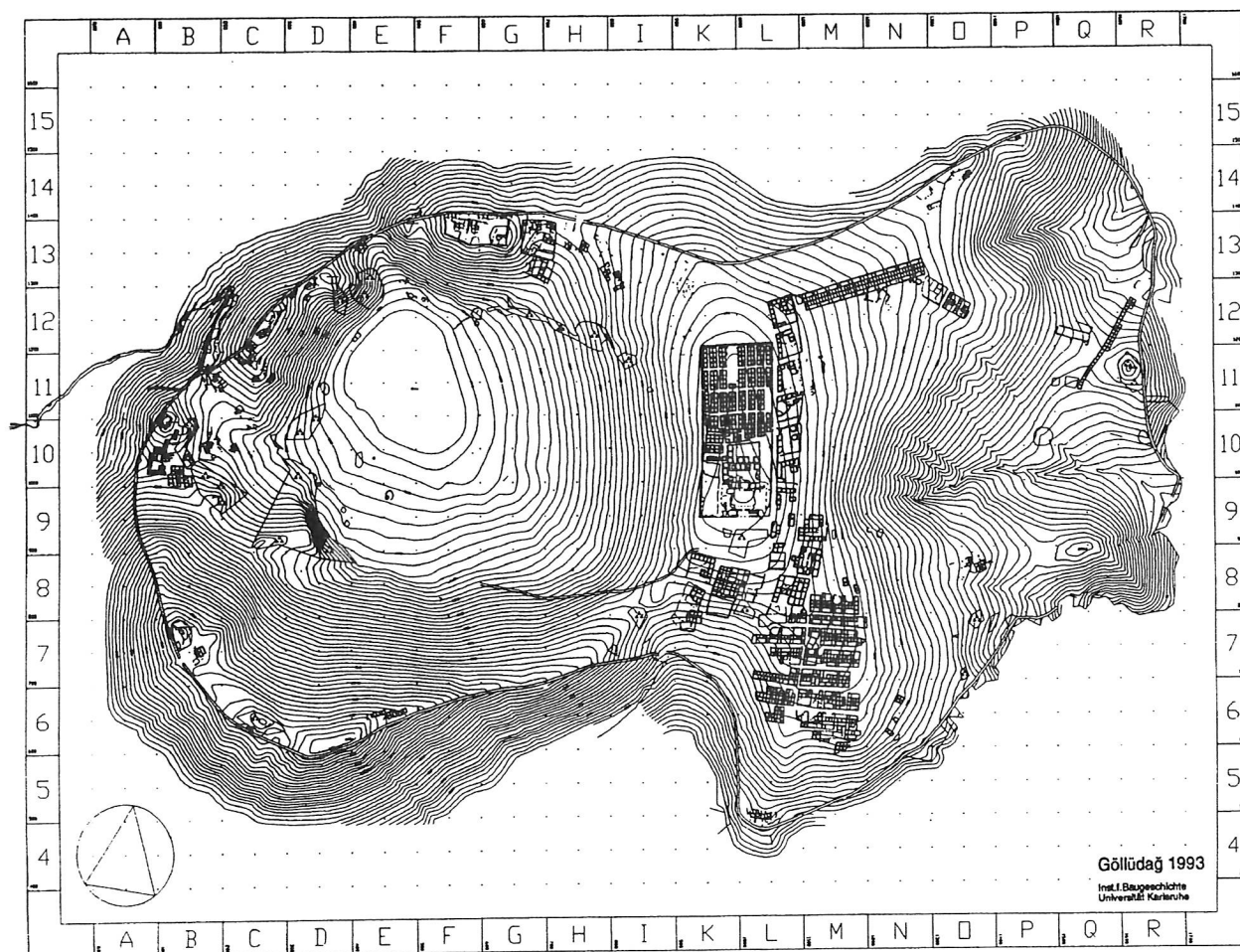


Fig. 16. Göllüdağ. Site plan.

village nearby. An illustrated report is published in *Arkeoloji ve Sanat* 62/63 (1994) 1–18.

Göllüdağ. In 1993, Wulf Schirmer (Universität Karlsruhe) carried out a second season at this fortified late eighth-century city near Niğde, in the Capadocian highlands. He kindly reports:

“The ancient site on Göllüdağ, the ‘mountain with a lake,’ was established on the ridges of a volcanic crater 2,000 masl. Earlier archaeological research had already determined the site’s general features, as well as its potential identification with the Tabal mentioned in Neo-Assyrian royal annals. The current project intends to record far more specifically all of the site’s architectural and cultural elements, as well as to evaluate its situation relative to the entire region during the Iron Age. This more detailed assessment may allow an eventual conclusion about its role in antiquity, and in historical geography.

“The first efforts of this project were to establish a topographical and architectural map of the 150-ha site by using aerial photographs in conjunction with a total station instrument. The completed plan (fig. 16) includes nearly the entire circuit wall, with

major gates on all four sides and smaller ones along the north stretch where the slope is less abrupt. Two possible forts were located inside the southwest and northern gates. The defensive system did not include towers.

“The monumental complex on the central ridge, where the 1968–1969 excavations had uncovered a portal of bit-hilani type with carved lions and sphinxes, can now be seen in plan as a 110 × 260 m enclosure with two distinct architectural zones. In the south, the portal leads into a portico and, opposite it, a central room lined with undecorated (unfinished) orthostats—the focus of the enclosure. The function of the buildings immediately behind it cannot be determined without excavation. Beyond them, the northern half of the enclosure was occupied by regular rectangular units of eight rooms each, built along a grid of streets. A similar orthogonal system was applied to the areas outside the enclosure, where comparably homogeneous architectural plans with small rooms and courts were laid out to the southeast, east, and northeast. These small rooms would have been suitable for residential purposes.

"The entire site would thus appear to have been constructed at one time, for a specific purpose. The paucity of associated finds, as noted by previous researchers, suggests that the site was used only sporadically. Earlier studies have proposed a military function for this large-scale building project, perhaps as a secure retreat in times of threat. One must, however, consider whether the bit-hilani complex with its monumental sculpture and central location is not more reasonable as a cult center. The housing projects that surround it may have served for pilgrims during brief visits for ceremonies conducted on a sacred mountain, closer to the sky and the gods."

For the 1992 survey, see *AraşST* 11 (1994) 237–42; a report on both seasons appears in *Architectura. Zeitschrift für Geschichte der Baukunst* (1993) 121–31.

Gâvurkalesi, Külhüyük, Kaman-Kalehöyük. See above, under "Chalcolithic and Bronze Age."

Şarhöyük-Dorylaion. In 1993, Muhibbe Darga deepened the soundings of previous seasons, and confirmed an uninterrupted MB–Byzantine sequence for this large mound outside Eskişehir. As at Gordion, Daskyleion, and Kaman, the arrival of the Phrygians is announced by a level of modest domestic architecture associated with handmade pottery. The Middle Phrygian pottery also fits securely in the standard assemblage, including gray wares with graffiti, and painted wares together with Orientalizing imports. The 1989–1992 seasons are summarized in *IstMitt* 43 (1993) 313–17.

Daskyleion. The future of the Achaemenid satrapal capital and its monuments was brightened in 1993 when the site was officially declared an archaeological park and a museum in nearby Bandırma was founded to house and exhibit regional antiquities. Tomris Bakır (Ege University) has put into action a successful program that encourages the area's villagers to hand over their finds in exchange for certificates of recognition and an official ceremony. They will now be able to see their gifts on display in the new museum. She kindly reports:

"The 1993 season was devoted to restoration, conservation, specialist studies on pottery and architectural finds, and excavations at Hisartepe. The Hellenistic pseudo-isodomic wall excavated 40 years ago on the southeast side of the mound was restored, thus providing a chance to study more closely its reuse of fifth-century Persian masonry. W. Koenigs, in a close analysis of architectural fragments from previous seasons, identified a fragmentary acroterion as part of a late sixth-century altar of Milesian type, as well as elements of an in antis fifth-century Ionic building from, perhaps, a Heroon or a propylon associated with the satrapal palace. Y. Tuna-

Nörling, in studying the Greek ceramics from the site, has recognized works of the finest Attic black-and-red-figure masters (e.g., Exekias, the Amasis and Andokides Painters, and Euphronios), a reflection of the Persian court's high standard of living.

"On Hisartepe, six soundings from previous years were continued in what now appears to be a cult or temple area. Pottery from the lowest levels attests to a Phrygian occupation during the ninth and eighth centuries B.C., with close parallels at Gordion. A small quantity of sherds belongs even earlier, to the period of Thracian migrations into Anatolia. By the end of the eighth century, imported Greek pottery made its appearance as the Phrygian inhabitants turned their sights toward the west. A rich ceramic assemblage was recovered from a large pit, perhaps the bothros of the cult center. Beside it, a water channel covered with stone slabs was also part of the installations, which were destroyed in the mid-seventh century at the time of the second Cimmerian invasions. The succeeding level, associated with Bichrome and Black-on-Red wares, would correspond to the new foundation of the site perhaps by Gyges, son of the eponymous Lydian king Daskylos. Architectural remains included a temenos enclosure wall, rebuilt several times over the following centuries when speakers of Phrygian, Lydian, and Greek were sharing this sacred place, and inscribing votive objects in their own scripts. The function of this area, misunderstood in previous seasons, is now firmly indicated by a limestone shrine model from a floor sealed by the destruction assigned to the last Cimmerian invasion of 640 B.C. The model illustrates a temple in antis, its ridgepole ornamented with a crescent acroterion of Phrygian type, and details indicated in red paint. It suggests a cult of Kybele here, and perhaps the presence of a wooden structure for the temple itself. Later, the Persians maintained this place as a sacred center."

Miletos. Iron Age levels at Zeytintepe and Kalabaktepe are discussed below under "Ionia."

CLASSICAL, HELLENISTIC, AND ROMAN

Pamphylia, Pisidia

Perge. Jale İnân continued to restore sculptures in the Antalya Museum with fragments from the theater and elsewhere on the site. The portrait heads of two Trajans and two Hadrians were fitted to heroic nude bodies; they belong to a statuary group of seven nude emperors that may come from a late workshop, or were consigned there for repairs. A Hadrianic head of Alexander from the 1992 excavations was joined to a draped torso from an earlier

season. The theater's proscenium frieze, illustrating the Dionysos cycle, has been reinstalled in its original sequence.

In the lower city, Haluk Abbasoğlu excavated more well-preserved housing of the fourth–seventh centuries A.D. The apsidal reception room of one house contained a large table made of Cypriot marble, and carved with reliefs illustrating Abraham's sacrifice; the house itself would not seem, given the table's theme, to have been secular. A similar table in the Istanbul Museum dates to the reign of Theodosius. Elsewhere on the site, an energetic restoration project raised columns along Perge's main street and in the central agora.

Side. Ülkü İzmirligil concluded the first decade of restoration and planning at Side with further work on the theater and its adjacent agora. She worried that, in the future, the theater's consolidation will receive less financial support from those interested in using it for performances, since the damage inflicted by concerts in the Ephesos theater has demonstrated that these ancient buildings cannot be subjected to highly amplified music.

Sagalassos. The fourth season at this highland Pisidian site brought together a large team engaged in conservation; ceramic, geomorphological, faunal and botanical analysis; research on water supply and distribution; and excavation. Marc Waelkens (Katholieke Universiteit, Louvain) generously reports:

"Excavations south of the Late Hellenistic fountain's retaining wall (early third century A.D.) revealed that it was constructed against the back wall of a large public structure, perhaps a peristyle building with marble columns, of similar date but set on a terrace 2.5 m below the level of the fountain (fig. 17). The wall, which was traced for a length of 20 m, was decorated on its inner face with large rectangular panels in plaster. After a fire at the end of the century, its ruins were filled with debris (including large fragments of a male marble cult statue), and divided into smaller rooms for a fourth–early fifth century re-occupation. West of the fountain house were discovered its water supply and sewage system contemporary with the terrace remodeling of the third century, which interrupted the earlier water system to the east.

