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THE UPPER TIGRIS ARCHAEOLOGICAL RESEARCH PROJECT (UTARP): A Summary and Synthesis of the Late Chalcolithic and Early Bronze Age Remains from the First Three Seasons at Kenan Tepe[1]

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INTRODUCTION[2]

This report is a detailed summary and synthesis of the Late Chalcolithic and Early Bronze Age architecture, stratigraphy and ceramics uncovered during the 2000–2002 seasons from Area F at Kenan Tepe, Turkey. The first part describes the stratigraphic relationship of the various layers and the features they contained. The second part is an initial attempt to organize the dominant ceramics from these layers into ware groups, describe their essential characteristics, including how they change over time, and how they relate to contemporary sites in the region and beyond. Next, the report discusses

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[2] In places, the interpretations in this report differ from those in previous preliminary reports. These differences arise from a comprehensive review of the available data and the combined view of three seasons. Written largely in 2003 and 2004, this report does not consider finds from the 2004 and 2005 seasons, except where they clarify or qualify the analysis of the earlier seasons. Preliminary reports from the 2000–2005 seasons at Kenan Tepe, including many photographs, drawings and plans, are published in the reports listed in the bibliography of this report and online at www.utarp.org.

small finds and carbon dates as they relate to the stratigraphy and emerging ceramic chronology. The conclusion explores the kind of sociopolitical organization that may have existed at Kenan Tepe and in the wider region, based on the evidence of the stratigraphy and finds.

Kenan Tepe[3] is located in the Upper Tigris River Valley,[4] approximately 20m above the north bank of the Tigris River, 15 km east of Bismil, in southeastern Turkey (for a regional map, see Parker et al. 2006: Figure 1). The site consists of a 32m high, 2.08 hectare tell (Excavation areas A, B, C, D, E) and a 2.16 hectare lower settlement (Excavation areas F, G, H, I) (Parker et al. 2006:72; for the most recent topographic site map showing the location of all trenches, see Parker et al. 2006: Figure 2). The site was occupied during the Ubaid, Late Chalcolithic, Early Bronze Age, Middle Bronze Age and Early Iron Age periods.[5]

Based on its size and the finds to date, Kenan Tepe was a village throughout its history. Although it is tempting to view such sites as examples of the 'timeless villages' that dot the landscape throughout the Near East, in fact these sites are often the nodes in long distance trade networks, and the locus for social, political and economic developments that led to innovations including plant and animal domestication, craft specialization and metallurgy. Similarly, religious and cultural rituals based in villages no doubt contributed to or were the basis for what became the institutions of kingship, the temple and other complex aspects of urbanized states. Thus, villages are not timeless, unchanging entities but crucibles of cultural change, and any regional study is incomplete without their inclusion (Schwartz and Falconer 1994). This is particularly true in times of widespread, cross-regional socio-economic and political changes, such as those that occurred in the transition from the Late Chalcolithic to the Early Bronze Age periods across north Mesopotamia. This report focuses on these periods at Kenan Tepe, presenting the basic data, including architecture, artifacts and stratigraphy that are necessary to analyze larger socio-cultural questions.

AREA F

Area F is defined morphologically as the 50m–70m square eastern portion of the lower settlement north of the tell. This area is bordered to the east by a 20–30m steep

[3] Excavations at Kenan Tepe began in 2000 under the direction of Dr. Bradley Parker, and continued through the latest field season in 2006 under the direction of Dr. Parker and Dr. Lynn Dodd.

[4] The upper Tigris river valley begins just south of the city of Diyarbakır where the Tigris makes a sharp 90^{o} turn and flows gently eastward for about 65 kilometers to the Tigris-Batman confluence. Along this course the Tigris is fed by several perennial tributaries but maintains a low, slow flow and a shallower channel than beyond the Tigris-Batman confluence, where larger tributaries significantly increase the flow and cut a deeper channel. The southern border of the upper Tigris river valley is marked by the Tur Abdin range, which rises to nearly 1500 meters (5000 feet) and extends 15 to 30 kilometers south and 140 kilometers east to west. Today as in antiquity, the Tur Abdin forms a substantial barrier to travel and communication between the upper Tigris river valley and the limestone hills of northern Syria. North of the Tigris, low rolling hills continue for nearly 50 kilometers before reaching the foothills of the Taurus range.

[5] For carbon dates for these periods at Kenan Tepe, see Parker et al. 2005:90-92. Carbon dates for the Late Chalcolithic to Early Bronze age in Area F are discussed later in this report.

drop to the Tigris River, to the north and south by seasonal drainages, and to the west by a slight rise to Area G.[6] Section cuts and soundings show that Area F contains cultural deposits 2m–4.5m deep, over sterile clay with calcium carbonate inclusions and layers of conglomerate deposited by ancient floods and shifts in the bed of the Tigris River.[7] Excepting a cluster of Ubaid sherds at the base of trench F6, cultural deposits in this area date from the Late Chalcolithic to the first half of the Early Bronze Age (ca. 3700–2500 BCE). These deposits contain mudbrick structures and domestic features, including small ovens, cobblestone surfaces, and simple stone installations.

Research in Area F proceeded in three stages. In the year 2000 we began three 5m X 5m trenches (F1, F2, and F3, the latter designated F9 in year 2001) and two section cuts in the steep eastern hillside (F4: 3.25m X 3.47m; F5: 2.30m X 3.50m). In the 2001 field season we added two larger exposures (F7: 10m X 10m; F8: 10m X 5m) and four sounding and section cuts (F6: 2X4m; F10: 1X1m; F11 and F12: each 2m wide section cuts) to define the stratigraphy and morphology of the Area. Finally in 2002 we dug a series of long narrow test pits, each 1m X 9m, to locate quickly any architecture across the Area (F13, F14, F15, F16). Three of these test trenches (F13, F14, F15) were partially expanded. Excavations in Area F continued during the 2004–2005 seasons,[8] but that material is not discussed here except where especially pertinent.

STRATIGRAPHIC LEVELS IN AREA F [9]

Chronological considerations

For clarity of presentation I describe the Area F contexts in seven levels.[10] These levels correspond to multi-phase strata, such as a room and its various modifications until abandonment, or a series of cobblestone surfaces sealing earlier pits. In many cases we have not yet connected these layers horizontally or by carbon or ceramic dating, and the current order and make-up of levels is tentative. The levels are numbered beginning with

[6] The surface of Area F is flat with sparse ground cover, including grass and thorny brush. Some parts of this area contain plow furrows but the land has not been farmed for many years and, according to local residents, is officially designated as a grazing area for sheep, goats and cattle.

[7] The cultural deposits are deepest towards the Tigris, indicating that the site originally extended further east but was eroded by the river. The author thanks Professor Donald Sullivan for advice on the interpretation of Kenan Tepe geomorphology. For a summary of the sections and soundings, see Parker et al. 2003:120-121.

[8] For a report on the 2003 and 2004 seasons, see Parker et al. 2006.

[9] In a preliminary report on the 2004 season, these levels, while correctly described (based on a draft of the present report), were incorrectly labeled as "LC" or "Late Chalcolithic" (Parker et al. 2006:82) when in fact their actual date or period assignment is a matter for discussion. For example, level 1 postdates the Late Chalcolithic, and Levels 2 and 3, while technically dating to the Late Chalcolithic period if it is defined as the fourth millennium BCE, might also range into the third millennium BCE. Thus, based on absolute dates and stylistic traits, levels 2–3, and possibly 4, may be considered Early Bronze Age or transitional.

[10] An important section drawing showing all these levels as they appear in trench F1 is published in Parker et al 2006:117 (Figure 8).

the most recent materials. Accordingly, the first level contains thirteen burials cutting earlier contexts. Levels two through seven contain earthen and cobblestone surfaces, pits, and small walls.[11]

Assigning chronological periods to these levels is difficult. For this task we have three kinds of evidence: 1) carbon dates; 2) ceramic typology; 3) style or type of small find (e.g. cylinder seals, metal pins). The small finds are few in number and their contribution is considered near the end of this report. The carbon dates, discussed below, indicate that level four dates to 3360–3020 BCE, placing levels one through three and five through seven earlier or later than this date, although some overlap can be expected considering the wide date range of level four. The ceramics from levels two through four share a range of wares and forms that seem to separate them from levels five through seven, despite some overlap. Without ceramic seriation it is not possible to define the chronology more closely than we do here.

As recently discussed by Cooper (Cooper 2006:6-8), new carbon dates in various regions of upper Mesopotamia are pushing back the start of the Early Bronze Age period, which was previously defined in relation to political events in southern Mesopotamia. "Local" chronologies, defined in relation to specific regions, such as the upper Euphrates valley (Cooper 2006:8-26), or the Jazireh of northeastern Syria (Pfälzner 1998), attempt to define the passage of time in relation to local socio-political developments and their corresponding material culture. The chronology for the upper Tigris region in the Late Chalcolithic and Early Bronze Age (among other periods) is still in the developmental stages as we synthesize the results from the many projects initiated in the region during the last decade and await publication of additional site reports.

Due to the differences between local and macro-regional chronologies, and the new chronologies that place the start of the Early Bronze Age in the last two centuries of the fourth millennium, we are sometimes in the awkward position of finding parallels for Kenan Tepe material culture from a single stratigraphic layer in both "Late Chalcolithic" and "Early Bronze Age" contexts from other sites. For example, the carbon date for level four corresponds to what a recent chronology (Rothman 2001) calls "Late Chalcolithic 5," but its ceramics are very similar to those in levels 1–3, which we call here "Early Bronze Age." These ceramics have many parallels to Ninevite V and Early Bronze Age period vessels from other sites. The earlier levels, 5–7, have parallels in the Late Chalcolithic period. In the section headings below, levels are labeled as "Early Bronze Age," "Transitional LC-EB"[12] or "Late Chalcolithic" on the basis of ceramic and artifact

[11] All of the trenches did not reach the same depth during the excavation seasons covered in this report. Thus, after levels one and two, some trenches appear 'blank' in the plan figures (Figures 2 and 3) because we did not reach the level under discussion (e.g. levels five, six, and seven were only reached in trenches F1 and F4).

[12] With so few carbon dates and in the absence of a clear settlement hiatus at the end of the Late Chalcolithic it is difficult to define its end and the beginning of the Early Bronze Age.

parallels.[13] Due to the subjectivity of these period labels, the reader may wish to pay closer attention to the suggested absolute dates.[14]

Level 1 (Unknown Date. May Range from Early Bronze Age to Islamic: 2900 B.C.E.–1200 C.E.). See Figure 1.[15]

Level one consists of thirteen burials cutting other features in trenches F1, F6, F7, F14 and G6.[16] These burials are difficult to date for these reasons: they all occur within 1.5m of the ground surface; only one or two burials contained grave goods[17] (L1011/21-A and– B: see Figure 13); and none of them were sealed beneath other loci, except F1 L1021-A, which was sealed by another burial, and F7 L7028,[18] which partly overlapped burial F7 L7084. In light of these factors, the burials may date from the Early Bronze Age to the Byzantine Period or even later. In contrast to the ceramic-dated Early Bronze Age burials in stone-lined and covered pits at nearby lower Salat Tepe (Şenyurt 2002: 686, Figure 13; 694-695), all of the burials in Area F are simple pit inhumations.

The burials of level one exhibit a variety of orientations, positions, and states of preservation (Table 1[19]). Seven of the ten adults and two of the three children or infants were poorly preserved or fragmentary. Of those burials preserved well enough to determine their position, five or possibly six were flexed while two or three were extended. All of the extended burials come from trench F1, and all three were oriented with their head west and feet east. Excepting L1004 in F1, which might be flexed, all of the flexed burials were found in trenches F7, F14, and G6. The flexed burials were

[13] Throughout this report, "Late Chalcolithic" is abbreviated "LC," and "Early Bronze Age" is abbreviated "EB."

[14] Ultimately what is needed is a local chronology, based on local events, which can be correlated to neighboring regions via carbon dates and key material culture diagnostics. The material presented here is part of an initial attempt to establish a local chronology, but since it relies on few carbon dates, limited exposures and unquantified artifact patterns from a single site, it remains preliminary and will no doubt be modified in the future.

