AMUQ VALLEY REGIONAL PROJECT

K. Aslıhan Yener and Tony J. Wilkinson

The Oriental Institute Amuq Valley Regional Project (AVRP) commenced full-scale excavations at Tell Kurdu, one of the 237 sites in the Amuq Plain. This approximately 15 ha site is situated close to the eastern edge of the former Amuq Lake (Lake Antioch-Amik Gölü) in the southernmost part of Turkey, the State of Hatay. The site was previously excavated by Oriental Institute teams, including Robert Braidwood in a rapid two week season in 1938. Full scale operations were resumed this year from 22 August to 12 October 1998 with a team of twenty-five, including students from the University of Chicago's Department of Near Eastern Languages and Civilizations. The excavations were embedded within the overarching aim to reconstruct palaeoenvironment and landscape patterns. Survey efforts wrapped up the first phase of reconnaissance in the valley and included parts of the foothills and mountain ranges of the Amanus.

The 1998 season was conducted under the auspices of the Turkish Ministry of Culture, Directorate General of Monuments and Museums. In Ankara we were greatly assisted by the Acting General Director of Monuments and Museums, Kenan Yurttagül. The Ministry was represented by Mehmet Erdem from the Antakya Museum. The 1998 excavation team consisted of Aslıhan Yener (project director), Chris Edens (site director), Abbas Alizadeh, Jesse Casana, Benjamin Diebold, Bakiye Yükmen, and Kubra Ensert. Brenda Craddock and Tülin Arslanoğlu executed the illustrations, Paul Zimmerman the topographical survey. Heidi Ekstrom, Missy Loyet, and David Reese were responsible for the palaeobotany and faunal analyses. Tania Collas and Cap Sease were the site conservators. A separate survey team led by Tony Wilkinson consisted of Tim Harrison, Jan Verstraete, Simrit Dhesi, Shin Ishiyama, Hatice Pamir, and Tülin Arslanoğlu. They continued the geoarchaeological and archaeological survey of the Amuq Valley and conducted additional surveys in the foothills. The Amuq Valley Regional Project was funded by the National Geographic Society, the Oriental Institute, Kress Foundation, and numerous private donors. We are particularly grateful to both the Oriental Institute and its members who contributed financially to the success of the project. Special thanks go to Malcolm H. Wiener and the Institute of Aegean Prehistory for their continuing support of the Amuq Valley Regional Project.

Excavations at Tell Kurdu (K. A. Yener)

The season began with the creation of a set of topographical maps of Tell Kurdu and endangered neighboring sites such as Tell 'Imar and Tell Dhahab near Judaidah. Tell Kurdu dates from Amuq Phases C through E (sixth–fifth millennium BC), and care was given to expose horizontally as much of Phase E as possible and to target known burials. Ten trenches of various sizes were placed on the northern and southern sectors of Tell Kurdu. Trenches 1, 6, and 9 exposed 225 m^2 on the summit of the