"Trenches to the east and west of the adjacent Roman library (A.D. 120–125) indicate that it was originally flanked on either side by a room 6 m deep, at least 7 m wide, and now preserved to a height of 4 m. The library would thus have belonged to a larger structure, perhaps a gymnasium. The rebuilding of the side walls in the early third century isolated it from the two flanking rooms, however; the west room



Fig. 17. Sagalassos. Peristyle building with stucco paneling (early third century A.D.), south of the Late Hellenistic fountain house. (Courtesy M. Waelkens)

was then abandoned in the library's brief third and final phase (probably during the reign of Julian, A.D. 361–363) in favor of a small stepped alley. Only the side rooms remained in use as simple dwellings for a few more decades, until a fire that can be assigned to the Isaurian raids of A.D. 404–406.

"A sounding to the north of the library showed that it was partly constructed on top of a monumental Hellenistic building of polygonal masonry. By the mid-first century A.D., this was filled in with rubble to form a terrace and the foundations for the back wall of a large house occupied until the early second century. Finds from this house's seven phases included a 15-cm bronze statuette of Aphrodite *pudens* (fig. 18). The Hellenistic masonry left standing was finally dismantled ca. A.D. 120 to make space for the library.

"Efforts in the Upper Agora included further excavation along its western side, and restoration. In the northwestern corner evidence was found for a Late Antonine portico (fig. 19) that ran the northern length of the agora in front of an Early Imperial market building several stories high. In the Late Antique



Fig. 18. Sagalassos. Bronze Aphrodite *pudens* from a first century/early second century A.D. house behind the Library. (Courtesy M. Waelkens)

period, a portico was again erected (this time from spolia) along the agora's west side, interrupted midway by an impressive stairway leading toward the bouleuterion. In the fifth/sixth century, a chapel was dedicated at the northwest end. Its contents included a large plate inscribed with an invocation to St. Michael. By the close of the 1993 season, excavations had also exposed a third of the 38.5 × 80–85 m Upper Agora (fig. 20); some 125 slabs that had been displaced in late antiquity were restored to their original position. Honorific pedestals for the bronze statues of prominent citizens have been reerected and repaired, together with the canopy roof of an Early Imperial monument (fig. 21). The sculpted half-columned piers from the upper gallery of the Hellenistic bouleuterion (late second century B.C.) were reassembled on a temporary terrace east of the agora, in anticipation of the bouleuterion's future excavation.

"A second season in the Lower Agora, west of the Roman baths in the lower city, succeeded in clearing three-quarters of its 1,200 m² area. Its eastern side was framed by a 5-m-wide portico of the late first-early second century A.D. that screened a row of small shops. These were completely reinstalled ca. A.D. 400, perhaps during the reign of Arcadius (fig. 22), and remained in use for a century or more. Primitive dwellings were then set up inside the portico, and the shops filled in for a water system at the beginning of the seventh century."

Analysis of the faunal remains from the Doric temple indicates that an important staple was fish supplied by the neighboring lake, the Mediterranean, and even Egypt or Syria (catfish). It is now known that the local potters' industry obtained its clay from two sources: near the theater for coarse wares, and 15 km distant for fine wares. Pottery was distributed to local markets in Pisidia and eastern Lycia, as well as to Italy and the East, perhaps through the commercial efforts of Pisidian soldiers. Finally, survey of the 20 km² area south of Sagalassos has located

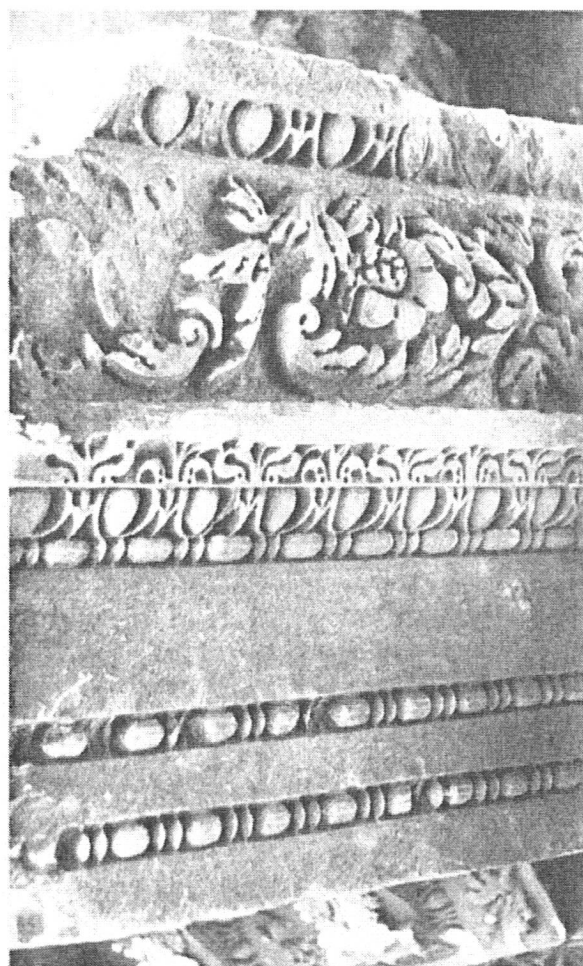


Fig. 19. Sagalassos. Upper Agora: entablature from the Late Antonine portico (A.D. 160–180). (Courtesy M. Waelkens)



Fig. 20. Sagalassos. Upper Agora at the end of the 1993 season. (Courtesy M. Waelkens)

35 sites ranging from the Neolithic to the Ottoman period, and a Palaeolithic flint source at 2,000 masl. For the 1992 season, see *KST* 15:2 (forthcoming) and M. Waelkens and J. Poblome eds., *Sagalassos* II (Louvain 1993). Preliminary studies and interim reports on the 1993 season are published in Waelkens and Poblome eds., *Sagalassos* III (Louvain 1994).

Lycia

Limyra. Jürgen Borchhardt pursued his restoration program in 1993 with the raising of columns in the monumental street, whose honorific monuments included a socle inscribed with the name of the general Theodosius, father of Theodosius the Great (A.D. 378–395); with the reconstruction of a model of the Ptolemaion, where a colossal female statue (found in 1992 in the rubble packing of the

Byzantine city wall) was once displayed; and with repairs on the southern fortification and its corner tower. The theater has been transformed into a museum for the site. The Heroon frieze is discussed in *IstMitt* 43 (1993) 351–59.

Xanthos. At regular intervals, the Xanthos excavations have produced ancient texts and modern documentation about the historical geography of ancient Lycia. The 1993 season again recovered an inscription of this sort, specifying the geographical boundary between the Lycian League and Termessos Minor. Christian Le Roy, École Normale Supérieure, Paris, kindly reports:

“Excavations in the Letoon (fig. 23) under A. Davesne’s direction took place around the sanctuary’s western temenos wall as far west as the modern road, and south to the limit of the archaeological site. Just

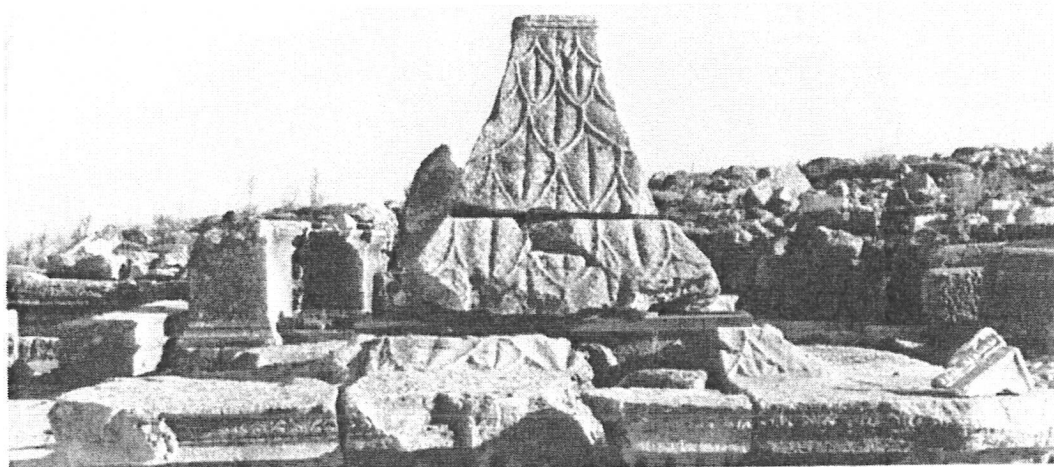


Fig. 21. Sagalassos. Upper Agora: canopy roof of an Early Imperial honorific monument. (Courtesy M. Waelkens)



Fig. 22. Sagalassos. Lower Agora: East portico with fourth-century A.D. shops (at the back, the unexcavated Roman bathhouse). (Courtesy M. Waelkens)

outside the propylon excavated in 1988 was uncovered a paved road leading travelers from beyond the Xanthos plain in the west, from the Kragos Mountains and Sidyma, directly into the sanctuary. The temenos wall's exterior facade bore 14 inscriptions below an equivalent number of stuccoed statue niches. They list the lives and careers of a notable local family over three generations, commemorated here because they financed the enclosure wall's reconstruction in the Flavian era. Inside the sanctuary, porticos on either side of the propylon were also investigated. In front of the western portico, north-east of the gate, a 2.65-m-high stele was discovered whose 110 lines specify the parameters of a border laid out between the Lycian League and "Termessos near Oinoanda" (Termessos Minor). Its text can be almost completely read, and provides great detail not only about the placement of boundary stones and natural landmarks, but also precise historical information regarding the dating system in use; a list of the eponymous priests of the relevant cities (Lycian League, Termessos, Tlos); the coinage ("new Rhodian plinthophoros") specified as fines for border violations; restrictions in the use of the border area, which could not be plowed or built upon; and the like. The stele documents further the regional conflicts and political maneuvers among the cities, as already attested by the Araxa inscription.

"Further study and mapping of the Late Antique and Byzantine fortification system concentrated on those sections where changes in building techniques

and materials could provide a chronological framework for the history of the circuit walls. Similar attention was devoted to the acropolis church, distinguished by the high quality of its architectural sculpture, and by a small chapel or baptistry added behind and against the main apse. It may have functioned as a pilgrimage center, in contrast to the episcopal church lower down in the city.

"Restoration work on the 'Dancers' Sarcophagus' was concluded in 1993 when the rest of its lid was replaced, the last small fragments were reattached, and the monument was treated to discourage lichen growth. Outside the site, surveys of three hillforts in the Xanthos valley signal the presence of an extensive defensive network characteristic of the Hellenistic period."

Recent publications relating to Xanthos include C. Le Roy, "Artemis à Didymes et en Lycie," *BAntFr* 1992, 144–49; Le Roy, "Aspects grecs et anatoliens des divinités vénérées au Letoon de Xanthos," *Akten des II. Internationalen Lykien-Symposions* (Vienna 1993) 241–47; J. Bousquet and P. Gautier, "Un juge de Xanthos à Angeira de Pisidie," *REG* 106 (1993) 12–23.

Patara. Fahri Işık continued the survey, planning, and restoration of a number of buildings (a Roman bath, the large basilica and baptistry, two Hellenistic temples) and the main colonnaded street. Soundings have produced Iron Age pottery in the lowest levels. The 1992 season is reported in *KST* 15:2 (forthcoming).

Arycanda. Excavations in 1993 above and to the



Fig. 23. Xanthos. Aerial view of the Letoon. (Courtesy C. Le Roy)

west of the stadium allowed Cevdet Bayburtluoğlu to reconstruct the building sequence for the row of shops with fine stuccoed facades discovered there in the previous season. The shops originally belonged to an apsidal structure that was condemned and filled in with rubble to create a terrace for the newly planned stadium. This level area was also expanded by cutting back the surrounding bedrock. The shops, however, continued to function throughout the life of the stadium as late as the fourth century A.D.

Work was also carried out in the Helios sanctuary, in the library, and on the skene of the theater. For 1992, see *KST* 15:2 (forthcoming); a topographical study is published by P. Knoblauch and C. Witschel in *AA* 1993, 229–62.