[15] All figures were created for this report by the author, based on field drawings and photographs by the trench supervisors. Pottery drawings and inkings were done by Güner Sümer and Bariş Üzel. In Figures 1-3, for purposes of visibility, loci are depicted schematically in their proper location but not to exact scale (e.g. the cobblestone features, ovens, and burials).

[16] Trenches F6 and G6 are not considered in the stratigraphic levels presented in this report, but burials from these trenches are included in Table 1 and in the discussion of level-one burials. For the location of trenches F6 and G6, see Parker et al. 2006: Figure 2.

[17] During a southward expansion of trench F1 in 2005 (dug as trench F22), we discovered a burial (F22, L13) associated with a bronze pin in Level 1. This burial disturbed another which, based on the absence of some skeletal elements, may have been a secondary interment.

[18] Our project uses loci as the basic excavation units, and 'KT numbers' are assigned to each group of items (pottery, bone, etc.) from a locus, while item numbers are given to specific potsherds or examples pulled from a group. In this paper, "L1020" stands for "Locus 1020," while KT numbers are written "KT1120" and items are added as decimals: "L1020 KT1120.2". In figures this is further shortened to: "F1.1020.1120.2".

[19] The following burials were identified, sexed and aged by Andy Creekmore: Trench F1 Locus 1004, 1008-A/B, and 1017/22. The following burials were initially identified, sexed and aged by Andy Creekmore and subsequently verified by Dr. Richard Paine: Trench F1 1011/21A/B; Trench F5 Locus 5000/5005; Trench F7 Locus 7006; Trench G6 Locus 8. The following burials were identified, sexed and aged by Dr. Richard Paine: Trench F6 Locus 6004, 6011; Trench F7 Locus 7028/54 and 7084, Trench F14 Locus 7.

variously oriented on the right or left side with the head west (3 examples), east (1 example), and north (1-2 examples).

The variety of orientations and the mix of flexed and extended burials may indicate that orientation and position were not important to the community, or that these burials were simply the first stage in a more complex burial ritual involving primary and secondary interments,[20] or that the burials belong to different ethnic or religious groups, or that they date to different time periods. It is tempting to view Area G, where three burials[21] were also found in the first level, and Area F as the burial ground for later period settlements on the tell or nearby sites. The density of burials is probably too low to indicate intensive use of this area as a burial ground over a long period of time, but occasional use across many different periods may explain the pattern of burials. The ratio of children to adults, 3:10, is not the demographic profile we would expect (too few children), suggesting that children and infants were buried elsewhere, perhaps beneath house floors or in a different part of Areas F or G, or that their smaller, thinner bone structure reduced their rate of preservation.

Status or wealth differences are not evident in the burials. All of the burials were primary interments in simple, unlined and unmarked pits, apparently with no special treatment. The only burials that contained grave goods were L1011/21-A and -B in F1 (Figure 13). These burials were found one on top of the other in an identical extended position but in a poor state of preservation with their lower bodies significantly disturbed. Although their upper bodies were lying on their backs, their legs may have been flexed and resting towards one side or with the knees straight up. Thus while the upper body indicates an extended burial the legs suggest a flexed position. The lower burial, L1021-B, had a bag-shaped, flared rim juglet (KT 1118) cradled in its arms, which were folded across its waist. The ware of this juglet is like that of the Early Bronze Age fine chaff and grit vessels that include pedestaled and ring base bowls (a drawing of this vessel can be found in Parker et al. 2003:172, Figure 15:M). Its size and shape are similar to pots found in tomb one at Tell Banat (Porter 1995: Figures 17 and 18, top row). In addition, a miniature vessel (L1021 KT1087) and a spindle whorl (L1011 KT1056) were found near the feet of L1021-A (a drawing of the vessel can be found in Parker et al. 2003:172, Figure 15:L). Since the lower limbs were disturbed, and the two objects were found some distance away, it is difficult to say definitively if the spindle whorl and miniature vessel were grave goods. It is also difficult to determine whether or not these burials were in the same pit or were separate burials because not only were their legs disturbed in antiquity but the first was partially excavated in year 2000 and disturbed in the off-season such that when we continued work in year 2001 we initially did not realize that the second burial

[20] See for example the rituals described in Porter 2002:21-22.

[21] Only one of the Area G burials is discussed here (G6, L8). The other two G6 burials are a jar burial of an infant in G4/6, which may date to the Late Chalcolithic or Early Bronze Age, and a burial from trench G8, which we did not fully expose or excavate (Parker et al. 2006:104).

was not part of the first. Considering their nearly identical orientation and close stratigraphic position, it is possible that they were in the same pit, one on top of the other.

Unassigned burial – perhaps belonging between levels three to seven (Early Bronze Age: early third millennium)

Located at a depth of over 5.5m below the ground surface, burial L5005 (formerly L5000) in trench F5 probably belongs between levels three to seven. I discuss this burial with the level one burials because it was found at the base of a section cut on the steep eastern slopes of Area F, and the earth immediately above was eroded to the point that no pit or sealing layer could be determined. We found the burial at the base of the cultural debris on the eastern side of F5, at the edge of the hillside, cut into sterile clay. A rib sample produced a two-sigma calibrated carbon date of 2920–2870 BCE and 2800–2770 BCE. This burial was flexed, lying on its right side, with its head to the southeast, feet to the northwest, facing northeast. A small bead or spindle whorl (KT5029) was found near the face and hands (for a photo of the burial see Parker et al. 2002:628, Figure 7 [there labeled incorrectly as Trench C2, but it is a view of L5000/5005]). This burial is most likely a male, aged 20–35 years. The individual seemed to be lying on a mat, perhaps made of grass. A mat is inferred from the square shape of the area beneath the body, the apparent grain impression observed in the soil and the appearance of this material where it clung to the bones.

Level 2 (Early Bronze Age: early part of third millennium). See Figure 1.

Level two consists of cobblestone surfaces, beaten earth surfaces, three ovens, three stone installations, a stone wall foundation and fragments of other poorly preserved stone structures or installations uncovered within the first meter below the ground surface. These loci are indicative of mostly outdoor domestic activity spaces spanning a 35m X 35m area. In contiguous trenches F2, F3/9, F7, F8, F13 and F14, loci assigned to this level can be connected stratigraphically, but the inclusion of loci from F1, F15 and F16 within this level is tentative.

A cobblestone surface initially found in F2 (L2003) continued west into F7. In F2 this surface had a clear earlier phase or foundation of smaller cobbles (L2008) beneath the later, larger cobbles, but in F7 this surface was a more complex mix of multiple layers of pottery debris and cobble layers of varying thickness (Loci 7005+). A nearly identical cobblestone surface (L1006), also with an earlier phase or foundation of smaller cobbles and pebbles (L1009), was found in F1 and continued southeast into F4. The surfaces in F2 and F8 were covered by debris such as pottery and bones, while the surfaces in F1 were very clean. Finally, another two-phase cobblestone surface was found in F15 (L6 over L12+). The F15 surfaces were notably more compacted than those in F1, F2 and F4, suggesting that the F15 area was more heavily trampled, perhaps used as a designated street or passageway rather than a courtyard. Two pits, Locus 4 and Locus 5, cut this surface.

The cobblestone surfaces in level two were associated with three ovens, one in F2 (L2002) one in F8 (L8002), and one eroding from the hillside south of F4 (no locus). All

three ovens were similar in diameter (0.50m–0.75m) and composition (0.02m–.03m thin clay walls). Near the oven in F8 we found three stone installations consisting of rings of cobblestones with a cobblestone base (L8005, L8006), or rings of odd-sized rocks and broken potsherds with no base (L8009). I interpret these as pot stands; no burning or artifacts were associated with these installations.

We found a level-two wall foundation in F14 (L19). This wall was 3.25m long by 0.50m wide, and consisted of two to three rows of 0.12m–0.30m cobblestones, one to two courses high. This locus did not connect to any other walls but was associated with two earthen surfaces (L20, L21), one on either side, covered with scattered broken pots and debris including several andirons.

Another feature possibly belonging to level two is L3 in F16. This 3.5m long feature consisted of cobblestones, fieldstones and thick potsherds arranged in a single row, one to two courses high. The wall curved to the northwest and was too thin and precarious to stand alone, suggesting that it was the border for an earthen platform or other feature yet to be defined.

Other partially preserved surfaces, marked by isolated areas of cobblestones, pebbles or flat-lying debris, can be assigned to level two. In F7 these include L7029 at the north baulk. This surface fragment is contemporary with the more substantial surface running from the eastern half of F7 into F2 (F7: L7005+; F2:L2003+). In F8, level two surface fragments include L8010, adjacent to oven L8002. In addition, a few concentrations of stones and debris represent poorly preserved or disturbed architectural fragments, including in F13 L6 (small cobblestone surface fragment) and L7 (beaten earth surface fragment below L6), and in F14 L3 (2.0m X 1.0m pile of stones, pottery, bones in western part of trench just below topsoil). These fragmentary surfaces and wall fragments are consistent with outdoor domestic activities.

Level 3 (Early Bronze Age: early part of third millennium). See Figure 2.

Beginning with level three it becomes more difficult to tie the stratigraphy of non-contiguous trench F1 to the group of connected spaces of F2, F7, F8, F3/9, F14 and F15. In this layer, F1 had mixed mudbrick and debris, including a burned portion of a collapsed wall (L1015) and an installation consisting of a partially preserved ring of cobblestones (no locus) over the level four collapse layers discussed below.

The main feature of level three is a mudbrick structure and associated pits and surfaces in F7. The structure, L7033/53, ran NW–SE for 4m, cornering seamlessly at both ends with W–E walls that continue east for 1.50m–2m. The walls were uniformly 0.40m wide, constructed of a single course and single row of mudbricks. This structure was apparently open on its eastern end, although a doorpost pivot stone was found near the eastern end of the southern wall (L7077 KT22). It is possible that the structure's eastern wall was not preserved due to disturbances from burials in level one (L7028, L7084), a pit (L7043), and the level-two cobblestone surfaces. Due to their close stratigraphic relationship, it is also possible that structure L7033 remained in use after the level-two cobblestone surfaces were laid (L7005, L7029), although its shallow preservation makes this difficult to assess.

Considering its lack of a stone foundation and its thin walls, the F7 mudbrick structure may have been a windbreak for an oven or a shelter for storage or animals. Pieces of clay oven material or baked brick were found inside the structure against the western wall, but there were no ash deposits or evidence of burning, nor was there conclusive evidence of animal dung. Flat-lying broken pots, animal bones and other debris marked two beaten earth surfaces inside (L7075) and outside (L7074) the structure. Two round pits, both 1m in diameter, cut the accumulated debris on the floor. These pits were L7042, located partially beneath cobblestone surface L7029 in the north-central portion of the trench, and L7043, located beneath L7038[22] in the east-central portion of the trench.

In F8 another group of level three loci, comprised of two pits, were found beneath the level-two stone installations and an oven (L8002). One pit (L8023) was located partly beneath the oven and was 1m in diameter, while the adjacent pit (L8022), was 0.60m in diameter. Both pits were less than 0.30m deep and contained a mixture of soil, ash and animal bones. In F13, level three loci include a brick wall stub (L18), a group of collapsed, burned bricks (L20), a partially preserved stone installation (L13) and a pit (L14). These features were associated with ash layers that extended east into trench F9.

As in level two, the predominant features in level three correspond to (probably outdoor) domestic activities, with the added dimension of an insubstantial mudbrick structure, potentially for storage.

Level 4 (Transitional LC-EB: Late fourth to early third millennium). See Figure 2.

In a previous publication (Parker et al. 2003) level four was identified exclusively as a pavement in F1. After completing the excavation of this context it is clear that this feature is not a pavement but a collapsed wall. The wall goes with the surface on which it rests, shifting the floor up from level five to level four, thus affecting the lower level assignments as well. The new level four features identified in 2002 are a pit and an adjacent cobblestone surface fragment found in F7. Level four in F7 may not be contemporary with level 4 in F1 but we at this time we cannot connect these layers to definitively determine their relationship.