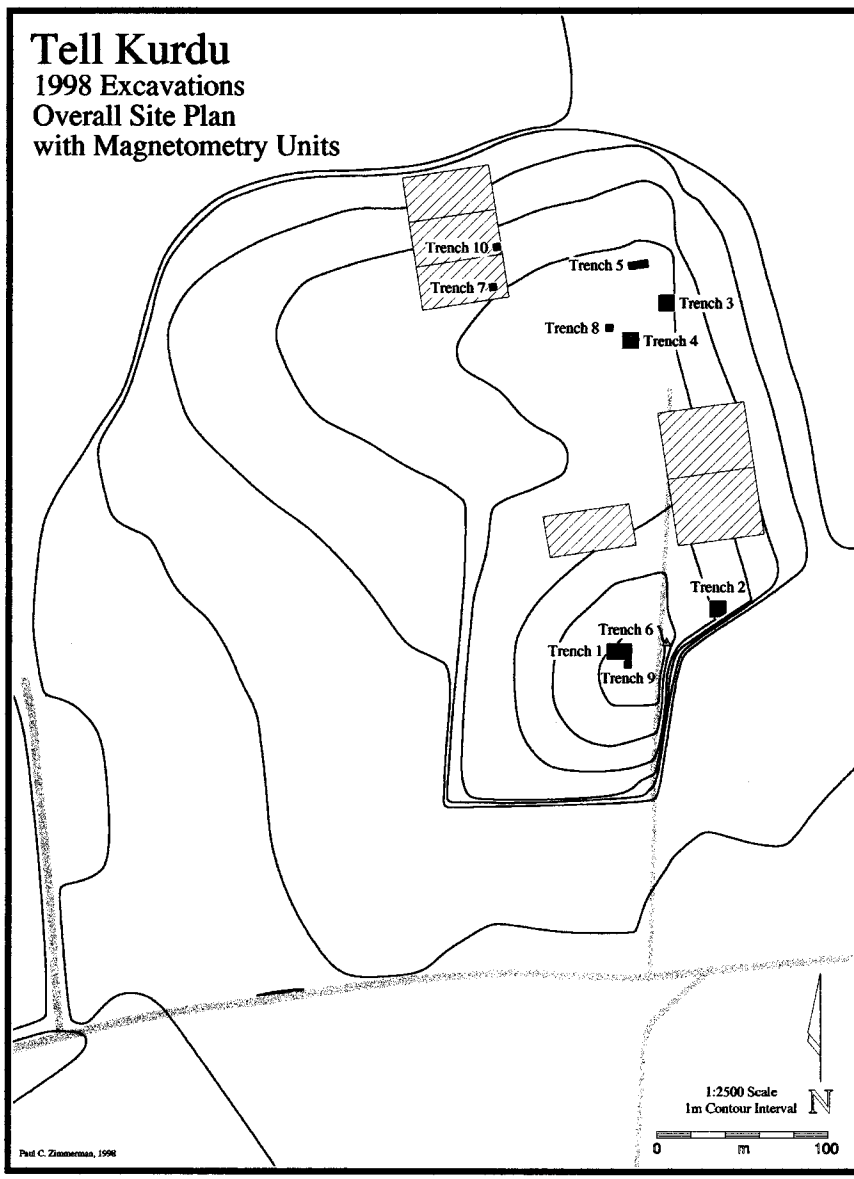

Figure 1. Tell Kurdu topographical map

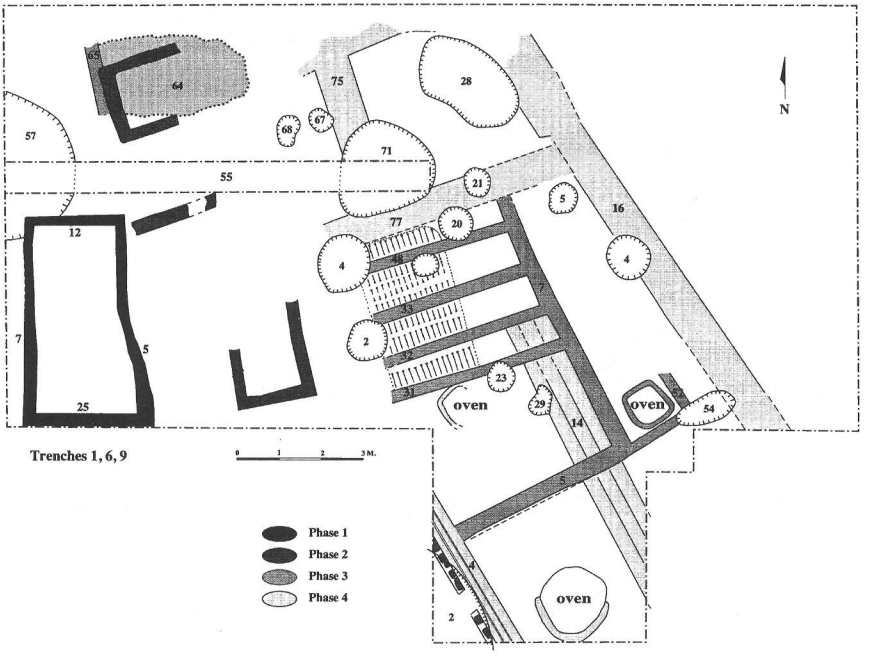

Figure 2. Trenches 1, 6, and 9

Southern Mound and unearthed a large multi-room building made of pisé slabs immediately below the plow zone. Long, narrow grill-like storage rooms flank a rectilinear corridor and subsidiary rooms of this public building set on a terrace. The terrace was constructed of alternating packed mud and reeds and provided a large open space adjacent to the building to the west. Undulating reed bedding, laid horizontally like beams, was found partly covering the base of the storage rooms – a curious and difficult to understand architectural idiom. Pottery revealed that the structure dates to very early Amuq Phase E or transitional Amuq Phase D/E, in the late sixth or very early fifth millennium BC.