Kyaneai, Balboursa. These long-term surveys in central and northern Lycia continued in 1993. Kyaneai and its satellite hilltop forts were recorded further by Frank Kolb. John Coulton's research into the subsistence economy of the territory controlled by Roman Balboursa is summarized in *AraşST* 11 (1994)

429–36. Several monumental tombs are discussed by C.H. Hallett and J.J. Coulton in *AnatSt* 43 (1993) 41–68.

Caria

Kaunos. The four Hellenistic statue bases whose dedicatory inscriptions name Protogenes, son of the famous sculptor Melanthes, were joined by Cengiz Işık to other reused blocks scattered throughout the site. Sixteen blocks were recovered from a pavement north of the theater: two of them bear the names Radamantes and Kranais. Others from the 1966 excavations in the temple area have surface cuttings for the feet of bronze statues. They have now been reassembled into an exedra monument with an interior bench and five projecting statue bases that radiate out from the exedra's outer face. This fine gray marble installation displayed the bronze sculptural group that Protogenes set up in the agora of Kaunos in the late fourth century B.C. The 1992 season appears in *KST* 15:2 (forthcoming). For a review

of the 1988–1991 seasons, see B. Schmaltz in *AA* 1994, 185–237.

Burgaz-Datça. In 1993, Numan Tuna began his investigations at Burgaz, an ancient port on the southern coast of the Knidian peninsula, with four areas of soundings to determine the occupational sequence. The lowest architectural levels produced Archaic pottery and sections of a city wall (perhaps Late Classical) built of elegant ashlar blocks with drafted edges. The site remained active in the Hellenistic to Late Roman periods.

Knidos. Ramazan Özgan extended excavations in the two areas focused on in the previous season. On the promontory overlooking the south harbor, a lower terrace served as the foundation for Hellenistic housing, with polygonal masonry, a good water/drainage system, and pottery spanning the late fourth to second centuries B.C. More of the Roman architectural phase was cleared on the terrace above the Aphrodite temple, along with a well filled with pottery of Early Imperial date. Beneath this was excavated Hellenistic walling with painted decoration. A brief report on the 1992 season is published in *AA* 1994, 714.

Hisarönü-Marmaris. An industrial production center for Rhodian amphoras was identified in 1990 at Hisarönü, on the Datça-Marmaris road, by N. Tuna and J.-Y. Empereur in the course of their work at the potters' quarters at Reşadiye. Roadwork had cut into the site's small harbor and quay, and into large potters' dumps. In 1993, Ersin Doğer began systematic soundings with the aid of remote sensing. His excavations produced several phases of workshops and kilns dating to the later third century B.C., together with potters' stamps covering a 30-year period. Many known potters (e.g., Hierotheles, Dionysios) are represented by multiple examples, while other potters are attested for the first time (e.g., Hadrios, Hippostratos). The site provides important documentation for the chronology of Rhodian amphora manufacture.

Bodrum-Halikarnassos. In 1993, Poul Pedersen found further evidence for Mausolos's palace on the promontory of the Knights' Castle. North of the terrace wall noted in the 1920s, and east of the museum, excavations uncovered walls of one large room and two smaller ones separated by a corridor. The green andesite used in their construction matches the rubble core of the Mausoleum. An outer wall and doorway of fine gray limestone were also characteristic of the fourth century B.C. These rooms are aligned with the orientation of the terrace, and must have been part of the same architectural complex.

Restoration of the Late Roman villa and its fine

mosaics was completed by the end of the season. For 1992, see *KST* 15:2 (forthcoming). A brief report on the Hekatomnid burial discovered in 1989 appears in *MKKS* 4 (1994) 95–99.

Iasos. Restoration continued at the misnamed "Fish Market," the funerary monument of Early Hadrianic date. Fede Berti also investigated the Roman mausoleum known as the "Clock Tower," which marks the entrance of the northeastern necropolis; its chamber tombs were once plastered and painted. The 1992 season is reported in *KST* 15:2 (forthcoming). For a general review of the excavations, see *Scavi* 188–247.

Stratonikeia. The 1993 campaign led by Yusuf Boysal continued to excavate, record, and preserve the theater of Hellenistic plan but Early Imperial date, the city's monumental gateway, and an enigmatic Hellenistic building—perhaps a gymnasium—of impressive scale and elegant marble construction. His surveys have led to an assessment of Bronze Age regional cultures, including a Mycenaean and Submycenaean necropolis at Çömlekci. For 1992, see *KST* 15:2 (forthcoming).

Lagina. Stratonikeia's sanctuary to Hekate at Lagina was investigated, with a view toward restoration, by Ahmet Tirpan in 1993. The area of the propylon, standing like a lone sentinel in the midst of shrubbery, was cleared of debris down to the pavement of a sacred road lined with orthostats. Cleaning also took place around the altar.

Aphrodisias. Excavations under the direction of R.R.R. Smith resumed in 1993 after two seasons devoted to research, mapping, and inventory. In line with the ongoing project to define Aphrodisias's urban layout, investigations focused on the new city plan that was set up in the Late Hellenistic period between the theater and the Temple of Aphrodite, and its evolution over the succeeding one and a half centuries. The 1960s' soundings in the southwest corner of the new city center, marked by the North Agora and the Porticus of Tiberius, had uncovered a major artery running due east under one apse of a triple-apsed church. In 1993, closer investigation of the church's south apse demonstrated that its four interior monolithic columns rested on a concrete base 2 m high; and that the church (as already proposed by R. Cormack) merely enclosed these standing columns when it was constructed. Thus the columns originally stood as a tetrapylon at an important crossing, whose north–south axis can also be situated thanks to a drain uncovered in the same sounding. At the northern end of the city, its boundary with the Aphrodite temple was also investigated.

The southern end of the Great Basilica, left un-



Fig. 24. Miletos. Zeytintepe: votive bronze (late seventh/sixth century B.C.) (Courtesy V. von Graeve)

excavated in the 1970s, was cleared in 1993. The building's focus consisted of a large chamber. Attached half-columns in situ and architectural fragments for a monumental arched entrance recall the basilica at Aspendos.

Further inventory of the sculpture from previous seasons resulted in new findspots for the Tetrastoon sculpture (including Flavius Palmatus); apprentices' practice pieces from a sculptor's workshop; and the recording of over 500 sarcophagus fragments. Close examination of the masons' marks on the Zoilos frieze had earlier shown the museum reconstruction of 1979 to be incorrect. The panels were originally arranged as a square monument with the frieze along the base. The reliefs have been reassembled in their proper order with a more logical composition: Zoilos is now flanked by two personifications, with herms serving as dividers for two separate scenes. The monument will be reinstalled in the museum after the 1994 season.

Regional surveys southwest of the city have located a new marble quarry, and much Classical material. In the Işıklar valley, a chamber tomb with a menorah in relief gives further evidence for the Jewish

community known from inscriptions at Aphrodisias. The 1992 season is reported in *KST* 15:1 (forthcoming). For the 1993 season, see R.R.R. Smith and C. Ratté, *AJA* 99 (1995) 33–58.

Herakleia am Latmos. The 1993 season was devoted to studying the ancient roads in the Latmos area. See A. Peschlow in *AA* 1995, forthcoming.

Ionian

Miletos. In a fifth season devoted to the investigation of Iron Age Miletos, excavations continued at the Aphrodite sanctuary on Zeytintepe, and the settlement on Kalabaktepe. Volkmar von Graeve, Ruhr-Universität Bochum, kindly reports:

"At Zeytintepe, two new soundings investigated the eastern extension of the early sanctuary outside the monumental stone enclosure traced in 1992. Deposits dating to the seventh and sixth centuries B.C. contained fragments of Laconian, Attic, and East Greek vessels of the highest quality; terracottas in Daedalic style representing female figures with long skirts and bare torsos; and votive bronzes such as a shield with a Pegasos figure, and the bridled horse illustrated here (fig. 24). Along with further examples

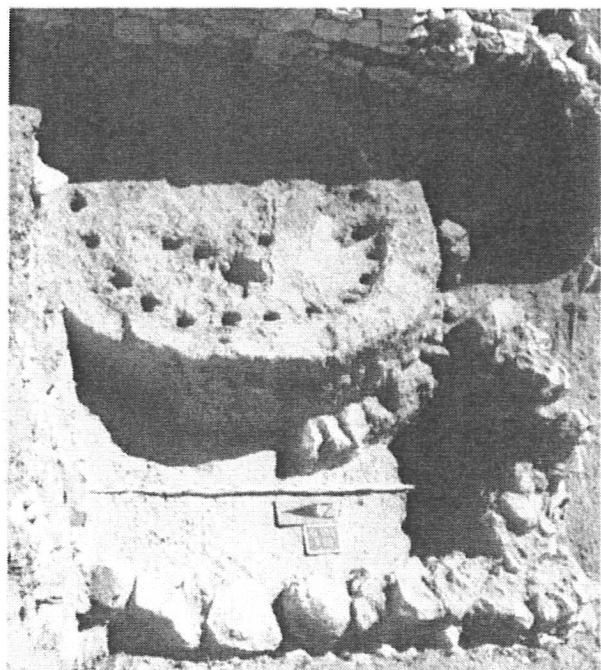


Fig. 25. Miletos. Kalabaktepe: Early Archaic kiln. (Courtesy V. von Graeve)

of limestone figurines, two fragmentary statuettes (one preserved as a hand holding a bird, the other a bird-bearing kore of Ionian type) were exceptionally made of lead.

"The 1992 soundings in the Archaic residential district of Kalabaktepe were enlarged and deepened in 1993, down to Late Geometric predecessors for the early seventh-century B.C. buildings. The Early Archaic settlement is estimated at 4,000 houses together with an industrial area represented this season by further excavation of a large and well-preserved potter's kiln (fig. 25). A comprehensive plan of these levels using photogrammetry and CAD now includes the remains on the east terrace excavated by T. Wiegand at the beginning of this century.

"Outside the ancient city proper, salvage excavations were carried out in an area of expanding agricultural land use on Mengerev Dağ, southeast of Miletos on the Söke-Milas road. They uncovered the partial remains of a circular temple porch, probably of Late Archaic date, that may be associated thanks to an inscription with the extramural Milesian sanctuary to Athena of Assesos. Regional survey recorded an additional 38 ancient sites, and continued mapping Miletos's necropoleis. A geophysical survey of the city pursued its investigations of the ancient water supply system, the contours of the Bay of Lions, and previously excavated areas in need of clarification for forthcoming publications.

"The ongoing restoration program of the site's

standing monuments is addressing as one of its major concerns the annual saltwater flooding that transforms Miletos into a small Venice every winter. By cooperating with the Turkish State Waterworks Department, we hope to develop an adequate system of drainage canals to control this destructive process."

For the 1992 season, see *KST* 15:2 (forthcoming); *AA* 1994, 711–12; and topical studies in *IstMitt* 43 (1993) 371–80 (W. Held on topography) and 429–36 (R. Koster on the palestra in the Baths of Capito).

Didyma. In 1993, Klaus Tuchelt and his team concentrated their attention outside the Apollo sanctuary on the Archaic Sacred Road, in a program begun four years earlier to document its construction, associated monuments, and history by archaeological means in the absence of any written records. They uncovered the road's first known monumental enclosure: a terrace with the foundations of an exedra structure, and behind it a treasury, separated from the road by an open area 18 m wide. A seated terracotta figure was once displayed in the middle of the terrace. In front of the exedra, a row of six stone sphinxes was set up on a wall overlooking the street, in an arrangement reminiscent of Delos. The complex, which contained offerings of animal bones and pottery from Samos and the Levant, was constructed in the third quarter of the sixth century B.C., when the Sacred Road itself was established. Ceramic finds suggest that the road went out of use in the fourth century A.D. with the onset of the Byzantine period and Christianity.