The level-four pit in F7 is 1.50–2.0m in diameter, with straight sides, and about 1m deep. This pit (L7094) contained ash, soil, and several broken pots including a ring-base bowl, a pedestaled bowl, a cooking jar, and three unusually large pedestal bases (See Figure 8). A carbon sample from this context yielded a two sigma calibrated date of 3360–3020 BCE. We uncovered a cobblestone surface fragment (L7079) just west of the pit.

In F1, beneath the level one burials and level two cobblestone surfaces, we encountered layers of fill and debris (level three) that overlay a layer of collapsed mudbrick walls. One large wall and parts of smaller walls fell onto an earthen surface

[22] L7038 is a fill layer beneath cobblestone surface L7024, which is part of the complex mix of cobblestone surface layers marked in Figure 1 as L7005.

(L1055) with an inset oven (L1045).[23] The main portion of the level-four collapse, originally interpreted as a pavement (L1033), consisted of bricks measuring 0.20m–0.40m by 0.10m set in a single row dozens of courses high. The surface of this wall was lightly baked, suggesting that the structure burned before it collapsed. The collapse covered nearly the entire northeastern two-thirds of the trench in a 3.5 by 3m area. These bricks abutted another piece of collapsed brick architecture (L1035), 1.25m by 1.25m square, consisting of a single course of bricks lying on its side just south of the center of the trench. The mud plaster on both the interior and exterior surface of wall L1035 was baked into a 0.02-meter thick black, pie-crust-like layer, prompting an initial interpretation of this feature as the remnants of an oven, although we now believe that it too was part of a collapsed wall. The western quarter of the trench at this level consisted of baked clay layers covering the area where the brick collapse described above failed to continue.

The collapsed wall pieces rested on a hard-packed, somewhat baked, mud-plastered earthen surface (L1055/1060) cut by a small pit (L1046), and covered with a thin, 0.10m layer of black ash (L1047+) perhaps originating from the oven in the center of the trench, or from a structural fire prior to collapse. The round, 1.60m diameter oven (L1045) was set into the floor. Only one 0.10m tall course of its bricks was preserved. A rectangular clay stand (KT1246) was set inside the oven just off center to the east. This stand was essentially a large mud brick with carefully smoothed sides, 0.64m long X 0.30m wide and 0.10m high. The clay floor in the center of the oven had turned bright orange from heating.[24]

Level four contains the first evidence for substantial architecture in Area F. This indicates a contrast between the function of the remains from level four and later levels, as well as between the eastern and western parts of Area F, as found in the features of F1 and F7.

Level 5 (Transitional LC- EB: Late fourth millennium. See Figure 3.

Level five is a domestic context excavated in the year 2002 in trench F1, marked by at least two phases of earthen surfaces, cobblestone surfaces, and thin mudbrick walls. In phase B, the earliest level-five surface (L1098) had a flared-rim cooking pot (L1103 KT5) buried within or beneath the surface, just south of the center of the trench, with its mouth flush with the surface. Two pieces of cobblestone surfaces were associated with surface L1098, including L1100 in the northeastern corner of the trench, and L1101 along the southern baulk. Two thin walls demarcated the area of the surface, a N-S wall (L1096), 1.75m long X 40cm wide, extending from the north baulk, and an E-W wall (L1069), 0.94m long X 0.36m wide, extending from the eastern baulk. These two walls separated a cobble surface (L1100) from the earthen surface (L1098).

[23] When the trench was expanded in 2005, we uncovered the remains of the walls that collapsed into the room. This architecture will be discussed in a forthcoming report.

[24] We found nothing to indicate the function of the oven, aside from a few bits of lightweight, greenish yellow slag that may be unrelated to the oven. This slag appeared in the ash layer in the northwest corner of the trench.

Later, in phase A, walls L1096 and L1069 continued in use and a third wall, 2.70m long X 0.50m wide, running W-E from the western baulk (L1080), was added to further demarcate the earthen surface (L1089) laid above surface L1098. This second surface sealed the pot buried in the previous surface (L1098). A shallow pit (L1090) cut L1089. This pit may be the remaining base of an oven because it was filled with ash, and the clay immediately around it showed evidence of heating. New layers of cobblestones were also added above surfaces L1100 (L1086) and L1101 (L1057/1097), and another thin wall (L1076), 1.06m long X 0.20m wide, was added running S-N from the south baulk to articulate with E-W wall L1069. These two new walls further demarcated what may have been indoor space in surface L1089, and outdoor space beyond the walls, a space traversed by intersecting cobblestone surfaces L1086 and L1057/97.

Levels 6-7[25] *(Late Chalcolithic: Mid to late fourth millennium).* See Figure 3.

Level six consists of general debris, and the ash and mudbrick debris found in pits and a large brick oven in trench F4. The oven itself, built upon sterile clay, is level seven. The relationship between many of the loci in F4 is visible in the trench's western section (for a drawing of this section see Parker et al. 2003:168-9, Figure 13). Trench F4 is located on the very steep, eroded eastern slope of Area F. The equivalent of levels one through five were removed as eroded slope deposits before we reached a clean context in which to begin stratified excavation. The first locus encountered was a layer of baked earth and bricks (L4000 / L4001), which contained a whole spouted pot (KT4027) (Parker et al. 2003: Figure 17x). This layer, which may be equivalent to level five in trench F1, sealed a large brick oven (L4009, L4027) approximately 2.0m in diameter, intersecting the northwestern baulk 2.60m below the present ground surface. The material inside this oven (L4007, L4023+) consisted of 1.3m of garbage, including ash, animal bones, stone tools, pierced pot discs (spindle whorls), and clay-like fill. The base of the oven was filled with a 0.40m thick layer of clay loam. The walls of the oven were made from at least twelve courses of 0.15m X 0.07m mud bricks. These walls curved slightly inward, suggesting that the structure had a domed shape.

As with the secondary garbage inside the oven, the material found outside of it in two pits yielded few clues as to its function. Both pits were dug against the wall of the oven, beginning at the preserved height of the oven wall. Pit L4024/L4033 was dug against the south side of the oven. This pit contained ash and other debris similar to the fill inside the oven. Pit L4028 was dug east of the oven. It contained two additional nested pits, L4034 and L4043. These pits contained layers of clay and ash. Notably, L4034 contained a potsherd with diagonal reserved slip (Figure 9Q).

The level-six and seven loci are indicative of production activities (e.g. the large oven), and garbage disposal in pits and an abandoned oven. Additional work is necessary

[25] Work continued in Area F during the 2004 and 2005 seasons. For the results from 2004 and a discussion of how they relate to the data presented here, see the section by Catherine Painter in Parker et al. 2006:80-84.

to provide a larger context for these loci. Excavations in 2005 in trenches adjacent to F1 and F4 pushed towards, but did not reach, level six and seven loci.

THE CERAMICS FROM LEVELS 2-7: A SUMMARY[26]

This ceramic summary is not exhaustive or quantitative; it focuses on the apparently dominant wares and types, and chronologically significant examples. I break the discussion into levels and associate each with a time period. I introduce material from test trench F6 because it contains the best examples of some Late Chalcolithic types.

Levels 2-4: Early Bronze Age

The Early Bronze Age ceramics that dominate levels two through four in Area F are characterized by three generalized ware groups, simplified here as follows. Each ware group will be discussed in greater detail below.

I) A temper-free, pale-yellow, very thin, well fired, wheelmade fine ware that comes in a host of shapes related to the Ninevite V group.

II) A fine chaff- and/or grit-tempered (often very little or no visible temper), micaceous and calcareous, red to reddish yellow and light brown, relatively thin, well fired, wheelmade ware. This ware is often wet smoothed and extensively burnished vertically on both the interior and exterior. The most frequent forms in this ware include pedestaled bowls, and ring- and flat-base bowls with simple straight or incurving rims.

III) A varyingly coarse grit- and chaff-tempered, reddish-brown/yellow/brown, relatively thick, low to medium fired, handmade and wheelmade ware. This ware is often burnished on the exterior and inside the rim, and frequently has fingernail or fingertip impressions on jars from the shoulder to the base. The most common forms in this ware are jars, bowls and cooking pots with simple open or flaring rims and bag-shaped or flat bases.

Other than these three predominent wares, there are cooking pots made from a very coarse, grit-tempered ware with large, densely packed grits. These pots are thinner than the mixed-temper pots, and occur less frequently. There are also a few examples of diagonal reserved slip,[27] some vessels with possible Trans-Caucasian connections, and a relatively fine gray or orange ware with distinctive fingernail impressed patterns.

[26] The summary presented here is based mostly on work conducted during June 2003 at the Diyarbakır Museum, and the subsequent study season at Kenan Tepe. Although this summary is the work of the author, it benefited greatly from discussions with Dr. Bradley Parker and Dr. Lynn Dodd. Ceramic analysis at Kenan Tepe continues, and it is likely that new material from Area F and other parts of the site will modify or perhaps significantly change the ware groups presented here. For a preliminary review of the Late Chalcolithic ceramics from the 2004 season excavations in Area F and on the tell in Area D, see the section by Catherine Painter in Parker et al. 2006:80-84.

[27] The reserved slip material is discussed in the next section, since most examples were found in earlier contexts.

Ware Group I

The first ware group is a wheelmade fine ware, 0.30–0.40cm thick (measured below the rim), distinguished by its pale yellow surface (Munsell 5Y 8/2 or 2.5Y 8/2) and fabric (5Y 7/3), which is often green (no matching Munsell value). These vessels usually have no core or occasionally a very light pink core, and have no temper aside from occasional fine grits that must derive from the clay itself. This ware comes in a variety of forms that have a carinated or hemispherical bowl as their core element, crowned by a simple straight rim or in rare instances a ledged rim (Figure 4:B, C, D, I, J, L, M, O; Figure 8:I). Bases in this ware are ringed, conical/flat or occasionally pedestaled (Figure 4:E, K, N; Figure 8:J). A spout is sometimes added to closed forms, and pierced lug handles are also found (Figure 4:F). The shoulders of these vessels often have two or three subtle ridges formed by shallow grooves (Figure 4:I, J, L, M). These grooves range from thin lines that probably were formed incidentally during throwing, to wider, intentional grooves that create distinct ridges. These vessels are wet smoothed, and may be self-slipped. The bowls have an 8–10cm rim diameter. Complete examples of the full range of shapes in this ware group were found in the Early Bronze Age tombs at lower Salat Tepe, not far down the river, east of Kenan Tepe (Şenyurt 2002: 683 – Figure 6, 687 – Figure 14). During the 2004 season we found a ring base in this ware with a probable potter's mark, an 'X,' incised on the base (Trench F18, locus 1, KT4).

Parallels for this ware and its forms are known from other sites in the Upper Tigris Valley, including Lower Salat Tepe (Şenyurt 2002), Salat Tepe (Ökse et al. 2001:Figure 7:10) and Ziyaret Tepe (Helen McDonald, personal communication). These forms also recall pots from very early third- millennium contexts at Tell Brak, which contained carniated bowls with shoulder grooves, lug handles, and ring bases (Matthews 2003:141, Figure 5.57:1, 17).

Ware Group II

The second ware group is a generally wheelmade micaceous and calcareous medium ware, 0.40–1.0cm thick (measured below the rim), marked by fine chaff and / or grit temper. This ware often has no visible temper, but sometimes the opposite is true, namely lots of fine chaff or grit. Most often this ware has no core, although sometimes a subtle core is evident, and dark cores may occur at thickened areas such as where a pedestal attaches. Surface colors in this ware range from yellows and reddish yellows to pale browns (Munsell 5 YR 6/6 reddish yellow, 2.5YR 6/6-6/8 light red, 7.5YR 7/6 reddish yellow, 10YR 6/3 pale brown, 7.5YR 5/3 brown, 7.5YR 6/4 light brown). Some vessels have a mottled surface color in which firing effects give the appearance of a red slip that is not really there. The more micaceous examples seem to have less chaff and a browner surface color. Vertical burnishing is common on all forms in this ware. The burnishing generally covers most of the vessel, but no attempt is made to polish away the vertical burnish marks. Forms include short pedestaled bowls, commonly called "fruitstands" (Figure 5:B,G,H,I,J; Figure 8:O), pedestaled jars (Figure 5:E), ring and flat-based open or hemispherical bowls with incurving, straight or slightly everted rims (Figure 6:A-E, H-M; Figure 8:B, C, F,G, M, N,), and jars with flared and everted rims.