Trench 2, which exposed 100 m^2 on the eastern edge and yielded a building with an array of pisé storage bins constructed like pigeonholes, is slightly later in date. An earlier phase yielded a large pisé tholos building (roughly 7 m in diameter) with triangular internal buttresses. Normally tholoi are associated with the Halaf period; however, the pottery retrieved from the floor was consistent with Phase E Ubaid traditions.

Trenches 3, 4, 5, 7, 8, and 10 exposed 335 m^2 on the older Northern Mound where an Ubaid cemetery had been reported by locals in previous years, and older deposits with architecture were targeted. Several flexed burials were found in situ with grave goods cut into a complicated sequence of midden deposits in Trench 4, filled chockablock with discarded charred grain and burnt pisé lumps. Catfish the size of a table, baby elephant, lion, equid, and other wild fauna were dumped into the trash pits that are tentatively dated to Phase D. Trench 7 exposed multi-room architecture with a cremation burial placed sometime after the use of the building. Associated pottery resembles Halaf Phases C and D periods.

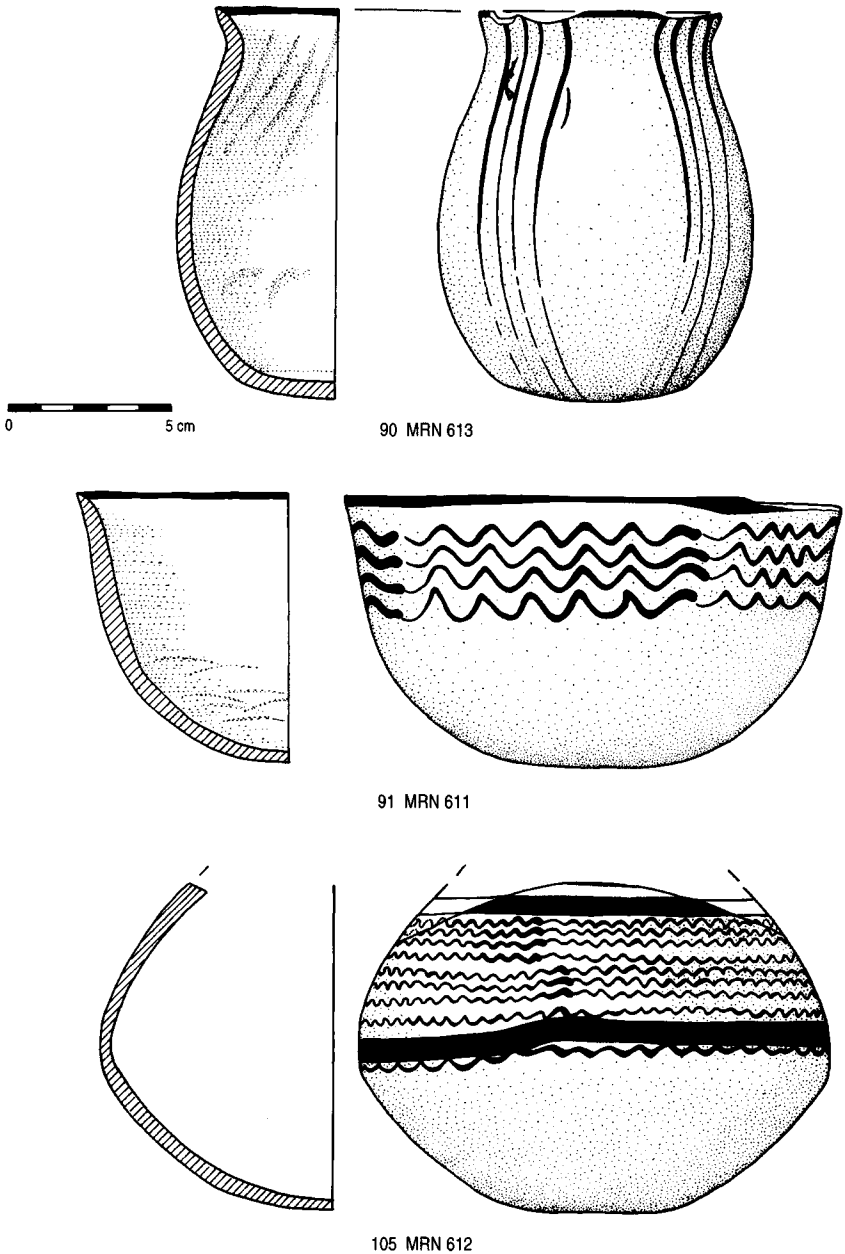

Figure 3. Ubaid Phase E ceramics from burials. Tell Kurdu

Remote sensing utilizing a magnetic field gradiometer covered several large areas of both mounds. Having delineated burnt areas for possible identification of pyrotechnological installations, the results also had a value added aspect in identifying a large, possible tripartite building in the older Northern Mound. In addition to