The meticulous conservation program at the Apollo sanctuary continued its efforts to counter the effects of natural and man-made disturbances—plants growing within the building's cracks, and the iron bands that were strapped around the columns in an early attempt to consolidate them. Stone fragments are being reattached, rust has been removed, but the reconstruction of the columns themselves will require several years of restoration. The 1992 season's report appears in *KST* 15:2 (forthcoming) and *AA* 1993, 679. For a comparison of the Artemis cult at Didyma and Xanthos, see C. Le Roy, "Artemis à Didymes et en Lycie," *BAntFr* 1992, 144–49.

Priene. W. Koenigs, Deutsches Archäologisches Institut, Istanbul, kindly offers the following report on his 1993 research season:

"Detailed studies preparatory to the final publications of the Athena temple, the Agora, and the Lower Gymnasium and Stadium continued to focus on accurate recording of their architectural sculpture and elements of construction. Previously unstudied Hellenistic pottery from the site's earliest excavations was inventoried, drawn, and photo-

graphed. Restoration of the theater extended to the original proscenium and its Roman modifications.

"In the neighboring region, a Byzantine fortress above Akçakönak (ancient Gumenes), and Hellenistic tombs at the foot of Thebes on the Mykale were noted. The tombs are the targets of repeated vandalism." For the 1992 progress report, see *AraşST* 11 (1994) 465–81 and *AA* 1994, 714. Analysis of the new Agora investigations appears in *IstMitt* 43 (1993) 381–97.

Magnesia ad Meandrum. In a decade-long program to restore this site for public view, Orhan Bingöl opened, in 1993, two trenches to the west and south of the Artemis temple to clear its propylon and a section of the agora from the silt accumulated in the century since Humann's excavations. A third trench against the northern stretch of the Byzantine city wall uncovered a road lined with Roman housing and a public latrine. Nearby, a shed has been constructed to display stone fragments from the site, which continues to produce architectural sculpture, including a seated statue. For the 1992 project, see *KST* 15:2 (forthcoming). Hermogenes' architectural standards as recounted by Vitruvius are discussed by Bingöl in *IstMitt* 43 (1993) 399–416.

Metropolis/Torbalı. Recep Meric conducted his 1993 excavations in three areas of ancient Metropolis, whose acropolis overlooks the Küçük Menderes (Little Meander) Valley at a midpoint between İzmir and Ephesos. Stratigraphic soundings on the acropolis showed that it was occupied only sporadically: first in the Middle–Late Iron Age (indicated by Ionian Geometric and Archaic pottery, and West Anatolian Black-on-Red wares), a settlement restricted to the acropolis and overlying bedrock; then, after a long interval, during Hellenistic times; and finally during the Byzantine era, when a fortress was constructed. The Byzantine fortress was connected to its lower town by curtain walls extending down the northeast side of the acropolis. At its base, continued excavations below a Byzantine tower revealed further stretches of a Hellenistic stoa, now traced for a length of some 60 m and 18 columns. In the third area of investigations, the exceptionally well preserved theater, a wider span of the cavea was cleared to reveal another proedrium throne, narrower than the others and inscribed with a monogram that reads "Dionysos." The proedria, altars, and proscenium date to the Augustan period, when the Hellenistic theater was modified.

The Metropolis excavations were initiated in 1989 at the invitation of the Torbalı municipality and its energetic mayor, in a partnership that is exceptional for Turkey. The municipality and local industry sup-

port the entire project, so that, in the words of Mayor Ertan Ünver, Metropolis will contribute "a global heritage of inestimable value for mankind as a whole, and works of which the local people of Torbalı can be proud." The Metropolis Friends' Society has produced an elegant brochure for visitors (1992); the 1992 season's preliminary report appeared in *KST* 15:2 (forthcoming).

Ephesos. The 1993 season at Ephesos lasted six months, with a staff of 63 members involved in 15 different projects under the direction of S. Karwiese. The deep sounding in the agora confirmed that the earliest occupation there dates to ca. 700 B.C., with Ionian Geometric followed by Archaic pottery; its Roman level contained a cache of vessels imported from an Italian potter's workshop. The sounding at the northwest end of the Artemis sanctuary produced an exceptional treasure: three gold fibulae of Phrygian type with vestigial horns, and decorated with granulation and lion heads; and a solid gold female figurine weighing 60 g, perhaps a copy of the original Artemis cult figure.

Elsewhere in the ancient city, research was carried out in preparation for final publications, but included new discoveries: at the Damianus stoa, where several first–fourth century A.D. tomb markers inscribed with the names of gladiators were found beside the road; in the harbor, with rich amphora deposits; at the Church of St. Mary, still in use in the 11th century, with a newly found tomb that contained three tortoise shells; and in the stadium, where a Byzantine building (dated A.D. 578) excavated against the south door seems to be another church. Restoration efforts continued on the Sacred Road and its associated buildings, and in the theater, which has suffered damage from recent use (outdoor concerts have now been stopped). Close study of the theater netted previously unrecorded graffiti, and demonstrated that the gates/arches were blocked after the A.D. 262 earthquake, when a number of monuments at Ephesos underwent repairs and modifications.

Claros. In a sixth season devoted to investigating the early history of the Apollo and Artemis sanctuary, Juliette de la Genière continued to test the stratigraphy between the Apollo temple and its altar, this time in front of the temple's collapsed columns. As in 1992, the lower phases (sixth–fourth centuries B.C.) produced terracotta votives of Apollo with a lyre. A deposit capping these phases marked the rebuilding of the sanctuary in the second century B.C., as indicated by a coin minted in Colophon. Stone foundations for a large circular monument associated with the earliest temple recall the "Rundbau" at Didyma, and would appear to be an altar. With

it were Protogeometric sherds, terracotta horse and bull figurines, and a silver eagle-headed protome. A second sounding in the area of the exedra temple enclosure reached its paving, and portions of the sacred road linking the two temples. In the Artemis sanctuary, to the northeast, nine Roman votive stelae were found that can be added to the 12 from previous seasons.

Restoration of the sanctuary continued, together with the reerection of Claros's divine Apollo-Artemis-Leto sculptural triad, nearly 9 m high. For the 1992 preliminary report, see *KST* 15:2 (forthcoming).

Klazomenai. Güven Bakır's 1993 campaign at Klazomenai defined further the three-phased architectural sequence of the Iron Age to pre-Hellenistic periods. As at Bayraklı, the early apsidal buildings were replaced, after the eighth century B.C., by squared constructions associated with Orientalizing Attic imports. These gave way, in the fourth century B.C., to well-built structures with good stone masonry and a different orientation. Olive-oil presses were found clustered among the domestic installations.

Bayraklı-Old Smyrna. Ekrem Akurgal and Meral Akurgal continued to excavate in 1993 along the main street leading to the Athena temple. Architectural finds included a large building, in use from the seventh to the fourth century B.C., whose scale suggests a temple. Conservation and analysis of the site's remarkable ceramics remain a major goal of the project.

Lydia

Sardis. The Harvard-Cornell Expedition's 1993 season, directed by C.H. Greenewalt, jr., investigated further the Lydian city's defenses besieged by Cyrus ca. 550 B.C., and the fortification that replaced them. Excavations in the open yard of the late seventh/early sixth century B.C. East Gate passage uncovered burnt deposits associable with small industry, such as haematite touchstones for testing gold, and rock crystal. Corinthian and Attic imports and two Little Master cups all confirmed a destruction in the mid-sixth century. In the second half of the same century, the fortification system was redesigned with solid stone walling on top of a brick glacis or rampart. Other Lydian research included further study and mapping of the Alyattes tumulus, where limestone blocks of the crepis wall, one to two courses high, have again been cleared on one side; and a new analytical project on the gold refinery excavated in the late 1960s.

The evidence for Late Roman Sardis (ca. A.D. 300) was increased over the winter by the chance discovery of a painted Roman chamber tomb in the necropolis west of and overlooking the Pactolus. This

tomb, like the housing suburb, and an apsidal building containing a terracotta chancel screen, belongs to the second well-attested phase at the site. Sardis has, in contrast, produced little material to span the fifth century B.C. to A.D. 300.

Restoration and conservation projects progressed. The Lydian gate building will be reburied, since the awning erected above the trench has not provided satisfactory protection. A replica will be built at ground level. For the 1992 season, see *KST* 15:2 (forthcoming); a summary of the research on the gold refinery by N.D. Meeks et al. appears in *AbsArch* 94 215. See too C. Ratté, "The 'Pyramid Tomb' at Sardis," *Ist-Mitt* 42 (1992) 135–61; and Ratté, "Anthemion Stelae from Sardis," *AJA* 98 (1994) 593–607.

Aeolis-Mysia

Pergamon. During the 1993 season, excavations of the Hellenistic lower city's Building Z were concluded, and the sectors of the building uncovered in the four preceding campaigns were fully analyzed. Wolfgang Radt, Deutsches Archäologisches Institut, Istanbul, generously provided the following report and illustrations:

"In order to complete the goal of the 1993 campaign, it was first necessary, as in previous seasons, to examine the Late Byzantine housing (12th–14th centuries) that extended over and in some cases reused walls in the southern half of Peristyle Building Z, and roughly followed its orientation. Three individual houses were defined with some difficulty because of severe erosion at the southern slope edge; terracing also obscured the relationships between rooms, cisterns, and features such as ovens at higher and lower levels. A well-preserved room on the west side may have served as a basement for a larger building, with internal access via a wooden staircase as well as from an outside doorway onto a western alley. Byzantine vessels, pithos lids, and a collection of iron tools (mostly knives, together with a roasting spit and an arrowhead) were lying on its foundation surface, which was cut into bedrock. Some of these finds appear to have fallen from an upper story. In a separate building to the southwest, two rooms and—in an earlier phase—the single room that preceded them reused the walls and columns of Building Z's fountain house.

"The 1993 excavations answered essential questions about the plan of the original, Hellenistic phase of Building Z, and its modifications during the ensuing centuries. On the east and south sides, which were cleared in 1993, the walls were preserved only at foundation level. Their layout is strikingly irregular. These foundations were placed in parallel rows,



Fig. 27. Pergamon. Fountain house, from the east. (Photo E. Steiner)

entrance, by staircase, connected with the Hera sanctuary up the slope to the east. A door in the rear of the Mask Mosaic Room suggests another, western, passage in the direction of the Demeter terrace.

"Excavation of Building Z's south terrace below the South Hall uncovered, at street level, a recess 1 m deep \times 7 m long in its southwestern end (fig. 27). It was faced with three Doric columns, and can be dated by its construction to the Hellenistic period. Its connection with a cistern, and resemblance to the so-called 'city fountain' at the upper entrance of the Gymnasium, make its identification as a fountain house certain. As mentioned above, it may have formed a visual counterpoint for Building Z's entrance gate further east. In Roman times, the fountain house's basin was divided in two at the level of the middle column, as indicated by the presence of two complete pitchers (first century A.D.) resting against a mortar partition. The fountain was later incorporated into a Byzantine house wall.

"The assignment of Building Z's construction to the first half of the second century B.C. was strengthened further by the deposits found among the foundation walls excavated in 1993. The front of the South Hall would date a few decades later, however, as indicated by masons' marks that contrast with those of the original stylobate. The second major phase in the building's history occurred during the early first century B.C., with the redecoration of its north and west wings: the Silenus Mosaic Room, like the Mask Mosaic Room, was stuccoed at this time. Soundings below the floors uncovered three burnt foundation offerings, consisting of burnt wood, ashes, a lamp, and, covering it, a deliberately broken vessel

(fig. 28: the lamp handle can be seen protruding beyond the bowl's broken wall). One deposit included a skyphos containing five knucklebones. All three foundation offerings dated to this second building phase, although at least one lamp appeared to be several decades older (second century B.C.). Early in the first century A.D. (rather than in the Late Hellenistic period, as previously thought), the northeastern annex with a columned atrium was constructed, together with its small bath. Building Z's double north wall, and its interruption at the level of the atrium, should be interpreted as early modifications in the original plan similar to those that affected the south and east sides of the peristyle; they were not dictated by the addition of the atrium, which postdates the north wall.