One distinctive bowl in ware group two has an often subtle (flattened by burnishing) but sometimes pronounced ridge bordered by two grooves below a simple, straight rim, and above the carination (Figure 5:I; Figure 6:K, M; Figure 8:M). Although it is a stretch, perhaps some examples of this type, those with a more pronounced band (e.g. Figure 6:K, M) are related to the band-rim bowls found in the Euphrates Valley (e.g. Frangipane and Bucak 2001:94, Figure 11:7). This bowl comes in a relatively fine, thin version (Figure 5:I; 8:M) and examples that are thick and contain much more chaff (Figure 6:M). One example (Figure 5:I) is attached to a pedestal, with an overall form that recalls Ninevite V pedestaled vessels (Matthews 2003:Figure 5.57:28; Oates 1986:261, Figure 4:59 [Early Dynastic]; Rova 1988:221, B9; Schwartz 1988: Figure 36:1-2; Wilkinson and Tucker 1995:209, Figure 68:19-21 [parallel for 'collar' at join between bowl and pedestal base]).

A number of simple incurved-rim bowls have a subtle wavy line incised below the rim; one example has two lines (Figure 6:D, J). This kind of decoration, seen in the Amuq G assemblages, is also found on a hemispherical, beaded rim bowl (Figure 6:C) that is similar to one from the Amuq G, Late Uruk/EBI contexts at Zeytinlibahçe Höyük, and early third millennium levels at Brak (Braidwood and Braidwood 1960: 279, Figure 220:22-23; Fragipane and Bucak 2001:88, Figure 5:8; Matthews 2003:Figure 5.56:17). An exact parallel to some of the bowls with wavy lines comes from the nearby site of Lower Salat Tepe, where these vessels were found together with vessels of ware group one in a stone-lined cist tomb (Şenyurt 2002: 687–Figure 14, the large brown bowl in the back of the photo). The Salat example is missing its pedestal.

In contrast to the tall, long-stemmed, shallow-bowl fruitstands common in the Carchemish region, at Kenan Tepe most of the fruitstands have short stems and relatively deep bowls (Figure 5:G, J, I). Parallels for the proportions of Kenan Tepe pedestaled bowls are found at Hassek Höyük (Hoh 1981: 71, Abb. 13:2) and Birecik Dam Cemetery (Sertok and Ergeç 1999:104, Figure 8:H, I). A few examples of the pedestaled bowls have deep, ovoid finger, fingernail, or round impressions around the top of the pedestal (Figure 5:G, H). These are found on vessels with small, medium and large pedestal diameters, including two very large bases that may belong to pedestaled jars. Similar decorations are found on late fourth-millennium pedestals at Arslantepe (Frangipane 2002: 142, Figure 12:1). In the 2005 season we found an incurved-rim pedestaled bowl with a rim like Figure 6:D that had fingernail impressions around its neck. This pedestaled bowl had three vessels inside it, including a miniature version of Figure 5:I and two ware-group-one cups like Figure 4: M, N. This finding confirms the association of these forms and wares.

Other parallels not mentioned above include the following: Pedestaled vessels similar to those at Kenan Tepe are found in the burials at Müslüman Tepe (Ay 2004: 380-1, Figures 4, 6, 7). For the bowls in Figure 5G, and Figure 6:B, I, parallels are found in Braidwood and Braidwood 1960: 268, Figure 206:4 [Amuq G]; Frangipane 2000: 467, Figure 13:13 [Arslantepe 3100–2600 B.C.E.]; Hauptmann 2000: 430, Abb. 3:4 [Norşuntepe EBI]; Hoh 1981: 91, Abb. 16:4 [Hassek EB]; Karg 1984: 142, Abb. 30:12 [Burhan EB]; Thissen 1985: 121, Figure 3:8 [Hayaz EB]. The bowl in Figure 6:H has

parallels in: Braidwood and Braidwood 1960: 268, Figure 206:2 [Amuq G]; Sertok and Ergeç 1999:104, Figure8:K [Birecik Dam Cemetery EB], and Hoh 1981:66, Abb 8:6 [Hassek EB]. The zig-zag incised bowl in Figure 6J has a shape parallel to: Algaze 1990: plate 45D [Kurban V, plain simple ware]. Other parallels to Kurban V from Algaze 1990 include: Figure 6A: plate 45C; Figure 8:A: plate 44:b; Figure 8:C: plate 44e. The pedestal foot in Figure 5:E has a parallel at Brak: Matthews 2003: Figure 5.64:4 [Ninevite 5]. The pedestal foot in Figure 8:O has a parallel in Kurban V (Algaze 1990: plate 51:L).

Ware Group III

The third ware group is a mix of wheelmade and handmade vessels, generally 1.0–2.0cm thick (measured below the rim) containing medium to large grit and chaff, often in large amounts (Figure 4:G; Figure 5:F; Figure 7:A-F; Figure 8:A, D, E, H). The proportion varies widely, as does the size of the grit and chaff. These mostly hand-made pots are lumpy, often lightly burnished on their exterior and inside the rim, and many, usually the cooking pots, contain large grit inclusions (often quartz) up to 0.05cm (Figure 8:A). A few examples are possibly wheel made or wheel finished (Figure 8:H). These vessels generally have a black core and are lightly burnished. Surface color varies from reddish yellow to shades of brown (Munsell 5 YR 6/6 reddish yellow, 10 YR 8/2 very pale brown, 7.5YR 6/4 light brown, 10 YR 5/3 brown). Some vessels have a brown or pink wash or slip.

Ware group three is dominated by open jars, generally with flaring necks and simple rims, and cooking bowls and pots with varying degrees of chaff and white sand-sized or larger angular grits (Figure 7:D; Figure 8:D), while some have mostly chaff (Figure 7:F). A few examples have thickened rims that may be bent or everted (Figure 7:D). Some examples have a subtle thickening of the rim that resembles a triangular lug but we found only one example of a true, full lug (Dodd et al. 2005: Figure 3:M). When preserved, the bases of these vessels have a non-descript, rounded or flat bag-shaped base (Figure 4:G). These vessels are frequently decorated with varieties of fingernail or fingertip impressions, or triangular gouges, in dense clusters all over the shoulders, sides and near the base (Figure 8:A, D). Given their density on many vessels, perhaps these impressions have a functional value. Parallels for these jars include the following: Figure 8:A: Hoh 1981: 73, Abb 15:7 [Hassek EB]; Figure 8:D: Algaze 1990 plate 52:G-H [Kurban V]; Figure 8:E: Hoh 1981: 75, Abb 17:3 [Hassek EB]; For both Figure 8A and 8D: Karg 1983: 141, Abb 29:1-2 [Burhan EB], Thissen 1985: 124, Figure 6:8-9 [Hayaz EB]. For Figure 8:H: Matthews 2003:147, Figure 5.60.10 [HS4, 2900–2500 B.C.E.], Ökse et al. 2001:Figure 7:3,-4 [Salat Tepe EB].

We recovered a number of relatively thick, chaffy, handmade bowls from levels two and three. These are lumped together with ware group three but they contain much more chaff and are apparently fired at a lower temperature than the other members of this group. These open bowls, variably deep and tall or wide and shallow, often have a large diameter, are 1–2cm thick and burnished inside and out. The body of these bowls is generally uneven and rims range from simple rounded to more pointy or flat examples. In complete profiles, the bases are flat or rounded. Two ware sub-types can be distinguished:

those with predominantly chaff temper along with some sand and gravel, and those with an even proportion of chaff and grit. These vessels are variably fired, often unevenly, with no core, a grading core or a thick black core. Surface color is mottled and ranges widely from reddish brown, brown and yellowish brown to pink and red.

Possible Transcaucasian or related vessels

One possible Trans-Caucasian jar (Figure 7:A) has a slightly out-turned, slightly thickened, rounded rim with a small/vestigial triangular lug at the rim. It has a micaceous fine grit temper (lots of sand), consisting of mostly white and grey bits with occasional 3–4mm inclusions. The interior is reddish brown; the exterior is black and well burnished but not highly polished. A possible parallel for this vessel comes from the 3100–2600 BCE "royal tomb" at Arslantepe (Frangipane 2000:470, Figure 16:4). Another shape similar to Figure 7:A includes the pots in Figure 7:B,C. These vessels are probably cooking pots, with coarse grit and chaff temper, burnished on the exterior and the rim. These two pots do not have a red-black interior-exterior color contrast like Figure 7:A; instead their fabric and surface color are shades of reddish brown. Parallels for these pots come from Arslantepe (Fangipane 2000: 470, Figure 16:4 [3100–2600 BCE]), Norşuntepe (Hauptmann 2000: 431, Abb. 4:6 ['monochrome' EB]) and possibly also Birecik Dam Cemetery (Sertok and Ergenç 1999:Figure 8:G).

Another vessel with possible origins outside Kenan Tepe is the everted rim, dark burnished jar in Figure 4:A. This pot has no visible temper and is well burnished inside and out. Its dark color is distinctive, and recalls later imitations of metallic ware.

Handles, lids, spouts

Apart from suggestive thickening at the rim in some jars, handles are rarely found on any vessels. In most cases, the 'triangular lugs' are merely a pinched-out area of the flaring rim rather than a distinctive handle attachment. A few loop and rectangular handles are known but their numbers are small. We found a small number of pierced lug handles from the shoulder of vessels, which come in wares one and two (ware one: Figure 4:F; ware two: Figure 6: F,G; Figure 8:L). The ware-two examples probably belong to the footed vases found at Arslantepe (Frangipane 2000:467, Figure 13:9-10), Birecik Dam cemetery (Sertok and Ergeç, 1999:103, Figure 7:J, K, L), Hacinebi (Pearce 2000:140, Figure 16b), Hassek Höyük (Hoh 1984:91, Abb. 16:1-2), Tell Brak (Matthews 2003:Figure 5.66:11), Tell Mohammed Arab (Period I, Roaf and Killick 1987:209, figure 3, left side), and Hayaz Höyük (Thissen 1985: 123, Figure 5:29). One example of a horizontal loop or single vertically pierced handle is notable (Figure 7:G), with a parallel from Hayaz Höyük EB contexts (Thissen 1985:124, Figure 6:35).

Lids are generally flat, made in the ware of group three, and have loop, square, and unpierced handles (Figure 4:P). Four examples of a finger-impressed swirl on a lid are particularly noteworthy (Figure 4:H). We found a handful of straight spouts from globular vessels in Area F, usually occurring in ware two, often burnished. A complete spouted vessel in a browner version of this ware is lightly burnished, has a flat base, a thick body with distinctive wheel-derived rills inside, and a tightly constricted opening

(Figure 5:A). Potential parallels for this vessel are found at Godin Tepe Period V (Badler 2002:143, Figure 13:B1 479 #173) and Brak Ninevite V contexts (Matthews 2003: Figure 5.55:3-4 [shape but not neck]; Figure 5.63.13 [neck only]).

Decoration

Decoration in the Early Bronze Age assemblage is somewhat specific to ware and form. Ware group one is often wet smoothed and has subtle horizontal grooves on the shoulder. Ware group two is vertically burnished. Pedestaled vessels in ware group two sometimes have fingertip or fingernail or round impressions around the join of the pedestal to the bowl. As discussed above, some bowls in ware group two have a shallow zig-zag incision below the rim (Figure 6: C,D,J). This zig-zag may be related to Ninevite -V designs that have wavy lines (Swartz 1988:87-88, Figure 32:1,4,5; 108-109, Figure 43:4,9,12; 116-117, Figure 47:6), or other such lines on jar shoulders, either incised or rendered in reserve slip (Hoh 1984: Abb 14:2; Karg 1984: Abb 32:25). This design is also found in the Amuq G (Braidwood and Braidwood 1960: Figure 220:23-25) and Kurban VI (Algaze 1990: Plate 21:I). The most common decoration is fingernail or fingertip impressions or gouges on coarse vessels in ware group three (Figure 8:A). One example combines thin, vertical string impressions with light fingernail impressions (Figure 8:D). Perhaps the preference for fingernail impressions shares some stylistic or functional relationship with this same decoration on strap-lugged holemouth jars at Brak and other sites in the Ninevite V region (Matthews 2003: Figure 6.69:22).