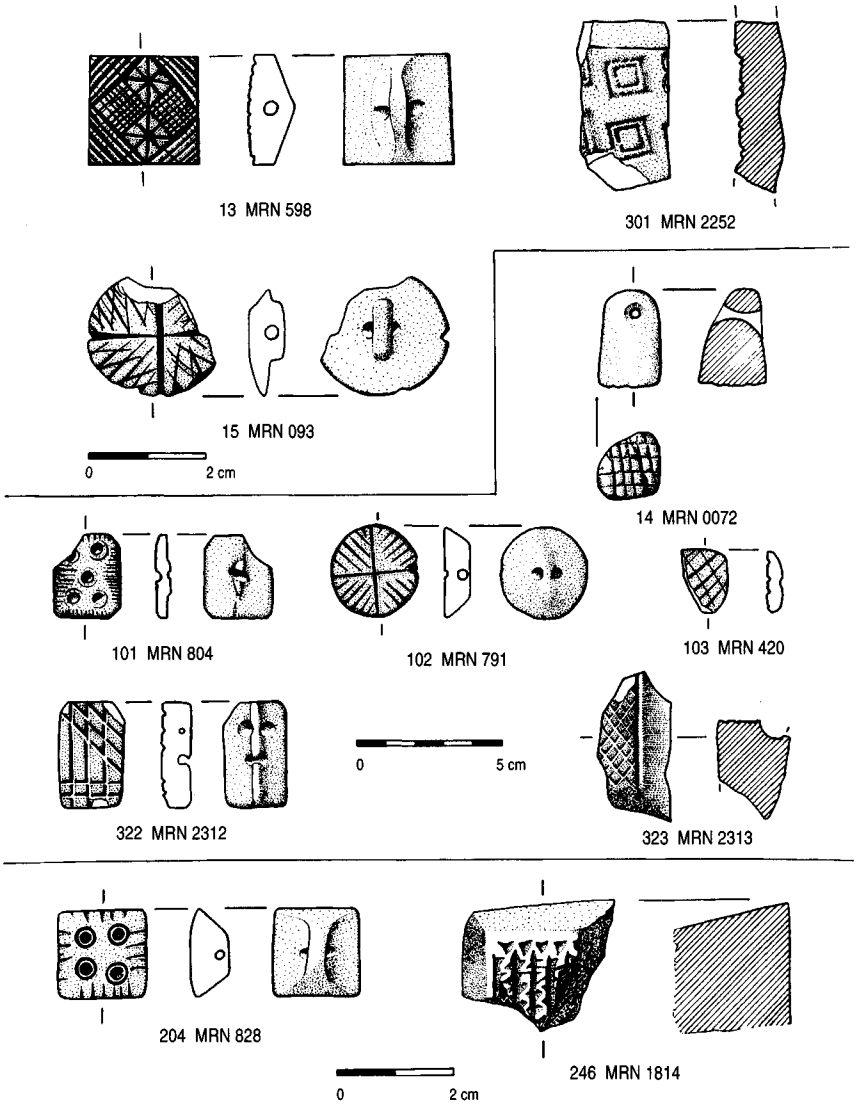

Figure 4. Stamp Seals and Sealings. Tell Kurdu

this feature, previous surface surveys had found vitrified wasters suggesting the location of ceramic kilns. This was corroborated by the magnetometer; two large circular structures appeared as magnetic anomalies.

Quantities of small finds were recovered from the first season, some within and on exterior surfaces of the excavated buildings. These include stone vessels, human and animal figurines, metal, slag and ore, flint and obsidian implements, groundstone tools, tokens and bailing tags, personal ornaments, and stamp seals. The clay tags and geometric devices found in the Southern Mound architecture offer a clear connection between special function or elite buildings and bureaucratic accounting.