"Building Z's last major phase corresponds to the addition of its mosaic floors in the north and west wings, ca. A.D. 100. In the better preserved Silenus Mosaic Room, the walls were lined with a 2.2-m-high dado of marble slabs, and the upper surfaces and ceilings were plastered and painted, as were the neighboring rooms. In the course of reassembling and restoring these plaster fragments, a number of graffiti have been recorded. This phase ended toward the last quarter of the second century A.D., probably because of earthquake damage. As noted in earlier campaigns, the building was then put to more modest domestic use until its abandonment by the mid-third century.

"Beyond the northeast corner of Building Z, a further area was opened to reveal a third segment

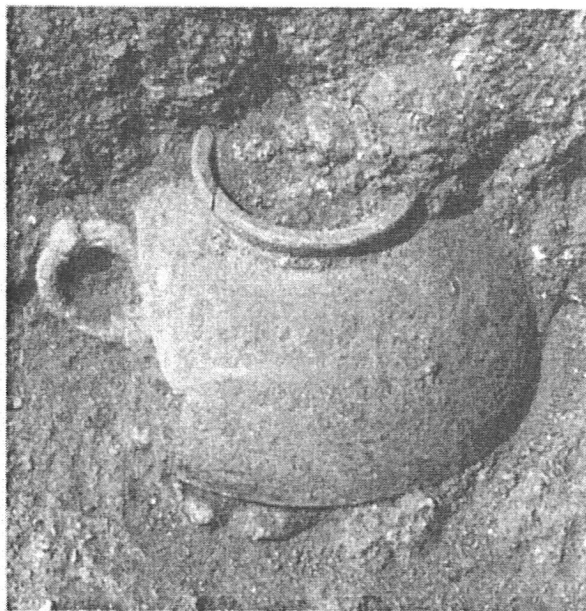


Fig. 28. Pergamon. Building Z: Late Hellenistic foundation deposit 3. (Photo E. Steiner)

of the Philetairan wall built on a retaining glacis revetted with squared stones (fig. 29). The chronological sequence is again clear: the Philetairan wall was cut by the construction of Building Z's east wall and its northeastern corner, where the atrium would later be built. The latter would in turn be destroyed by Roman buttress walls. Elsewhere at the site, the Philetairan city's street plan was extended north thanks to soundings along its easternmost north-south street, as far as an east-west crossroad.

"Painstaking restoration of Building Z's stuccoes continued, as did the cleaning and reassembly of the wall paintings from the Silenus Mosaic Room. The wall paintings consist of red and white bands, and a yellow band with red semicircles. The architectural reconstruction of the Trajaneum was completed in 1993 with an evocative modular northwest corner for the cella (fig. 30), and elements of the west hall's pediment set on a low socle (fig. 31). After final clearing and restoration, the southern terracing of the Trajaneum once again forms a coherent ensemble with the entire temple complex."

For a 1992 report, see *KST* 15:1 (forthcoming) and *AA* 1993, 347-79. A comprehensive report for 1993 appears in *AA* 1994, 403-32; and specialist studies in *AA* 1994, 381-87 (W. Raeck on the Trajaneum's cult statue) and 389-400 (D. Salzmann on mosaics). City planning at Pergamon and Priene is discussed by W. Radt in T. Möller Kristensen ed., *City and Nature. Colloquium Odense* (1993) 201-209.

Phocaea. In his determined race against the expansionist policies of Foça's municipality, Ömer Özyiğit conducted his 1993 salvage excavations in the midst of construction sites and drainpipes. A sounding under a modern street midway between the theater and the north harbor produced a stratified sequence from the seventh century B.C. to the Roman period, the earliest phase represented by polygonal masonry and terracotta architectural fragments. At the harbor sanctuary of Athena (investigated by E. Akurgal in the early 1950s), a careful study of the steps and cuttings in the bedrock was undertaken, together with the collection of many architectural terracottas, some of them sculptural, and acroteria. The site has been enclosed with a fence. The Roman mosaics uncovered in construction sites in 1992 were consolidated and lifted. The 1992 campaign is reported in *KST* 15:2 (forthcoming).

Kyme. Excavations under the direction of Sebastiana Lagona continued at the harbor fortifications, on the south hill with its large Hellenistic cistern and Archaic levels, in the theater, and in the residential district of the ancient town. Against the back wall of the theater was discovered a Late Roman

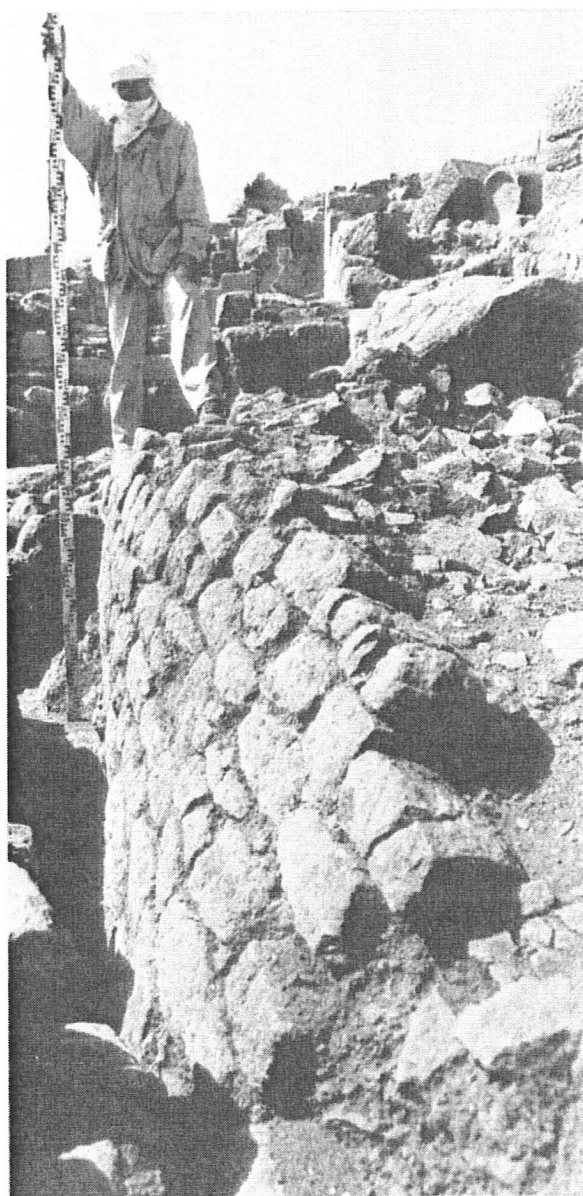


Fig. 29. Pergamon. Cobbled rampart of the Philetairan wall. (Photo E. Steiner)

lime kiln, which explains the disappearance of the theater's proscenium. In the temple area first investigated in 1992, the massive debris accumulated around the corner of its stone platform produced a large number of lamps, terracotta figurines of a goddess with a child, and molds for Megarian bowls. A 1992 report appears in *KST* 15:1 (forthcoming). For a general summary of past seasons, see *Scavi* 248-301.

Troad

Troy. C. Brian Rose, director of the University of Cincinnati's post-Bronze Age excavations at Troy, kindly reports on the 1993 season:

"Investigations focused for a second year on the



Fig. 30. Pergamon. Trajaneum: northwest corner of the cella, reconstructed. (Photo E. Steiner)

southwest side of the mound, north of the Upper and Lower Sanctuaries excavated by Blegen. The large structure that is now called the North Building was cleared down to an impressive marble threshold and an interior floor, which had been stripped in antiquity of its marble or tile paving. The building's foundation is to be dated to the mid-second century B.C.; its destruction can be assigned to Fimbria in 85 B.C., as recounted by Strabo. Although the building had been emptied of its contents, evidence for collapsed window frames and roof beams and the skeleton of a middle-aged man caught in the final fire show that the building had not been dismantled in anticipation of the attack. Soundings into the fill associated with the North Building's predecessors produced cult objects such as Cybele terracottas, a mold

for a head of Athena, and an iron double ax. A specific cult cannot be determined. When the sanctuary was rebuilt in the Augustan period, the ruins of the North Building seem to have been left standing as a memorial of the dramatic events that had overwhelmed Ilion nearly a century earlier. Repairs suggest it was still visible ca. A.D. 200; its abandonment may date as late as the sixth/early seventh century A.D.

"Nearby, the 1992 excavations had traced the foundations of a large wall of Augustan date. In 1993, the wall was connected to a much earlier South Building constructed in the mid-second century B.C. in tandem with the North Building, and separated from it by a narrow alley. Although only a corner of this South Building was uncovered, its exceptionally deep (over 3 m) original foundations would make it the

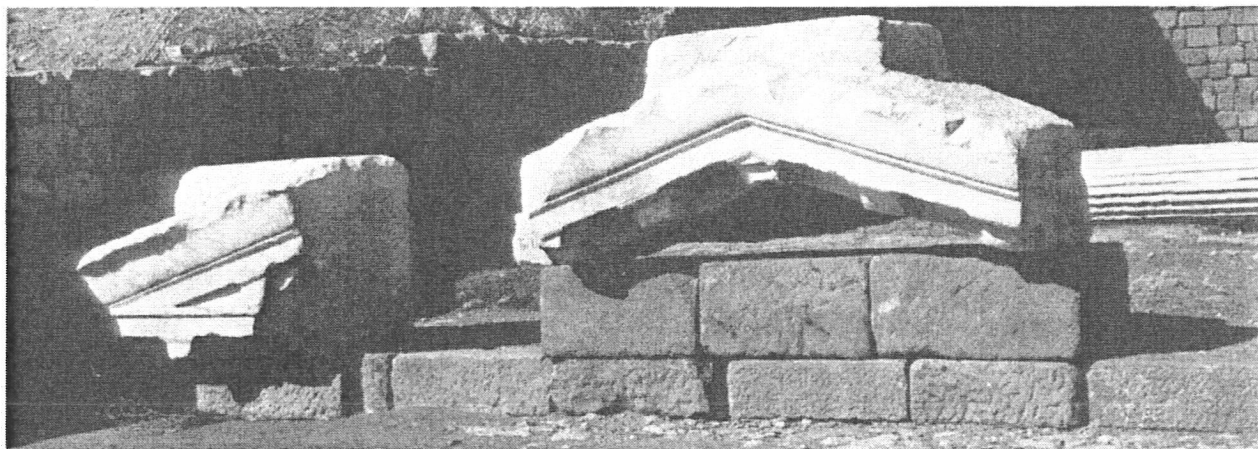


Fig. 31. Pergamon. Trajaneum: pediment of the west hall. (Photo E. Steiner)

sanctuary's largest structure. It was perhaps a portico or stoa placed to enjoy a spectacular view of the Dardanelles, and of the mounds that tradition identified with the tombs of the Trojan War's heroes. The scale of the sanctuary's building program in the mid-second century B.C. may be attributed to Troy's revival when the Roman Senate recognized Ilion as its mother city in 188 B.C. (Strabo), and to the fruits of a prosperous alliance with Pergamon once the Seleucids lost control of the area.

"Soundings below the North Building produced evidence for earlier monumental building activity, with at least five different architectural levels dating from the fifth to the late third/early second century B.C. The earliest building fill, apparently a robbing trench, included the first red-figure sherds from a closed context, as well as Archaic and Protogeometric wares that promise the future recovery of Troy's elusive Iron Age settlement.

"A trench on the eastern side of the Bouleuterion revealed the foundations of four successive buildings and a terrace wall that span the third and especially the second centuries B.C., and belong to the revival also attested in the sanctuary. These buildings should not be connected with the Early Hellenistic Bouleuterion. They sit on LB deposits without intervening occupation.