Ware group three is often burnished, sometimes lightly, sometimes intensively. Less common are fingernail impressions in patterns or registers on finer orange and grey wares that are similar to ware two (Figure 5:C). Some examples of these finer wares, all body sherds, have fingernail impressions separated by a horizontal wavy line reminiscent of the wavy incisions on incurving rim bowls (Figure 5:D; 7:H). Other decorations include round punctation and comb-tip punctation on medium to thick pots with grit and chaff temper in a distinctive reddish-brown fabric (Figure 5:F, K). A small number of combed or incised sherds are also present (Figure 8:K). Painted sherds and molded decorations are extremely rare.

Levels 5-7: Transitional Late Chalcolithic–Early Bronze Age?

In this discussion I am considering only trenches F1, F4 and F6, and one should be cautious of assuming that these small exposures are representative of the entire settlement at this time. Nevertheless, several patterns (not quantified) seem to emerge. As we go deeper in F1, the fine vessels of ware group one above nearly disappear and many possible examples of this ware have a different feel. Also, the pedestaled bowls that dominated levels two through four appear less frequently, and sometimes in wares of odd color or temper, or with longer stems. The zig-zag incised, incurving rim, vertically burnished bowls disappear, as do pierced lug handles and finger-impressed swirl lids. At the same time, vertical burnishing, while still present, is often done lightly or much more loosely applied, leaving distinctly spaced lines similar to pattern burnish, rather than a

fully burnished surface. Finally, although there are just a few examples of reserved slip from area F, most of them come from earlier contexts in trench F4.

The forms that disappear or become less frequent in the earlier levels are 'replaced' by vessels with lots of medium or large chaff, bowls and jars in a 'simple' ware, and several distinctive shapes: a triangular or hammerhead-like-rimmed bowl (Figure 9:A, B, C; Figure 10:A, B, D, F), a small carinated bowl that sometimes has a groove on its shoulder (Figure 9:J-L, N, O), and a conical bowl with deep wheel marks on its interior and a coarse, unfinished and untrimmed string cut base (Figure 9:E). In addition, the flaring rim jars in these levels become coarser and more friable, and many have a tapered rim rather than a simple rounded rim. If we include a group of Late Chalcolithic vessels from trench F6, we can summarize the Late Chalcolithic to Early Bronze transitional period ceramics from Area F with two general wares as follows:

I) A fine grit with occasional fine chaff, sandy, micaceous, orange-pink surface color, medium to well fired wheelmade ware with no surface treatment aside from occasional vertical or light burnishing.

II) A fine to large chaff with fine grit (often angular white grits), surface color mottled pink to light brown, low fired, porous, smoothed or lightly burnished ware.

This ware dichotomy is no doubt oversimplified and will be improved upon during ongoing analysis of additional material.

Ware Group I

Ware group one could be called a 'simple ware,' with the distinctive sandy or gritty feel of an untreated surface, although it sometimes has some fine chaff. Apart from occasional light burnishing, sometimes vertically, the surface is untreated and shows wheel striations. Vessels in this group are thinner than the other Late Chalcolithic ware group and sometimes have a bright pink or reddish surface or core. Common forms in this ware include hammerhead-rimmed bowls (Figure 9:A; Figure 10:B, D, F), beaded or everted and tapered-rim carinated or open bowls and neckless jars (Figure 9:H, K, L, M, N, P; Figure 11:C, G). Jar shapes in ware one include Figure 9:I.

Parallels for the forms in ware group one include: for Figure 9:A (Hoh 1984: 91, Abb 16:6 [Hassek EB]); Matthews 2003:Figure 5.55:7 [in association with beveled rim bowl]); Porter 1995: Figure 11:5 [2600–2400 BCE]); for Figure 9:N (Braidwood and Braidwood 1960: 270, Figure 208:6 [Amuq G]); (Hauptman 2000:Abb. 7:3 [Norşuntepe black burnished]); (Hoh 1981: 67, Abb 9:9 [Hassek EBI]); (Schwartz 1988: Figure 53:6 [Leilan LC]); for Figure 10:B: (Helwing 2002: Tafel 1:9 [Hassek LC]); for Figure 10:D (Hoh 1984: 86, Abb 11:4 [Hassek LC]); for Figure 11:C (Filli 2003: Figure 4.21:5,6,8 [Brak LC]); (Pearce 2000: Figure 8:H [Hacinebi LC, late Phase A, B1]); (Schwartz 1988: Figure 53:13 [Leilan LC]); for Figure 9:I (Frangipane 2000: 456, Figure 2:22 [Arslantepe LC]; and 459, figure 5:9 [Arslantepe EBIA]).

Ware Group II

Ware group two comes in many of the same forms as group one, but generally in thicker, rougher wares. This ware group often has a distinct dark gray core. These vessels are sometimes wet smoothed, lightly burnished or slipped. Some examples have a distinctive burnished pale yellow slip on a low-fired, crumbly, light red fabric. Some finer examples in this ware are similar to Late Chalcolithic ware group one in that they contain minimal fine chaff and fine grit, but these are still distinguished by a 'chaffy' appearance with chaff facing or lighter weight. A notable sub-ware within group two contains fine chaff and large lime inclusions. These vessels, frequently carinated bowls, often have pronounced wheel marks on the lower half of their interior surface and a flat base (notably NOT string cut). Ware group two includes cooking pots, which we have not yet subdivided into sub-wares. Sooting, calcareous inclusions, simple flared rims, and simple vertical loop handles often distinguish cooking pots from other vessels in ware group two. Examples of shapes in ware two include Figure 9:B, C, D, E, F, G, J, O, Q; Figure 10:A, C, E, I; Figure 11:A, B, D, E, F, H, J; Figure 12:A-I.

Parallels for the forms in ware group two include: for Figure 9:B (Hoh 1981: 69, Abb 11:4 [Hassek EB]); for Figure 9:D (Pearce 2000: 131, Figure 7b [Hacinebi LC]); for Figure 9E (Ay 2004: 381, Figure 7: the middle bowl in the second vertical row from the left looks like a coarse bowl with a string cut base, apparently found in association with vessels like Kenan Tepe's Early Bronze Age ware group I, as well as the pedestaled vessels of Ware Group II and, it seems, metallic ware cups). Further parallels for Figure 9E include: (Badler 2002: 107, Figure 16: middle row [Godin tepe period V]), (Frangipane 2000: 459, Figure 5: 4-7 [Arslantepe EBIA, 3500–3100 BCE]), (Pearce 2000: 137, Figure 13:b-c [Hacinebi 'Uruk' coarse conical bowl]). Parallels for other figures include: for Figure 11:A: (Gut 2002: 30, Figure 7: 2nd row, 2nd from right, MN 2-4 [Nineveh after Thompson and Mallowan 1933]); (Özgen et al. 1999: Abb 24:3 [Oylum LC]); for Figure 11:B: (Algaze 1990: Plate 37:C [Kurban VI - LC]); Felli 2003: Figure 4.19:8, Figure 4.23:10 [Brak LC]); Gülçur 2000: 404, Abb 44: bottom row, 4th from left [Norşuntepe LC]); for Figure 11:E: (Akkermans 1988: plate 110:123 [Hammam VB = LC]); Badler 2002: 104, Figure 13: B1479 #181 [Godin Tepe period V]); for Figure 11:F: (Gut 2002: 39, Figure 17:1 [Nineveh, upper MN3–lower MN4]); (Pearce 2000: 127, Figure 3:g, and 134, Figure 10:a [Hacinebi LC]); for Figure 11:H: (Frangipane 2000: 456, Figure 2:17/22 [Arslantepe LC]); (Pollock and Coursey 1995: 140, Figure 7:f-g [Hacinebi LC]); for Figure 12:A: (Frangipane 2000: 456, Figure 2:5 [Arslantepe LC]); for Figure 12:B: (Algaze 1990: plate 31:D [Kurban VI–LC]); (Pearce 2000: 133, Figure 9:b [Hacinebi LC phase B1-B2]); for Figure 12:C: (Frangipane 2000: 456, Figure 2:7 [Arslantepe LC]); (Schwartz 1988: Figure 52:7 [Leilan LC]); for Figure 12:D: (Pearce 2000: 133, Figure 9:e [Hacinebi LC]); for Figure 12:E: (Akkermans 1988: plate 106:93 [Hamman VB–LC]); for Figure 12:F: (Algaze 1990: plate 30:F [Kurban VI–LC]), (Pearce 2000: 131, Figure 7-f [Hacinebi LC, late phase A]); (Schwartz 1988: Figure 58:I [Leilan V = LC]); for Figure 12:G: (Felli:2003: Figure 4.17:3 [Brak LC]), (Pearce 2000: 126, Figure 2:e [Hacinebi LC, late phase A]); for Figure 12:I: (Thissen 1985:119, Figure 1:39 [Hayaz Höyük LC]).

A few debris contexts near the base of test trench F6 contained a large variety of forms related to the Amuq F and Late Chalcolithic of Anatolian sites like Hacinebi, including simple rim open bowls (Figure 12:F,G), carinated fineware bowls (Figure 11:C), a variety of hammerhead bowls or platters (Figure 12:A-E, H, I), jars with an internal ledge or flared rim (Figure 11:A,B,D,E), and a casserole (Figure 11:F). This assemblage is somewhat different from, and perhaps earlier than, the material from contexts such as the oven (L4007, 4023) and pits (L4024/4033 and L4028/34/43) in F4, and the materials in level five of F1. The F1 and F4 contexts seem to range into a transitional period between the Late Chalcolithic and the Early Bronze Age, evidenced by the appearance of vertical burnishing, pedestal bases, an occasional horizontal-grooved open bowl similar to Figure 5:I, a few pieces of diagonal reserved slip, string cut bases and triangular-rimmed bowls.

Reserved Slip

We recovered only five sherds of reserved slip from Area F during the first three dig seasons, all of them small body sherds, about 1cm thick, most likely from jars. One sherd comes from F8 L8010 while the others come from F4 L4024, L4025 and L4034. In each case the vessels were wheelmade and the design is diagonal lines, in one case with a horizontal wavy line as well (Figure 9:Q). Three examples have chaff temper with some sand, while the fourth has chaff temper with a few white grits. Interior surfaces are light brown, brownish grey or pink (Munsell 7.5YR 6.5; 10YR 6/2, 7/5 YR 7/4), and exterior surfaces are pale brown or light reddish brown (Munsell 10YR 6/3, 2.5Y 8/3, 10YR 7/4, 2.5YR 6/4) with a pale yellow slip (2.5Y 7/3). Two examples have an abrupt, thick black or grey core, while the others grade to a dark core. The largest example is also burnished horizontally (Figure 9:Q). Given their rarity at Kenan Tepe, these vessels are probably imports. Parallels to Figure 9:Q include: (Hoh 1984:89, Abb 14:2 [Hassek EB]); (Cecchini and Mazzoni 1998:59 and 94, Figure 11:7 and 31:1 [Afis LC]).

Handles, lids, spouts, bases, decoration.

In the material analyzed thus far from levels five through seven, few handles or lids could be identified, and we found only a couple of straight spouts. Bases are both flat or ringed, with string-cut bases apparently more common than in levels one through four (Figure 9:E,F). Decoration is rare in these levels but includes combed sherds, cross-hatching and fingernail impressions on jar shoulders in limited spaces (not all over the vessel as in levels one through four), as in Figure 10:G. A single painted bowl has cross-hatching between horizontal, parallel lines (Figure 11:I).