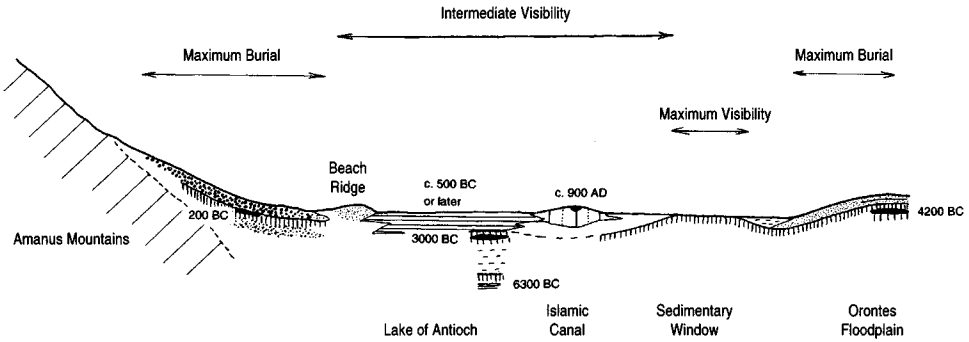

Figure 5. Diagram summarizing the overall sedimentary stratigraphy of the Amuq Basin

This was the first foreshadowing of the subsequent bulk storage of staple products and increased wealth in the form of high status artifacts and their distribution during the Uruk period. A variety of clay lumps were found that might have functioned as sealings on containers, bags, or bales, and could be associated with the control of goods. Perhaps closely related are a number of clay "gaming" pieces, which may be interpreted as tokens or counting devices. As a group, the forms and styles of the seven stamp seals found in excavated contexts resemble assemblages found previously in Phase E at Kurdu, although some examples on the Northern Mound suggest that levels earlier than Phase C may be present.

Animal and human figurines are also associated with the Southern Mound architecture. Ubaid-related stylistic imagery is present especially in the human figurine fragments found in Trench 2 and may reflect ideological aspects of prestige enhancement. Coffee-bean eyes, a conical head (or headdress), and a lizard-shaped face are characteristic of this style. Fifteen sling pellets or missiles were found, constituting a large category of bi-conical and ellipsoid shapes made from a variety of media – clay, serpentine, marble, and other stones.

The excavation recovered several very small pieces of copper, seemingly fragments of tools or ornaments (e.g., awls or pins). In addition, a complete flat ax was a surface find that cannot be dated. Iron ores — hematite and goethite — were used like ground stones to make mace-heads and other dense objects. Chipped stone, including obsidian, and lithics included elongated querns, mullers, and mortars. Polished stone celts and wedges of various sizes, an artifact category that spans Amuq Phases A through F, were common. Bone tools such as awls and needles made from sharpened shafts of animal long bones as well as spatulated tools also appeared. A shaft hole hammer made of antler was also found. Spindle whorls (usually rounded and pierced sherds) and loom weights were abundant.

Field Survey (T. J. Wilkinson)

The 1998 field survey season commenced initially in August 1998 with a small team consisting of Simrit Dhesi, Hatice Pamir, and Jan Verstraete, and then continued under the direction of Tony Wilkinson in early September 1998 when he arrived from Syria. Fieldwork then went on until the end of September with the above team, supplemented by Shinichi Nishiyama. A total of 34 new previously unknown sites

Figure 6. Monumental building on limestone ridge at Kizilkaya (AS 208)

were visited and recorded, which takes the total number of sites recorded (including those published by Robert Braidwood) to 237.

In 1998 progress continued to be made in the reconstruction of the environmental sequence with the discovery of a massive trench through the southwest part of the Orontes flood located near the Byzantine and Ottoman water mill at Sultan Merkezi (site AS 229). This roughly 300 m long cut penetrated down to some 6 m below the level of the floodplain. At its southern end the trench cut through an ancient land surface and alluvial fan that contained later Palaeolithic artifacts. This old land surface must therefore have formed the valley side that accumulated during the later stages of the last (Pleistocene) ice age. After this accumulation a long sequence of sediments was deposited during the last 10,000 years or so as the Orontes River floodplain became built up over the earlier sediments. As a result of this sequence it is now possible to summarize the sedimentation in the Amuq Plain as indicated in figure 5. This composite diagram shows: to the left, the rapid accumulation of gravel fans that dumped some 2–3 m of gravel over the Hellenistic land surface along the Amanus Mountains; in the center is the Amuq Lake, which accumulated after about 500 BC; right of center are levees deposited by Islamic canals; and to the far right are the various accumulation levels of the Orontes floodplain. In other words there seems to have been significant accumulation of sediments over much of the plain, which might therefore have obscured a number of smaller sites. The one area that was not affected by this sedimentation appears to have been the Çakaltepe sedimentary window, an area in the south central part of the plain (right of center in fig. 5) in which the present ground surface approximates to that of the prehistoric period. It was within this window that archaeological sites were best preserved.