"The 1993 conservation project devoted to the Roman Odeum (Theater C) revealed that Blegen's excavations had stopped short of significant building collapse in and around the stage. New evidence for three main phases of the stage building; the elaborate marble revetment of its second, Hadrianic, aediculated facade; and the discovery of an over-life-sized statue of the young Hadrian (see *AJA* 98 [1994] 275, fig. 28) behind the stage in alignment with its two central niches can now be interpreted in the light of an incomplete dedicatory inscription from Blegen's campaigns that names [Ari]stionoe as donor of the building and its statuary. The renovation must have honored Hadrian's visit to Ilion in A.D. 124. More difficult to date is the third restoration and its marble pavement (cleared by Blegen), perhaps in the first half of the fourth century A.D.

"Magnetic prospection in the lower city continued, in 1993, to define the Roman grid plan that extended at least 300 m east and nearly 500 m south from the foot of the mound. The Roman city has now been mapped along 47 orthogonal blocks of 360 (north-south) × 180 (east-west) Roman ft (narrower, however, south of the Athena temple). The plan is still incomplete at the eastern and western limits. Two earlier plans with different orientations have also been detected, but their attribution is at present un-

clear. Excavations in the western area of the lower city, where parts of two elegant Late Roman houses were uncovered, suggest that the affluent district of the city was located on that side, closer to the Dardanelles.

"Among the 1993 season's most important discoveries was a marble Doric architrave and frieze block (fig. 32) from a field at the lower city's southern edge, near modern Kalafat. The partial inscription records a dedication to the emperor Claudius, Athena Ilias, and the Demos. In the lowest line, the name of one of two donors was deliberately erased, leaving a queen Pai[—] as sole builder of this monument. It is conceivable that her partner was Mithridates VIII, and that the erasure occurred in or after A.D. 49 when the Pontic king was sent as a hostage to Rome. Whatever the function of the building, whose type cannot be guessed from the block alone, it illustrates the rarely attested phenomenon of a royal dedication by a foreign ruler outside his own kingdom."

Preliminary reports for the 1992 and 1993 seasons appear in *Studia Troica* 3 (1993) 97–116; and 4 (1994) 75–104. For a brief discussion of the 1992 results, see *KST* 15:1 (forthcoming).

Alexandria Troas. Coşkun Özgünel conducted a first season of survey at this Hellenistic and Roman harbor site, founded by Antigonos at the invitation of Alexander. It prospered in Hadrianic times, when Herodes Atticus sponsored the construction of several public monuments. Statuary and inscriptions recorded in the course of earlier research have been published in E. Schwertheim and H. Wiegartz eds., *Neue Forschungen zu Neandria und Alexandria Troas (Asia Minor Studien 11, Bonn 1994)* 157–74 (D. Pohl on coins); 183–85 (S. Mühlenbrock on statuary); and 193–95 (S. Mühlenbrock on inscriptions).

Assos. In 1993, Ümit Serdaroğlu directed another excavation and restoration campaign, with the collaboration of a German team for the long-term project to reveal the funerary monuments that lined the main road into the ancient city. Soundings around the agora confirmed that its surrounding terraces were occupied by housing from Classical until Byzantine times. Restoration was carried out on the fortifications and the theater.

Smintheon. Coşkun Özgünel's excavations at the Sanctuary of Apollo Smintheon neared completion in 1993 with the formal opening of a site museum to display 12 seasons' finds of architectural sculpture and associated items. Soundings for the museum foundations recovered many reused fragments from Byzantine walls, which are also responsible for the disappearance of the temenos enclosure. The 1992 report is published in *KST* 15:2 (forthcoming).



Fig. 32. Troy. Architrave and frieze block with a dedication to the emperor Claudius. (Courtesy C.B. Rose)

Propontis, Bithynia, Thrace, Pontus

Cyzicus. The inventory of architectural elements from the Temple of Hadrian was continued by Abdullah Yaylalı in 1993. Fragments of frieze sculpture include two female heads (one wearing a laurel wreath, the other a helmet) and one bearded male, all with traces of red and blue paint. Outside the temple area, the team recorded a third-century A.D. funerary monument with an inscribed sarcophagus set on a high pedestal. For results in 1992, see *KST* 15:2 (forthcoming).

İznik. During the 1993 excavations of the İznik theater, another architectural enterprise associated with the emperor Hadrian, Bedri Yalman recovered more fine marble frieze fragments, masons' marks, graffiti, and elements of the stage building. The theater's vaults were converted into houses during the Byzantine period, when the filled-in cavea was also used as a cemetery. A number of the individuals buried there were males in their mid-twenties, some with clear wounds, others with an iron ring around one ankle. The uppermost levels again provided evidence for the famous Ottoman ceramic industry. The 1992 season is discussed in *KST* 15:2 (forthcoming).

Ainos-Enez. Investigations under the direction of Afif Erzen and Sait Başaran were again carried out on the acropolis, in the necropolis on the eastern

side of the modern city, and on known Byzantine monuments such as the Hagia Sophia church and St. Jonah chapel, whose frescoes are being restored. For 1992, see *KST* 15:2 (forthcoming).

(For the early settlement at Hoca Çeşme Höyük, see above, "Later Neolithic.")

Kırklareli. The finds from a rich fourth-century B.C. tumulus are published by M. Pfrommer in *Ist-Mitt* 43 (1993) 339–49.

Amasya-Şamlar necropolis. Metin Özbek conducted a first, brief salvage campaign at a Roman necropolis on the cliff overlooking Amasya. He uncovered 21 tombs, some of them cist graves built of plastered stone roofed with tiles, others in more formal rows of barrel-vaulted brick chambers.

Sinop. Although some 20,000 amphora and tile stamps from Black Sea sites identified Sinop as an important (even the largest) regional production center, typologies for its amphoras and other local vessels were little known. A 1993 survey undertaken in the region has begun to investigate this industry. Dominique Kassab, Bilkent University, Ankara, kindly reports:

"The Sinop Museum's pottery holdings provided, from the start, an invaluable collection for setting up a preliminary typology of the Late Classical to Late Antique local ceramic industry. This research, in tandem with an archaeological survey, resulted

in an initial evaluation of several distinct workshops. The survey was particularly successful along the bay south of Sinop, where five sites were identified along a 20-km stretch of coastline. All five were situated on clay beds beside the sea, and near a watercourse. They could be recognized from kiln fragments and piles of wasters, and they clearly specialized in the manufacture of amphoras and tiles, with coarse and fine wares as a sideline.

"Demirci, the large site 18 km south of Sinop, was especially active from the first–fifth centuries A.D., with sporadic evidence for an Early Hellenistic industry in amphoras and tiles. Many previously unattributed Black Sea shapes and wares can now be traced to its kilns. The chronology for local ceramic production has also been extended well after the Hellenistic period, when the practice of stamping amphora handles had ceased." Excavations began at Demirci in 1994. For amphoras from Sinop found in northern Black Sea sites, see S.J. Monachov in *Anatolia Antiqua* 2 (1993) 107–32.

Phrygia

Aizanoi. The 1993 excavation and restoration program again centered on the porticoed street discovered in 1992 northeast of the Macellum. Klaus Rheidt, Deutsches Archäologisches Institut, Istanbul, kindly reports:

"The colonnaded street, the northeast portico, and the row of shops behind it were exposed further to the southeast for a total length of 25 m. Three additional columns and a socle for a small Ionic column have now been added to the portico's facade. In the northwest end of the portico, two large orthostats with sloping sides appear to be reused pedimental blocks from an Early Imperial temple. A deer in relief on one of the orthostats suggests a dedication to Artemis. On the opposite side of the street, the stylobate of the southwest portico was extended by another four columns, two of them complete. Coins indicate that the street was constructed from salvaged materials in the fourth century. It was still active by the late fifth/early sixth century, when a metal workshop was installed in the northeast portico. An earthquake may be responsible for the street's destruction a few decades later.

"Deep soundings below the street level uncovered more of the stone-lined drain from the 1991 season. It cut through the remains of a modest row of shops, whose rubble walls would date to the Late Hellenistic/Early Imperial Roman period.

"The 1:200 plan of Çavdarhisar village has been completed. Restoration work continues on the newly excavated columned street, as well as on the known

ancient monuments of Aizanoi." For the 1992 season, see *KST* 15:2 (forthcoming) and *AA* 1994, 712–14. Specialized studies have been published in *AA* 1993, 437–73 (A. Hoffmann on the stadium excavations); 476–507 (K. Rheidt on topographical history); 509–15 (H.C. von Mosch on a Roman portrait head); 517–26 (M. Türktüzün on two sarcophagi); and 527–41 (Ü. Wulf on two funerary monuments).

Seyitömer Höyük. The Afyon Museum and its director, Ahmet Topbaş, have been conducting large-scale salvage operations on this high mound northwest of Kütahya since 1989. The mound overlies a rich seam of lignite. It is at the local coal-mining company's request and with its financial support that the excavators have committed themselves to a complete investigation and removal of the site. By 1993, the entire upper level, a Hellenistic fortified settlement, was exposed. Future seasons will investigate the MB level that immediately precedes it, and the EB to Late Chalcolithic occupations accounting for over 20 m of deposit. For a review of the Hellenistic phase, see *MKKS* 4 (1994) 297–310.

Pessinus. The elusive Phrygian settlement at Pessinus was finally located by J. Devreker during the 1993 campaign. In the deep sounding of the town center, a basal deposit with pre-Hellenistic pottery was reached below the uninterrupted Hellenistic–Byzantine sequence known from previous seasons. Trenches to the north and south of the temple also exposed a floor, hearth, and pits associated with polychrome and gray-burnished pottery of the later Phrygian period (sixth–fourth century B.C.). These domestic remains were succeeded in Hellenistic times by a monumental wall, and finally by the Early Imperial temple. Two marble frieze blocks and a cornice block of high quality were found in the south trench, where they had escaped the quarrying activities of Byzantine builders.

The project's ongoing archaeological and geomorphological survey was extended to Mt. Dindymos, where two Bronze/Iron Age settlements with stone houses were found on its north flank at a high elevation. Below them lies an Early Phrygian site beside a worked pyramidal granite outcrop. Fifteen Roman cemeteries have now been located in the Pessinus area, half of them already in use during the Hellenistic period. The Roman water supply and irrigation systems are being studied, as are the limestone quarries west of Ballıhisar, a probable source for Roman building materials. Finally, five Byzantine settlements, and three watchtowers to defend the Early Byzantine city, document the continued importance of the site after the Roman era. A progress report for 1992 appears in *KST* 15:2 (forthcoming).

Hierapolis. The 1993 project under the direction of Daria de Bernardi Ferrero continued its energetic restoration of this Roman and Byzantine city's major monuments to their former elegance. A stratigraphic sounding below the agora reached a level with Tyrrhenian amphoras of the first century, among the earliest finds attested at the site. Excavations were also carried out in the residential and commercial district near the theater; and in the northern necropolis, together with a typological study of its tombs. For the 1992 season, see *KST* 15:2 (forthcoming). A general summary of the project appears in *Scavi* 104–87.

Cilicia

Cumhuriyet Square-Tarsus. Early photographs of the municipal square at Tarsus show that a mound once existed there, and the famous Orpheus mosaic (now in the Hatay Museum, Antakya) was found in the vicinity. When preparatory bulldozing for a large underground carpark began to uncover an ancient street, the municipality invited Levent Zoroğlu to direct salvage excavations under its auspices. The 1993 season succeeded in following the street for a length of 65 m. It was paved with carefully fitted black polygonal slabs, and its sidewalks were delineated by a white limestone border. Pipes on both sides connected to a central drain that could be controlled from square manholes at regular intervals. Evenly spaced column bases for the street's porticos were still located in situ. Their monolithic granite shafts, however, were found reused in the Late Roman–Byzantine/Medieval levels that account for 4 m of fill. The street itself can be dated to the Hellenistic period. That it remained active for several centuries is indicated both by Roman repairs, and by an off-street house whose three (poorly preserved) rooms were embellished by an opus sectile floor and fragmentary Fourth Style wall paintings.

Finds associated with the street and the fill that buried it include Iron Age and Classical sherds; Hellenistic terracottas; weights stamped with the Tarsus monogram (also found at Gözlü Kule); and a Y-shaped kiln tester as witness to the city's known ceramic industry. Excavations continued in 1994.