Potentially Uruk related forms

Although we have not yet found any ‘true’ Uruk forms at Kenan Tepe, such as nose lugs, beveled rim bowls, or drooping spouted jars, we do have several forms potentially related to southern Mesopotamian Uruk period assemblages. These include the coarse bowls with a string cut base, found in levels five through seven (Figure 9:E), incised geometric designs on jar shoulders (Figure 10:G), a flared ‘round-rim’ jar with a

tall neck (Figure 9:I), a jar with ledge rim (Figure 11:J) and a single example of a bowl with something resembling a lip spout (Figure 10:H [from trench G6]). As others have observed, the presence of forms similar to Uruk types, or of mineral inclusions in the ware, does not mean that these vessels are imports from southern Mesopotamia (Pollock and Coursey 1996:234). As noted above, these potentially Uruk-related forms have parallels at other north Mesopotamian sites and may have arisen from indigenous forms, or local experimentation with Uruk forms (Pollock and Coursey 1996:239).

Ceramic summary: dating and connections

Two sealed contexts from Area F are dated by carbon-14 analysis. These are the level four ashy debris layer/ pit (F7, L7094) beneath level two to three surfaces, and the oven in F4 (F4, L4007/4023). A third context, an unsealed surface (F4, L4004) above the F4 oven, is also carbon dated.

Context F7 L7094 yielded a two sigma calibrated date of 3360–3020 BCE (F7.7094.28). Selected vessels from F7 L7094 are illustrated in Figure 8. This context contained nearly the full range of Early Bronze Age types and wares described above. Not illustrated here are a ring base bowl similar to Figure 6:E, I, L, and two large pedestal bases with finger-impressed decoration around the top like that shown in Figure 5:H. As discussed above, the shapes and decorations in this context, as well as those throughout levels two through four have parallels to the Amuq G (Braidwood and Braidwood 1960), Arslantepe VIB2 (2900–2800 BCE: Francipane 2000:451), Brak Early Third Millennium (Matthews 2003), Leilan III (Ninevite V: Schwartz 1988:xix), Hassek Early Bronze Age (Hoh 1981, 1984) and Kurban V ("Early Part of the Early Bronze Age": Algaze 1990:281).

Not surprisingly, Kenan Tepe is not only geographically 'between' the Ninevite V areas and the Upper Euphrates, but its ceramics also have similarities to both the Ninevite V assemblages and those of the beginnings of the Early Bronze Age at sites to the west such as Hassek. A few rare but key diagnostics, including diagonal reserve slip, zig-zag incisions on bowls, and pierced lug handles, also have parallels within this time period. This ceramic evidence, combined with the L7094 carbon date, as well as the absence of metallic ware, horizontal reserve slip, dark rimmed orange bowls, or triangular-lug handles in significant quantities argue for a dating of levels two through four to the end of the fourth or the turn of the third millennium.

Context F4 L4004 yielded a two sigma calibrated date of 3350–2910 BCE (KT 4061). A distinctive spouted vessel from this context, in Late Chalcolithic-Transitional period ware I, is illustrated in a previous report (Parker et al. 2003:174, figure 17X). Samples from within the F4 oven yielded two-sigma calibrated dates of 3360–3030 BCE (KT4157), 3630–3570 BCE and 3540–3360 BCE (KT4229), and 3660–3620 BCE and 3600–3520 BCE (KT4253). In addition to the vessels illustrated in Figure 10:B,G many examples from this context are illustrated in a previous report (Parker et al. 2003:165, Figure 12). The materials from these dated contexts, and throughout levels five through seven, have parallels in Late Chalcolithic and transitional period assemblages at a similar

range of sites as the material in levels two through four. Parallels from levels five through seven and selected contexts in trench F6, are found at Hacinebi (Late Chalcolithic phases A & B [4100–3300 BCE] Pearce 2000), Kurban VI (Late Chalcolithic: Algaze 1990), Arslantepe VII (3900–3400 BCE) and VIA (3400–3000 BCE) (Francipane 2000:451), Brak (Fourth Millennium: Felli 2003), Leilan IV (Late Uruk: Schwartz 1988: xvii), and Hassek Late Chalcolithic (Hoh 1981, 1984).

It is difficult to pin down the transitional period between the potentially earlier fourth-millennium examples from trench F6, the other Chalcolithic materials from levels five through seven in trenches F1 and F4, and the Early Bronze Age assemblage from levels two through four. Some of the carbon dates from F4 contexts, discussed above, overlap the upper range of the date from F7 L7094 of level four. Without more carbon-14 dates, a quantified seriation, and larger exposures of sealed, stratified contexts, it is difficult to discern if levels five through seven should be seen as "transitional" along a continual development from the fourth to the third millennium, or if a settlement hiatus exists. At the present time I am inclined to see transition within continuity, rather than hiatus and abrupt change.

Aside from changes in some ceramic forms, and the appearance of Early Bronze Age ware group I, the most notable change in the ceramics from levels five through seven to levels two through four is the replacement of the simple gritty potsherds of Late Chalcolithic ware group I by the intensively vertically burnished potsherds of Early Bronze Age ware group II. Also, although Early Bronze Age ware group III is fairly similar to Late Chalcolithic ware group II, the Bronze Age version is more frequently burnished and often has fingernail or other impressions. Thus, it seems that the ceramics of levels two through four required more labor investment in surface treatment and decoration. Perhaps labor-saving changes in the manufacturing process offset the additional time necessary for burnishing and incising. Despite these changes, continuity in ware and temper is indicative of a gradual local development spanning the late fourth millennium to the early third millennium BCE.

Small Finds: levels 1-7

The small finds from levels one through seven in Area F consist of pierced pot discs (rounded and pierced potsherds, probably used as spindle whorls), beads, figurines, cylinder seals, miniature vessels, andirons, and a metal pin. Some of these finds are described in previous publications cited throughout this report, and we only consider them briefly here. The most numerous finds from levels two through four are andirons and pierced pot discs. None of the andirons have designs or decorations of any kind. They are round, oval or rectangular in cross-section, sometimes pierced through the narrow point between the base and the top (very similar to the examples illustrated in Smogorzewska 2004: Figure 9, and Figure 10:1-2). The highest concentration of andirons (six) comes from the level two surfaces around a wall (Locus 19) in trench F14. The presence of these andirons and those throughout all levels in Area F is consistent with the simple ovens and

cobblestone surfaces also found here, evidence of domestic activities such as food preparation.[28]

The pierced pot discs, presumably spindle whorls, indicate domestic textile production activities. Notably, F4 L4023 (level six) contained eight pierced pot discs, an andiron (F4.4023.4225; Parker et al. 2003:141, 173: Figure 16S), a large flint sickle blade (F4.4007.4088; Parker et al. 2003:142, 174: Figure 17Z) and a steatite bead (F4.4025.4180; Parker et al. 2003:139, 172: Figure 15H). We interpret this context as a refuse deposit that offers a glimpse of domestic activities taking place during that time at Kenan Tepe. Trench F4 was also rich in other finds, including stone beads, additional pierced pot discs, a bronze pin with a fiddlehead scroll (F4.4025.4160; Parker et al. 2003:141, 173:Figure 16Q), and a cylinder seal (F4.4026.4132; Parker et al. 2003:137, 172:Figure 15A). The pin, from F4 L4025, and clay cylinder seal,[29] from F4 L4026, are consistent with a Late Chalcolithic or transitional Late Chalcolithic to Early Bronze Age date for these levels.

THE LATE CHALCOLITHIC AND EARLY BRONZE AGE AT KENAN TEPE, AND IN ITS REGION: SUMMARY AND CONCLUSIONS

Following the Ubaid period, Kenan Tepe expanded beyond the tell into Areas F and G during the Late Chalcolithic Period. This area continued to be occupied into the Early Bronze Age but was abandoned at some point in the mid third millennium while the tell was resettled by sometime before the turn of the second millennium. The domestic character of Area F continues across the Late Chalcolithic into the Early Bronze Age. Thin mudbrick walls, cobblestone surfaces, pits, small ovens and stone installations, combined with artifacts such as spindle whorls and andirons, found across all levels, are characteristic of self-sufficient domestic activities. The lack of substantial architecture and general absence of stone foundations is notable, especially when contrasted with the monumental Early Bronze Age wall foundations found in the step trench on the Tell (Parker et al. 2005:13).[30]

The carbon dates and ceramic corpus from Area F suggest a general continuity between the Late Chalcolithic and Early Bronze Age periods. The carbon date range from trench F7 L7094 overlaps some of the dates from levels five through seven in trench F4.

[28] The symbolic or ritual role of andirons must also be considered. Even andirons without designs or obvious anthropomorphic shapes may be simplified versions of and allusions to the same figures (e.g. bulls) depicted in the form of more clearly symbolic andirons (Smogorzewska 2004:152).

[29] In 2004 we found a clay cylinder seal in F7, and in 2005 another clay cylinder seal turned up in F2, both in contexts equivalent with levels four or five.

[30] During the 2005 season, not discussed here, we found structures with brick walls up to 1m wide around trench F1 (in Trenches F19, F20 and F22) in levels associated with the level four oven and surfaces in Figure 2. In contrast, we continued to find thin mudbrick walls, with widths less than half a meter, in trenches in the rest of the area F in levels contemporary with levels 4 and higher. This architectural differentiation is likely due to functional differences between the structures.

Similarly, although some Late Chalcolithic ceramic forms disappear (e.g. hammerhead bowls) as Early Bronze Age forms become more prevalent (e.g. pedestaled bowls), most jar and bowl shapes remain very similar. Although burnishing becomes more intensive in the later period, chaff and grit temper continue in use, and overall the wares do not change dramatically. The best evidence for settlement hiatus, the collapsed structure in level four of trench F1, is difficult to interpret: it could represent a period of abandonment and therefore a significant break with the material above it, or it may simply mark accidental or deliberate leveling of the structure that took place while other parts of the site were still occupied. The material below this collapse becomes increasing Late Chalcolithic in character, but not starkly so. This suggests that if this level marks a localized hiatus in settlement, it was short-lived.[31]

Two surveys of the portion of the upper Tigris River valley between the city of Bismil and the Batman River confluence found many small Late Chalcolithic sites but few Early Bronze Age settlements (Algaze et al. 1991:182; Ay 2000). The apparent drop in local settlement density, and by extension population, may be due to issues of ceramic visibility and recognition from these periods (Algaze 1989:245).[32] Alternatively, this phenomenon may be related to urban growth and settlement reconfiguration in northern Syria and the Euphrates Valley (Algaze et al. 1991:182; Algaze 1999:555). It remains unclear just how urbanization affected the upper Tigris River valley. The only apparent candidate for urban status in the valley in the Early Bronze Age is Pir Huseyin, estimated to be at least nineteen hectares by the late third millennium.[33] A late-third millennium occupation is indicated by the presence of dark-rimmed orange bowls and red brown wash ware across the full extent of the site, but we must keep in mind that these wares continue in use into the second millennium.[34] A firmer indicator of a late third-millennium settlement is the presence of metallic wares and 'Early Trans-Caucasian-like' wares in small amounts.[35] Assuming that Pir Huseyin was fully occupied in the late third millennium, it was possibly the only urban site in the valley at that time and could not have absorbed the population loss implied by settlement patterns. Perhaps the increase in population at urban centers outside the valley derived in part from valley residents moving east, south or southwest to take advantage of perceived urban opportunities, including work, protection, trade, or political and religious prestige. Alternatively, the drop in settlement density during the Early Bronze Age may be related to increased nomadism during that period, or local political realignment.

[31] We should be able to answer these questions once we have excavated levels five through seven in other trenches in Area F.

[32] For example, it is reported that the course chaff-tempered vessels of Kenan Tepe Early Bronze Age ware group III were likely mistaken for Neolithic or early Chalcolithic period vessels during the surface survey of Ziyaret Tepe. This mistake was discovered when this ware was found in Early Bronze Age levels in the step trench (Matney et al. 2003:179).

[33] Brian Peasnall, personal communication, 2005.

[34] Ibid.

[35] Ibid.