The environmental sequence from Lake Gölbaşi (located towards the north end of the plain) continues to be refined by Liz Friedman and Ercan Alp, now with the

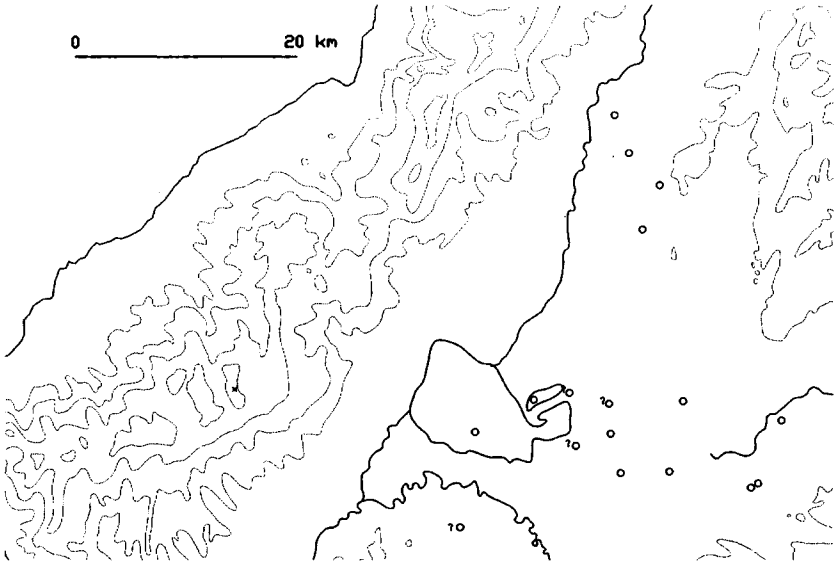

Figure 7. Map showing the distribution of sites of Amuq Phase G (ca. 3000 BC)

additional assistance of Anton Stampfl. As a result of their pioneering work using the advance photon source synchrotron beam at the Argonne National Laboratory to measure trace elements in sedimentary cores, we are now starting to understand the sedimentary sequence from the center of Amuq Lake. From the cores and other sections recorded in the field, it appears that the Amuq Basin might have contained a series of pools or even a small lake around 7000 years ago. This episode would have coincided approximately with the period when Tell Kurdu was occupied and might have provided the requisite valley floor habitat for the numerous large fish recorded as part of the faunal analysis from the 1998 season at Tell Kurdu. The water bodies that existed in the basin center appear to have dried up through the remainder of the Chalcolithic and Bronze Age. After this, the Lake of Antioch became established and the area, as we know from classical records, then became a supplier of fish for the inhabitants of the region.

The advance party of Dhesi, Verstraete, and Pamir had already made important breakthroughs by finding significant new sites on the limestone uplands to the east of the basin. These included a large monumental building situated on top of the limestone ridge of Kizilkaya (site AS 208). This structure (fig. 6), dated to the mid- to late third millennium BC by a scatter of small sherds of red-black burnished ware, consisted of large mainly limestone blocks that formed an elongate trapezoidal structure measuring 16.4 m across the short end. Although its overall length was some 63 m, the main structure appears to have been somewhat shorter. From its location and monumental structure, this site seems to have functioned as a major fortified building that overlooked the main north-south route which followed the eastern side of the plain. In addition to this small but important site, the team found a massive dolmen field consisting of some 144 stone tumuli that presumably represent