Meydancikkale. Final reports on the seven seasons of excavation and research are in preparation. At the 1994 archaeology symposium in Ankara, Alain Davesne presented an assessment of the site's historical phases as reflected in coinage spanning the seventh century B.C. to the Late Byzantine era.

Kelenderis. Rough Cilicia's best harbor, 10 mountainous km from Meydancikkale as the crow flies, is revealing the earlier stages of its occupational his-

tory through a program of deep soundings begun by Levent Zoroğlu in 1989. Below the 1992 season's Late Antique portico whose mosaics show a ship entering the port under full sail (ca. A.D. 500; fig. 33), the 1993 excavations proceeded down as far as a burnt sixth century B.C. level. It consisted of a depot for basket-handled amphoras, and included a broad range of Cypriot and Archaic eastern Aegean ceramics. Warped examples of Cypriot red-painted pitchers and Ionian banded skyphoi raise the possibility that local potters were imitating these wares. Numerous Geometric wares redeposited in fill push the settlement back at least two centuries.

Elsewhere on the site, the Ottoman fortification wall was cleaned down to its original, Hellenistic foundations, and a necropolis outside the ancient city was investigated. On the acropolis (600 masl) overlooking the harbor, the remains of a watch station attest to a defensive system also traced on the peaks around Meydancikkale, in the Lycian highlands, and elsewhere in the Hellenistic world. The 1992 season is reported in *KST* 15:2 (forthcoming).

Soloi-Pompeiopolis. The 1993 season at Soloi-Pompeiopolis (modern Mezetli, 15 km west of Mersin) resumed a project begun in 1991 to survey and map Turkey's ancient harbors. Robert L. Vann, University of Maryland, kindly reports:

"As a result of the earlier study of harbor sites along the coast of Rough Cilicia between Mersin and Alanya, it was decided to focus first on Soloi, traditionally settled by Argives and Rhodians, destroyed during the Mithradatic wars, and refounded by Pompey in 67 B.C., when it acquired the name Pompeiopolis. The season's objectives were to survey and measure its visible Roman breakwaters, examine its sequence of construction, and compare the new plan with the one drawn up by Beaufort early in the 19th century.

"The 1993 survey resulted in a harbor somewhat smaller than Beaufort's, with the inner basin roughly the same length but only three-quarters the width. The harbor is today completely silted in. Of its two breakwaters, the western one, which formed the harbor's southwest side, is better preserved, in some places standing 2.4 m high. It was built of concrete faced with thick walls of rectangular stone blocks, and inner stone crosswalls creating a casemate system. The eastern breakwater incorporated a sluice gate, known too from Caesarea Maritima, to prevent the basin from silting. Once the builders had prepared the seabed by cutting back its few stone outcrops, they would have constructed the breakwaters' stone facings, and poured concrete between them. This method, with the poured concrete displacing

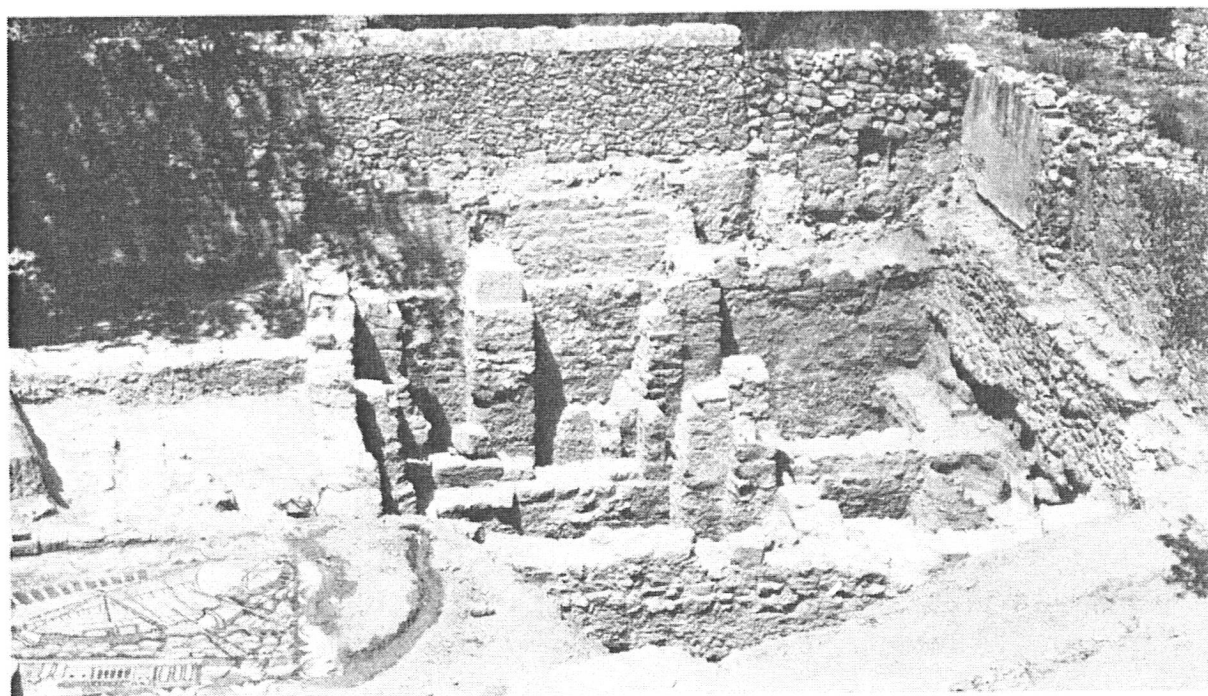


Fig. 33. Kelenderis. Late Antique walling in upper phase of deep sounding; ship mosaic in lower left. (Courtesy L. Zoroğlu)

seawater, is described by Vitruvius and attested at Caesarea Maritima and Side." The 1991 survey is discussed by R.L. Vann in *AJA* 96 (1992) 337; in D.H. Keith and T.L. Carrell eds., *Underwater Archaeology: Proceedings from the Society for Historical Archaeology, Kingston, Jamaica 1992* (Uniontown, Pa. 1992) 75–79; and *AraçST* 10 (1993) 29–40; for the 1993 season, see Vann and S. Sachs, *AJA* 98 (1994) 320–21.

Southeast Anatolia

Zeugma. Zeugma was founded by Seleucos I Nicator on both banks of the Euphrates as the twin cities of Seleucia (west bank) and Apameia (east bank, modern Belkis). The bridge (*zeugma*) connecting them ensured that the city immediately became the region's largest commercial and legionary center until the mid-third century, when it was sacked by the Sasanians and gradually shrank to village size. The entire site extends over an area of 300 ha, and its Roman remains lie directly below the modern surface. It has few rivals in the Near East to illustrate more accessibly the intersection between the Graeco-Roman world and Mesopotamia.

This major city, known only from epigraphic and archaeological surveys, remains a most urgent candidate for a large-scale salvage project. The site has been systematically stripped by illicit digging for years, its mosaics and finds scattered over 40 collections both inside and outside Turkey.

Zeugma now faces flooding by the end of this decade, when the Birecik dam will destroy all of low-lying Apameia, and 40% of Seleucia. In 1993, a preliminary field season was undertaken by David Kennedy in collaboration with Rifat Ergeç, director of the Gaziantep Museum, whose previous excavations of a superb Late Hellenistic villa were reported in *AJA* 98 (1994) 278. Trenches in three areas on the west bank uncovered the remains of houses, one with a fine mosaic of the Antioch school whose central figural panel had already been excised by robbers. Elsewhere, a Late Roman/Byzantine city wall and sections of the city's sophisticated canalization system were investigated. Survey extended to the city's large rock-cut cemeteries. It is hoped that more intensive excavations will take place in the few years left to Zeugma. Plans of the site and of a section of the fortifications appear in the regional survey report by G. Algaze et al., *Anatolica* 20 (1994) 95–96.

BYZANTINE PERIOD

Istanbul. Mehmet Tunay, Istanbul University, kindly reports on random and controlled finds from the Byzantine period revealed during the restoration of the city walls, and by building activities in the city.

"One of the most significant Byzantine discoveries of the century was the intact late fourth/early fifth century hypogeum (fig. 34) uncovered in 1988 during repairs on the fortification walls at Silivri Kapi.



Fig. 34. Istanbul. Silivri Kapı: Early Byzantine hypogeum (late fourth/early fifth century). (Photo M. Tunay)

It was stripped of many of its furnishings, including six marble sarcophagus lids, before coming to official attention. Fragments recovered later, however, show that the lids were sculpted with biblical scenes in relief, and painted. Frescoes in the tomb had at a later date been plastered over; they were unfortunately inexpertly cleaned, and have lost most of their figures. Since then, more careful attention has been paid to other tombs that have come to light outside the city walls in the course of restoration. They again include typical marble sarcophagi and frescoes (fig. 35). An excavation team is also carrying out research on the Hormisdas Palace, residence of the crown prince Justinian beside the Great Palace.

"Bulldozing for a hotel to the south of the 10th-century Myrelaion Church (Bodrum Camii) broke through the stairs leading into the columned cistern (fig. 36) underneath the terrace that flanks the church. Equally destructive was a foundation trench begun in front of the Sultan Ahmet Mosque; it had been cut 2 m down into a gate of the Hippodrome, and broken several travertine seats and monogrammed columns before work was stopped by museum authorities."

Robert Ousterhout, University of Illinois at Urbana-Champaign, provides further details about the Hippodrome and other Byzantine affairs:

"The unauthorized digging of a foundation for a new toilet facility in front of Sultan Ahmet was halted within 24 hours; but the trench was still open several months later, leaving the line of seats, their *opus caementicium* substructure, and some clay pipes

exposed. A similar fate awaited the Forum of Constantine, where bulldozing for a carpark was well advanced before public protest succeeded in interrupting it. The Istanbul Archaeological Museum then took charge of a salvage excavation."

A progress report by E. Yücel on the restoration of Hagia Sophia appears in *MKKS* 4 (1994) 481–95.

Great Imperial Palace-Istanbul. Survey of the terraces and structures associated with the Great Palace of the Byzantine emperors was carried out in 1992 and 1993 by E. Bolognesi Recchi-Franceschini, a doctoral candidate at Oxford. She kindly reports:

"The first part of the survey, in 1992, succeeded in demonstrating that the two main terraces on which the Great Palace was built, leading dramatically from the Hippodrome south to the sea, were in fact subdivided into six levels not distinguished in earlier topographical studies of the site. The second project focused on the border between the two major terraces—essentially, the border between the higher palace of Constantine and its extension under Justinian, and the later version of Basil I and Constantine VII (ninth–tenth centuries) near the Boukoleon harbor.

"Remains of three Byzantine structures along this border were recognized, and plans were drawn. The first, at the highest level of the palace complex, may represent the west wall of the Justinianic Senate House, later used as a hall (*Magnaaura*) for foreign ambassadors. The second building (fig. 37), to the south, was part of a long row of galleries, perhaps the Gallery of the Forty Martyrs. A third, smaller

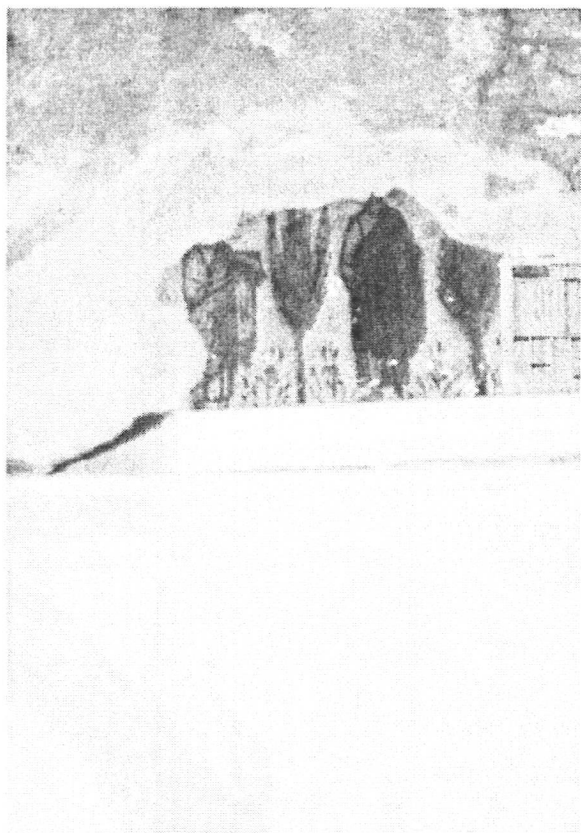


Fig. 35. Istanbul. Silivri Kapı: wall paintings and sarcophagus from a Byzantine tomb. (Photo M. Tunay)

structure (fig. 38) with two vaulted chambers and adjoining corridors lies at the connecting point between the Hippodrome terrace and the Peristyle terrace 6 m below it. It may be part of the sloping corridor that led from the east end of the Covered Hippodrome to the loggia of the Main Hippodrome, as described in historical accounts." A detailed report will appear in a forthcoming issue of *JÖBG*.