The expansion and contraction, settlement and abandonment of Kenan Tepe between the Ubaid and the Early Iron Age alternatively may be related to chiefdom cycling in the Upper Tigris River Valley.[36] Chiefdoms are adequately described as "regionally organized societies with a centralized decision-making hierarchy coordinating activities among several village communities" (Earle 1987:288). Chiefdoms are known to develop and collapse in repeated cycles in a process whereby "centers of power shift or rotate over the landscape, as first one community and then another assumes prominence" (Anderson 1994:10). From the Late Chalcolithic and Early Bronze Age periods onwards, the Upper Tigris River Valley was apparently by-passed by major trade and transportation routes that turned away from the Tigris in northern Iraq to cross North Syria, intersecting many developing urban centers before turning northwest of the Tigris. Thus, Uruk trade moved up the Tigris Valley to Mosul, then across north Syria and up the Euphrates Valley (Algaze 1993:47: Figure 21). The effect may have been to create a politically isolated area that was 'free' to develop along a relatively independent socio-political trajectory.

To date we have little evidence for extensive southern Mesopotamian activities in the Upper Tigris River Valley in the Late Chalcolithic Period and the first half of the Early Bronze Age, but such material may be found at many sites in the region where work is ongoing. At least a few beveled rim bowls are published from the region, including one from Giricano (Schachner 2004:533: Figure 22, top right) Lower Salat Tepe (Şenyurt 2004: 654, Figure 7), and Ziyaret Tepe (mentioned in Roaf 2005:23), and several from Çattepe (Velibeyoğlu 2002:825, Figure39:1-6). The relative isolation of the valley in terms of international trade, if ongoing excavations do not prove otherwise, may explain in part why urbanism did not arise in the area when it developed nearby in the Euphrates Valley and north Syria.[37] Indeed, throughout its history, the Upper Tigris River Valley seems to have been under the 'influence' of outside powers, subject to loose hegemonic rule or periodic military campaigns. In the mid and late third millennium this may have included the far-reaching power of Ebla to the southwest and the Akkadians to the southeast (Matthiae 1981; Drower 1971:332). Yet the Upper Tigris region was located at the fringes of these and other major power centers in Anatolia, Mesopotamia and the Levant. Thus, outside powers apparently did not fully or directly control the area around Kenan Tepe until the Assyrians established themselves at Ziyaret Tepe[38] in the Iron Age. In the absence of direct, sustained control by foreign powers, local leaders and their communities would have been able to compete for control of resources and indigenous

[36] Although the chiefdom concept has its variations and potential problems when applied to the ancient past, it is a useful way to consider the socio-political situation in the Upper Tigris River Valley.

[37] Despite any political or economic circumscription, valley residents were not in a bad position. Even if the major land trade routes skirted the valley, its inhabitants were relatively close to mountain resources in the north, had access to materials coming down the river from the Diyarbakır area, and the opportunity to send goods downstream on the Tigris. Indeed, Kenan Tepe is situated on a ridge at the Tigris River's edge. Although the River's course may have shifted across the flood plain over the period of Kenan Tepe's inhabited history, the site always remained close to the water. Perhaps this location was chosen for access not only to water but also to riverine food and plant resources, trade, and a measure of protection.

[38] Most likely the location of the city of Tushan (Matney et al. 2003:190-191).

political allegiance. This condition may have fostered chiefdom cycling and in the process prevented indigenous urbanism by maintaining sub-state polities in the region during the Late Chalcolithic and Early Bronze Age periods.

At this time, however, evidence for chiefdoms in the upper Tigris River Valley is fragmentary. Evidence for chiefdoms typically includes a multi-tiered settlement hierarchy, increased control of goods production and distribution (e.g. a tributary system) and enhanced social differentiation, such as segregated housing for elites and non-elites, monumental architecture associated with elite houses or institutions, or separate burial practices and locations for elites and non-elites (Wright 1984). Competing chiefdoms also may engage in warfare, which contributes to shifting centers of power as the groups trade victories. As yet, the Late Chalcolithic to Early Bronze Age settlement pattern in the Upper Tigris Valley is not entirely clear; so far it consists of at best a two-tiered settlement system, with a few small sites around 3 hectares, and a couple of sites, including Kenan Tepe, approaching four, five, or six hectares (Ay 2000). It is also difficult to know how large the surveyed sites were in any given time period, although ongoing excavations at several sites should answer this question. Perhaps a regional center of greater size lies beneath the substantial Assyrian remains at Ziyaret Tepe, as indicated by the 14m of occupation levels dating to the Early Bronze found in the step trench (Roaf 2005:21).

Regarding status differentiation, goods management or warfare in the valley: the only burials at Kenan Tepe that potentially date to the Early Bronze Age contain simple pots or no grave goods.[39] Early Bronze Age stone-lined cist burials at nearby Lower Salat Tepe contain ceramic vessels, bronze pins and rock crystal beads (Şenyurt 2002:694-695) but apparently not riches in metal or weaponry,[40] as in the Birecik Dam Cemetery (Şenyurt 2002; Sertok and Ergeç 1999). Despite the lack of rich graves, there is some evidence for wealth at Kenan Tepe. This includes the beads and metal pin from trench F4 (discussed above), and a cache of over 100 beads found in a pot during the 2005 season. There are also at least five cylinder seals (but no sealings) from Late Chalcolithic or Early Bronze Age contexts, and others from later periods, possibly indicating some form of goods management. Seals and sealings were recovered from the Early Bronze Age layers of the step trench at Ziyaret tepe, but not from clear contexts (Matney et al. 2003:179). It is not clear if cylinder seals, beads and metal pins are typical possessions of all persons in the region,[41] or if they represent a significant accumulation of wealth.

[39] There is now an exception to this statement: as noted above in the discussion of Level 1, during a southward expansion of trench F1 in 2005 (dug as trench F22), we discovered a burial (F22, L13) associated with a bronze pin in Level 1.

[40] However, the excavators note that the burials were robbed "either during the period to which they belong or immediately afterwards" (Şenyurt 2002:695), and robbers likely would have removed any highly valuable items from the graves.

[41] The fact that beads, pins and pots were found in the Salat Tepe graves despite the activities of robbers, suggests that these items were common possessions and not necessarily objects of great value.

The only evidence for monumental architecture at Kenan Tepe in these periods are the large walls, built ca. 3000 BCE, uncovered in the Area A step trench and Area C soundings (Parker and Dodd 2005:75-77; Parker et al. 2006:102-104). It is not clear if both of these walls were built to retain the growing tell, provide defense, or as part of large buildings. If they were built for defense, they could indicate increasing conflict in the late fourth to early third millennium.[42] Regardless of their purpose, these walls likely required significant investment of energy for a small community to set the stone foundations and manufacture the bricks.

In sum, current data are not sufficient to argue definitively for chiefdom cycling as characteristic of the Upper Tigris River Valley, but the data from ongoing research throughout the region should contribute to a better understanding of these issues in the near future. If the picture remains one of a few small settlements with little evidence for social differentiation, control of production and distribution, or warfare, then perhaps the socio-political system in the region is best described as multiple simple chiefdoms (Wright 1984) that abandoned their settlements during periods of localized environmental or social stress, whether internal or from outside powers such as the Akkadians. Instead of conceptualizing this area as one that 'failed' to urbanize until later periods on its own, or as a 'backwater' border region without social evolutionary significance, we should begin to discuss the kinds of political organization that potentially characterized the area. Concepts like chiefdom cycling may lead us to an understanding of political trajectories that provided alternatives to urbanism and urban-centered states.

[42] A similar circuit wall is reported at Ziyaret Tepe (Roaf 2005:23), although its association with dark-rimmed orange bowls suggests that the wall is significantly later than the one at Kenan Tepe.

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Trench	*Locus*	*Type*	*Orientation: Head-Feet*	*Facing (on L/R Side)*	*Preservation Full/Partial/Poor*	*Age*	*Sex*	*Goods*
F1	1004	f (?)	N-S (?)	W (on right side)(?)	Poor	adult	X	none
F1	1008-A	e (?)	W-E	N (?)	Partial	adult	X	none
F1	1008-B	X	X	X	Poor; single ulna mixed with L1008A	child	X	none
F1	1011/21-A	e	W-E	N (?)	Partial	adult	n/a	possibly miniature vessel KT1087 and spindle whorl KT1057
F1	1011/21-B	e	W-E	S	Partial	adult	n/a	juglet KT 1118
F1	1017/22	X	X	X	Poor; only skull fragments	adult	X	none
F5	5000/5005	f	SE-NW	NE (on right side)	Full	20-35	male	bead/spindle whorl KT5029
F6	6004	X	X	X	Poor	4 +/- 1	X	none
F6	6011	X	X	X	Poor	adult	X	none
F7	7006	f	W-E	N (on left side)	Full	child	X	none
F7	7028/54	f	W-E	S (on right side)	Full	25-45	female	none
F7	7084	f	N-S	E (on left side)	Full	adult	n/a	none
F14	7	f	E-W	N (on right side)	Partial	adult	n/a	none
G6	8	f	W-E	S (on right side)	Full; very large person, massive bones.	20-40	male	none

Table 1
Area F / G Burials Summary for the 2000 - 2002 Seasons
(?) = uncertain attribution; X = cannot determine;
n/a = information not available; f = flexed; e = extended

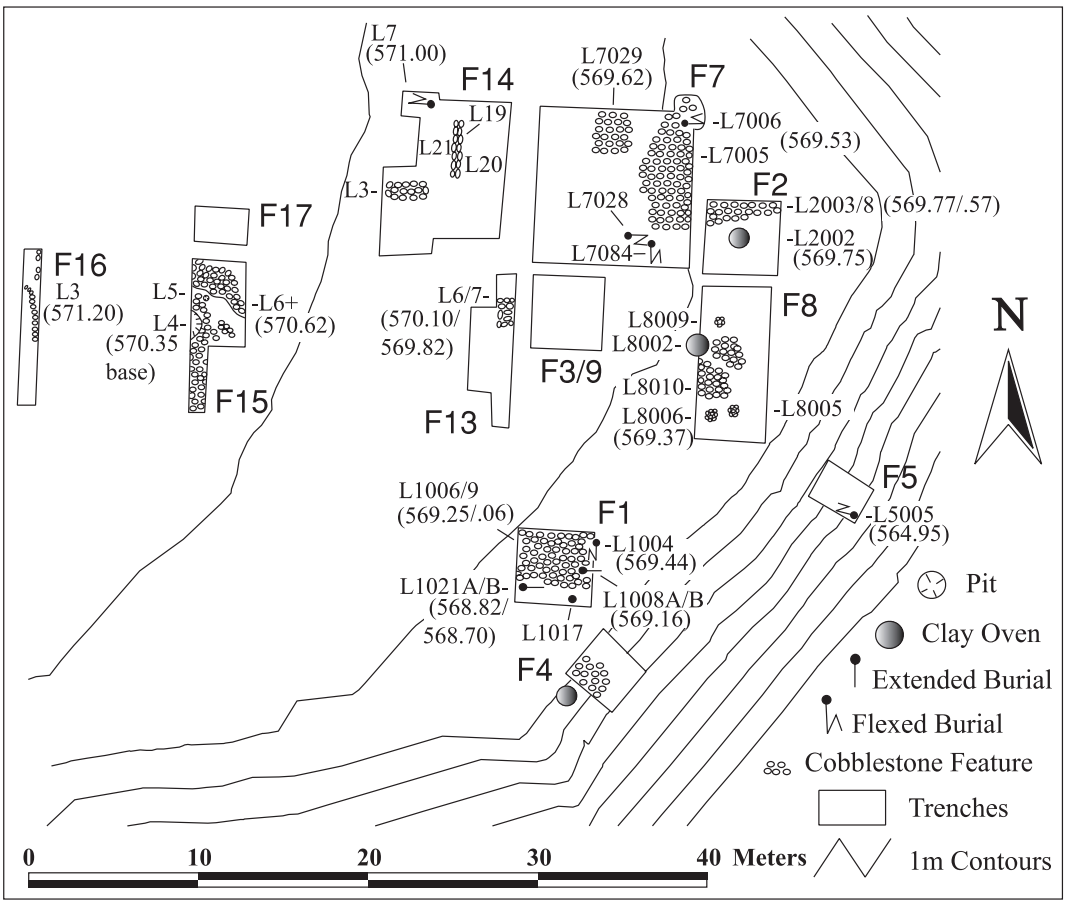


Figure 1. Area F: Levels one and two. Elevations not appearing on the plan include the following (top elevation is listed): F7, L7028: 569.60; F7, L7084: 569.46; F8, L8002: 569.58; F8, L8005: 569.20; F8, L8009: 569.26; F8, L8010: 569.44; F14, L3: 570.62; F14, L19: 570.52; F14, L20: 570.31; F14, L21: 570.38.