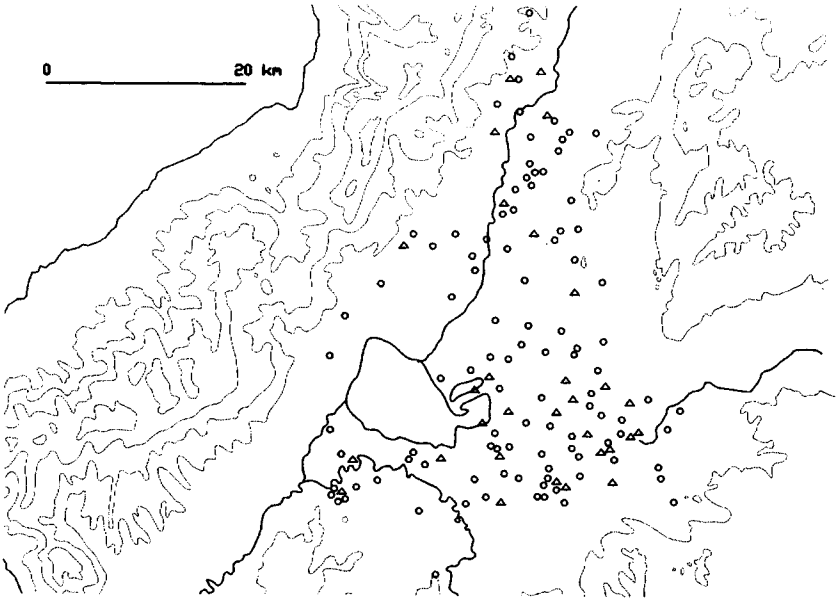

Figure 8. Distribution of Roman and Late Roman sites

prehistoric tombs. These are currently being studied by team member Bakiye Yükmen of Mustafa Kemal University.

On the plain itself one of the more significant sites is the large low mound of Karacanlık (AS 92) that covers some 8–10 ha (20–25 acres) and was occupied through the late fourth and early third millennium BC (that is during Amuq Phase G). When originally visited by Braidwood in the 1930s this site was surrounded by marsh, but we now know that this marsh development only occurred in the last 2,000 to 3,000 years. At the time of occupation, however, this small town was apparently surrounded by dry cultivable soils that eventually became inundated by the rising levels of the marsh during the Late Roman, Byzantine, or early Islamic periods. This pattern of inundation is therefore very similar to what happened to the small site of AS 181 which became flooded by the rising waters of the lake (see *1996/97 Annual Report*). Altogether fifteen occupations with Amuq Phase G were recorded, with three additional occupations of probable or possible Amuq Phase G date (fig. 7). This is a significant increase over the six sites recorded by the original survey.

In the earlier seasons most of the survey was undertaken using the standard Near Eastern technique of mound survey, but to increase the total recovery of sites we have employed more intensive survey techniques that entail off-site walking transects across the plain between sites. Although productive in terms of site recovery, this method was not without tedium, the procedure being for the team to be spaced at intervals of roughly 20 m apart and walking along parallel alignments, collecting pottery across a field until the opposite side was reached. This methodology, which was conducted over approximately 110 ha of the Amuq (ca. 272 acres), confirmed that during the Roman and Late Roman periods the plain was very well

populated. Settlements were scattered over the surrounding foothills to the southwest, especially near Antioch, where they seem to have included small dispersed settlements, rural buildings, and small farmsteads (fig. 8). The sites in the southwest corner are very close to ancient Antioch, and on the basis of the presence of masonry remains, roof tiles, and lumps of mosaic tesserae, many can be interpreted as the remains of Roman villas such as have been described by the ancient writer Libanius (e.g., sites AS 226, 228, 235, 236, 237).

It is also possible that a number of the late Roman sites were settled by people who were displaced by the expanding lake because the geoarchaeological surveys clearly indicate how the late phases of the lake had overlapped onto field soils that had been cultivated in the Roman and Late Roman periods. This was particularly clear to the north of the lake near site AS 87. Also for the Roman period we recorded briefly the destruction wrought by the expansion of the modern city of Antakya and its suburbs. Among the numerous discoveries of heavily bulldozed Roman, Late Roman, and Byzantine suburbs was a small conduit, presumably constructed to supply water to the eastern part of the city.

By the end of the 1998 field season we had resurveyed most of the Amuq Plain, artifacts had been collected from most sites, and geoarchaeological sections had been recorded whenever possible. In addition, some progress has been made towards an understanding of settlement in the surrounding hills. Nevertheless much remains to be done. Pottery collections from the sites need to be studied, drawn, and analyzed; sites that were occupied at the same time as Tell Kurdu need to be revisited and collected in more detail, and finally we still need to survey in more detail the adjacent drier uplands as well as the Orontes Valley to the southwest, and the Kara Su Valley to the north. This we hope will be undertaken in future seasons.

The Amuq represents an area where potential multi-project initiatives can be undertaken and students, faculty, and colleagues of the Oriental Institute will be able to investigate a variety of sites.