Saraçhane-Istanbul. A final report on the pottery from R.M. Harrison's excavations at the church of H. Polyuktos has been published by J.W. Hayes, *Excavations at Saraçhane in Istanbul 2: The Pottery* (Princeton 1992).

Amorium. The occupational sequence and character of this strategic Byzantine city in central Anatolia came into sharper focus during the 1993 season. C.S. Lightfoot, Bilkent University, Ankara, kindly supplies the following summary of the fieldwork he directed:

"During the sixth season at Amorium, excavations were carried out in four separate areas: in the church and the triangular tower of the lower city, and on the south and north sides of the upper city. Trenches outside the apse of the lower city church confirmed that it lay at the center of a much larger ecclesias-

tical complex. Careful study of the floors inside the church proper provided further evidence for its two main phases and their features. In the northwest aisle, the original marble floor was later replaced with square terracotta tiles similar to those found in 1991 in the northeast aisle. Two phases could also be observed in the nave, whose southern half from the synthronon westward was partly cleared of destruction debris. The bema, paved in marble opus sectile with later repairs, was separated from the main body of the church by a templon screen, its base of breccia slabs still in place. At a later stage, an ambo or pulpit was added in front of the screen, as indicated by a foundation course of large reused marble blocks. Several fragments of recarved marble doorjambs (originally fifth/sixth century) may have belonged to the ambo's superstructure (fig. 39). At the same time, the nave was repaved with terracotta and marble tiles (fig. 40), and a hollow mosaic roundel of glass tesserae forming a stylized floral pattern. This mosaic floor, the first found in the church, represents a rare example for the Middle Byzantine period. Glass tesserae recovered in the destruction debris indicate that the church's walls, vaults, and ceilings were sim-



Fig. 36. Istanbul. Cistern below the Myrelaion (Bodrum Camii). (Photo M. Tunay)

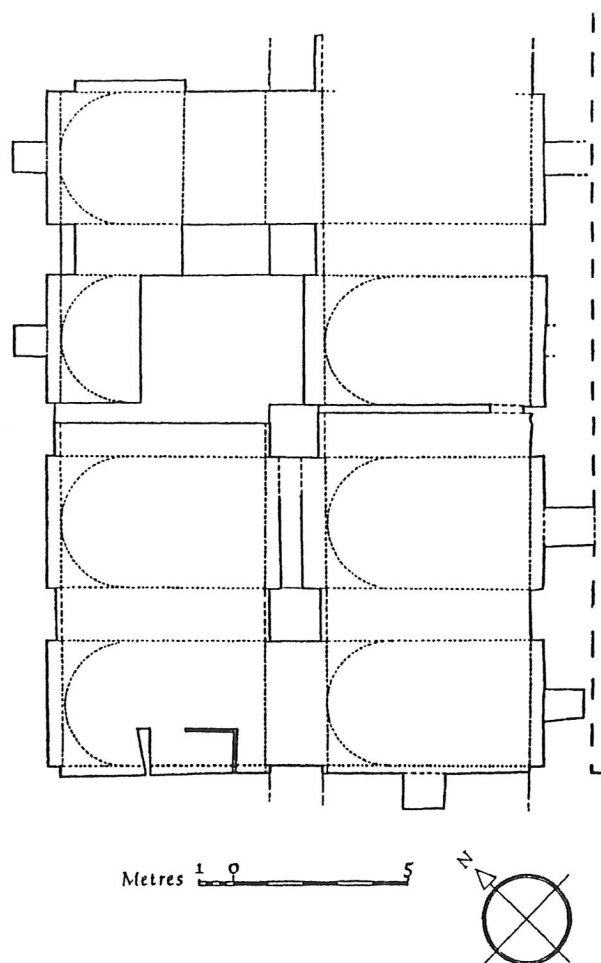


Fig. 37. Istanbul. Great Imperial Palace: Gallery of the Forty Martyrs (?).

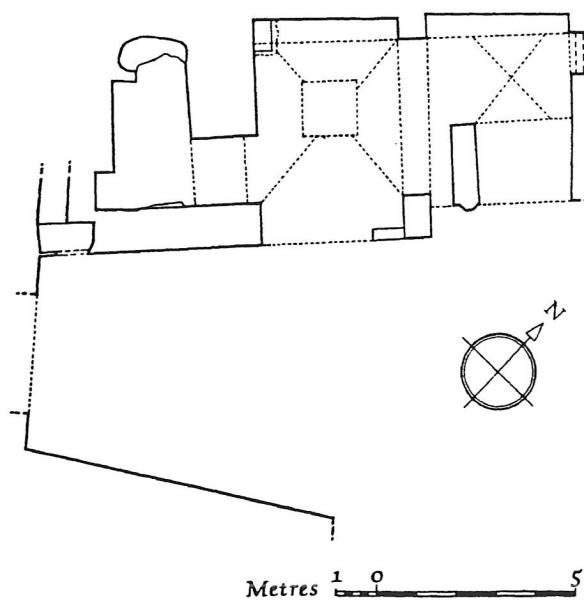


Fig. 38. Istanbul. Great Imperial Palace: proposed corridor between the two terraces.



Fig. 39. Amorium. Lower city church: ambo fragment. (Courtesy C. Lightfoot)

ilarly decorated, and at least partly standing when the church burned. Its dedication or rededication to one of the prophets is now suggested by a fragment from the left-hand end of the templon architrave (fig. 41) found in the rubble of the narthex; other fragments, now lost, were recorded at the church in 1962 (see *AnatSt* 42 [1992] 212).

"Excavation of the massive destruction level within the triangular tower of the lower city's fortifications produced textile fragments; numerous large iron nails; the carbonized remains of timbers cut from seven separate conifers spanning a 230-year sequence (see above, "Dendrochronology"); and two coins dating to the reigns of Arcadius or Honorius (395–408) and Heraclius (610–641), respectively. A sounding below the tower's floor and foundations uncovered a

wall of large limestone blocks belonging to an earlier fortification or an altogether different construction.

"In the upper city, the trench begun in 1992 on its south side was expanded to clarify the Byzantine fortification system and associated occupations. The area in front of the defensive wall was cleared, revealing later additions to the defenses and traces of an outer circuit wall. Thus far, three phases of domestic installations inside the walls belong to the Late Byzantine period. A fourth phase, separated from the earlier three by substantial debris, would date to the Early Seljuk period (later 11th century). Finally, a new step trench on the upper city's steep north slope was opened to test the stratigraphic history of the mound onto which Amorium's inhabitants retreated after the Arab attack of 838. The slope was found to have been terraced and fortified with a complex system of walls extending down 3 m, the base of the 1993 sounding. These defenses appear at present to be Byzantine and post-Byzantine; earlier phases must await future seasons." Reports on the 1992 season appear in *AnatSt* 43 (1993) 149–62 and *KST* 15:2 (forthcoming); for 1993, see *Minerva* 5:1 (1994) 14–16, and *AnatSt* 44 (1994) 105–28.

Araklı-Maçka Survey. A 1992–1993 survey of Roman and Byzantine sites in the Trabzon area, led by James Crow, focused on the forts at Hortokop, Sürmene, and Buzluca Kale. Hortokop, a circular site with a single gate, should probably be contemporary with the Roman road nearby. Sürmene would date to the second–fifth centuries. Buzluca Kale, in contrast, was a large Byzantine monastic complex, with chapels scattered along the south side of its circuit wall. The sculptured decoration and octofoil plan of a large church at the top of the site recall 10th-century parallels. It can now be identified with the Monastery of Christ the Savior at Araklı (not, however, modern Araklı) mentioned in Byzantine and Ottoman documents. These towns, which shifted their locations from antiquity to medieval times while preserving the same names, prospered as centers for tax collection (typically beeswax). The 1992 survey is reported in *AraşST* 11 (1994) 73–78, and *University of Durham/University of Newcastle upon Tyne Archaeological Reports* 1993, 44–47.

Ödemiş-Izmir Survey. A five-year survey of Byzantine castles along the Aegean coast was begun by Mark Whittow in 1992. Yılanlı Castle, focus of the 1993 survey, lies 15 km northeast of Ödemiş on high ground already settled in the Hellenistic period, to judge by pottery. The castle's two later phases can be dated to the 12th–13th centuries, as indicated by characteristic Late Byzantine brickwork. The orig-



Fig. 40. Amorium. Pavement in nave of lower city church. (Courtesy C. Lightfoot)

inal foundation, more difficult to assess, could date to the seventh/eighth century or as late as the 12th. The castle's very plain, utilitarian construction suggests a local communal fortress rather than an imperial foundation, although Byzantine documentation for such establishments is equivocal. For the 1992 survey, see *AnatSt* 43 (1993) 117–35 and *AraşST* 11 (1994) 559–70.

Gaziköy–Tekirdağ. The survey and rescue excavations of the Byzantine amphora workshops at Gaziköy, ancient Ganos, on the west coast of the Sea of Marmara, are published by N. Günsenin in *Anatolia*

Antiqua 2 (1993) 193–201, and *MKKS* 4 (1994) 497–512 (with M.A. Işın).

Cyzicus–İznik Survey. Françoise Véronique led the fourth of five projected campaigns to investigate the historical, topographic, and economic features of Byzantine Bithynia. This study extends to the mapping of roads, bridges, and ports, as well as paly-nological soundings around the İznik lake. The survey will close with the 1994 season.

Gemiler Island/Fethiye Survey. The numerous churches and monastic complexes on the Lycian coast and offshore islands near Fethiye have been the sub-



Fig. 41. Amorium. Lower city church: inscribed templon architrave fragment. (Courtesy C. Lightfoot)

ject of surveys, since 1991, by S. Tsuji with Kazuo Asano. The plan of Gemiler or St. Nicholas Island was completed in 1993. Its 1.2-ha area was completely built up, with at least five churches, public buildings, and private houses set out along narrow winding streets, and a cemetery at its eastern end. Four basilicas on the mainland were also surveyed, together with a church on the island of Karacaöğren, opposite Ölüdeniz. The region's wealth in Byzantine times would have been supported by trade and pilgrimage. Reports on earlier seasons appear in *Araştırmalar* 10 (1992) 7–17, and 11 (1994) 65–71.

Xanthos. For Byzantine Xanthos, see above, "Classical, Hellenistic, and Roman: Lycia."

Demre/Myra. Excavations at the Church of St. Nicholas continued in 1993 under the direction of Yıldız Ötüken, who would redate the square plan of the church to the eighth century or Middle Byz-

antine period. Many of its building stones were taken from the Roman stadium nearby. Notable finds include Late Byzantine glass vessels closely paralleled in the Serçe Limanı shipwreck, and stemmed glassware known from Fustat/Cairo.

Dereağzı. Final reports on Dereağzı's Byzantine fort and its Lycian precursor, together with a regional history of Lycia, have appeared in J. Morganstern ed., *The Fort at Dereağzı and Other Material Remains in Its Vicinity from Antiquity to the Middle Ages* (*IstForsch* 40, Tübingen 1993).

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