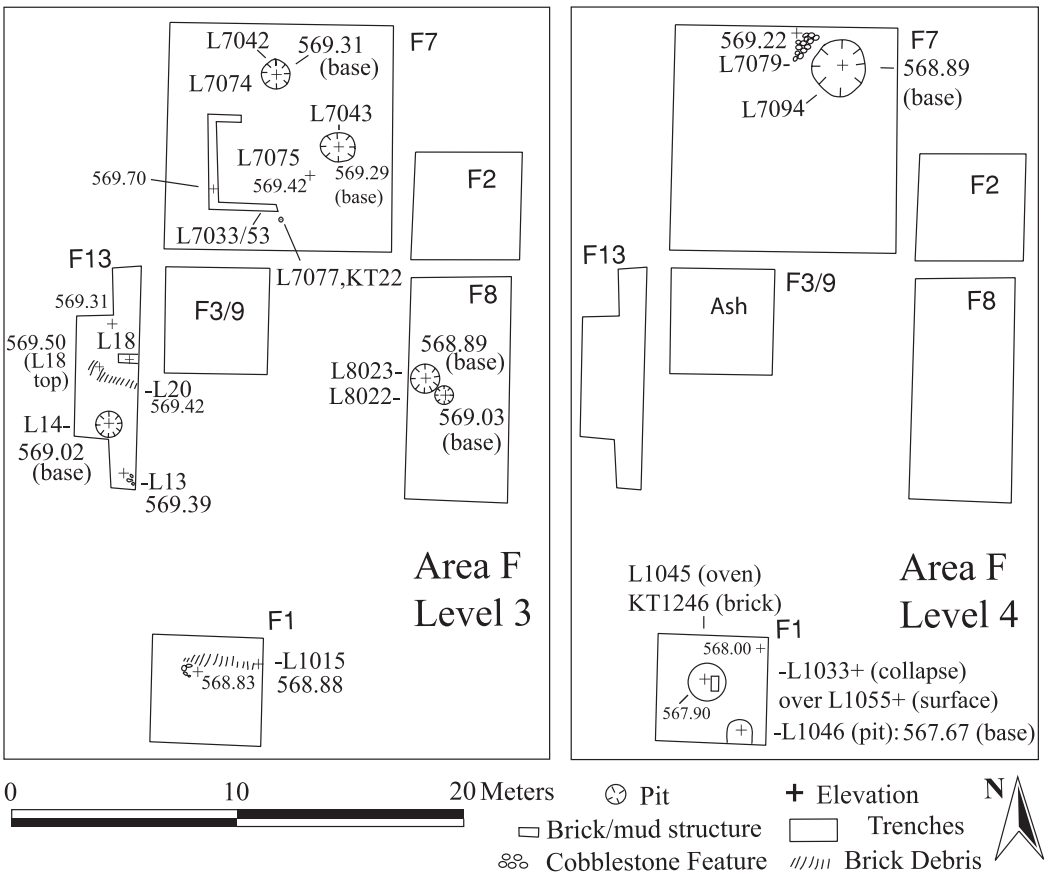


Figure 2. Area F: Levels three and four.

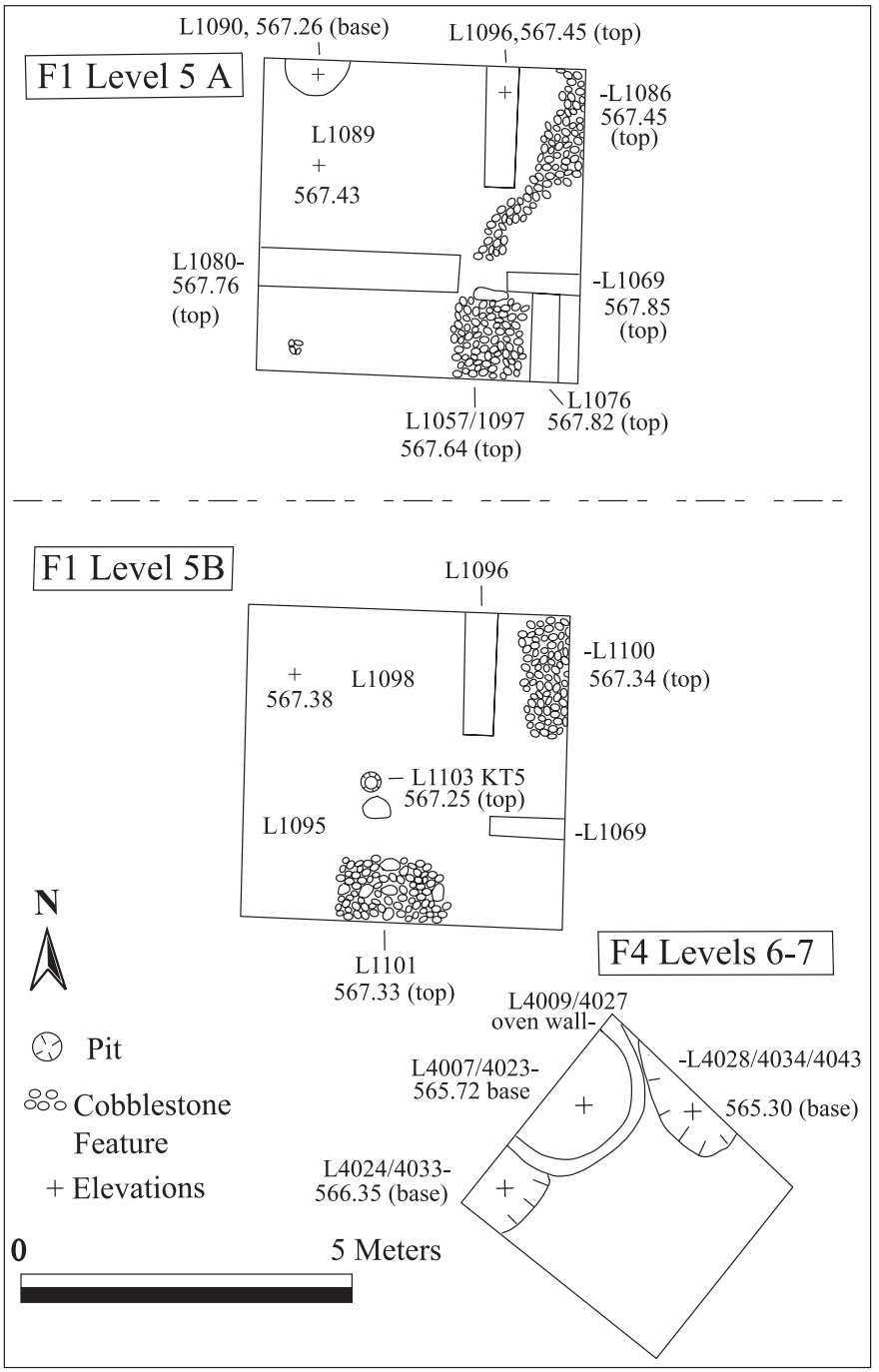


Figure 3. Area F: Levels five, six and seven.

Figure 4 Descriptions

All items from Levels two–three. B-F, I-O: Early Bronze Age ware group I. G-H, P: Early Bronze Age ware group III. A is exceptional. Colors listed are Munsell values.

A: F7.7067.10.3: 10cmd. Exterior surface: 10 YR 3/1 very dark gray. Interior surface: 10 YR 4/1 dark grey. Fabric: 10 YR 3/1 dark grey. No core. No visible temper. Exterior and interior well burnished.

B: F7.7029.7285.1: 12cmd. Exterior surface: 5Y 8/2 pale yellow. Interior surface: 5Y 8/2 pale yellow. Fabric: 5Y 8/2 pale yellow. No core. Fine grit temper (very little). Smoothed exterior.

C: F7.7074.7.1: 13.5cmd. Exterior surface: 5Y 8/2 pale yellow. Interior surface: 5Y 8/2 pale yellow. Fabric: 5Y 8/2 pale yellow. No visible temper (possibly some very fine chaff).

D: F8.8025.8177.7: 7.5cmd. Exterior surface: 5Y 8/2 pale yellow. Interior surface: 5Y 8/2 pale yellow. Fabric: 5Y 8/2 pale yellow. No visible temper.

E: F7.7077.3.1: 4cmd. Exterior surface: 5Y 8/2 pale yellow. Interior surface: greener, like Gley 1 8/1 light greenish grey, but greener. Fabric: 5Y 8/2 pale yellow. Scattered, sand-sized gray grits, probably naturally occurring within clay. Exterior scraped near base. Smoothed exterior.

F: F7.7074.29.1: Exterior surface: green – greener than Gley 1 8/10Y light greenish grey. Interior Surface and fabric: very green, no munsell equivalent. A few dark grits.

G: F7.7069.123.11: 10cmd. Exterior surface: 10 YR 3/1 very dark gray. Interior surface: 7.5YR 5/3 brown. Fabric: Exterior colors grading to thick, grey to black core. Medium chaff temper (medium amounts). Fine grit temper – tiny white specks. Some sand sized inclusions. Exterior well burnished. Upper half of interior surface well burnished. Fine chaff facing. Exterior, inner edge of rim sooted.

H: F2.2007.2039.3: 13cmd. Exterior surface: (dorsal) 7.5YR 6/4 light brown. Interior Surface: (ventral) 2.5Y 3/1 very dark gray to black (sooted). Fabric: 2.5Y 3/1 very dark gray interior half, grading to exterior half of 7.5 YR 6/4 light brown. Medium to fine chaff temper (medium amount). Interior lightly burnished.

I: F7.7069.39.3: 12cmd. Exterior surface: 5Y 8/2 pale yellow. Interior surface: 5Y 8/2 pale yellow. Fabric:2.5 Y 8/3 pale yellow. No visible temper. Smoothed.

J: F7.7074.71.1: 10cmd. Interior surface: 2.5 Y 7/3 pale yellow. Exterior surface 5Y 8/2 pale yellow. Fabric: 2.5 Y 8/3 pale yellow. Fine grit temper – white and tan bits (medium amount).

K: F8.8025.8184.6: 4cmd. Exterior and interior surface, and fabric: Gley 1 7/5Y (but greener). No visible temper.

L: F8.8005.8051.2: 8cmd. Exterior and interior surface, and fabric: 5Y 8/2 pale yellow. No visible temper. Interior and exterior wet smoothed.

M: F8.8025.8178.4: 9cmd. Exterior surface: 2.5Y 8/2 pale yellow. Interior surface and fabric: 10YR 7/4 very pale brown. No visible temper – possibly some fine chaff. Smoothed.

N: F7.7037.7281.8: 3cmd. Exterior surface: 5 Y 8/2 pale yellow slip/wash. Lower part of exterior surface 7.5 YR 7/4 pink (slip/wash?). Interior Surface and fabric:10YR 8/3 very pale brown. A few tiny very fine grit inclusions. Exterior smoothed.

O: F7.7068.101.1: approx. 8cmd. Exterior and interior surface, and fabric: deep green, no munsell equivalent. No visible temper. Smoothed interior and exterior.

P: F7.7009.7111.2: About 22cmd. Interior/bottom: black (sooted). Exterior/top 10YR 7/3 very pale brown. Fabric margins 7.5YR 6/4 light brown. Thick dark core. Medium chaff temper (medium amount). Top lumpy, mica shows, smoothed.

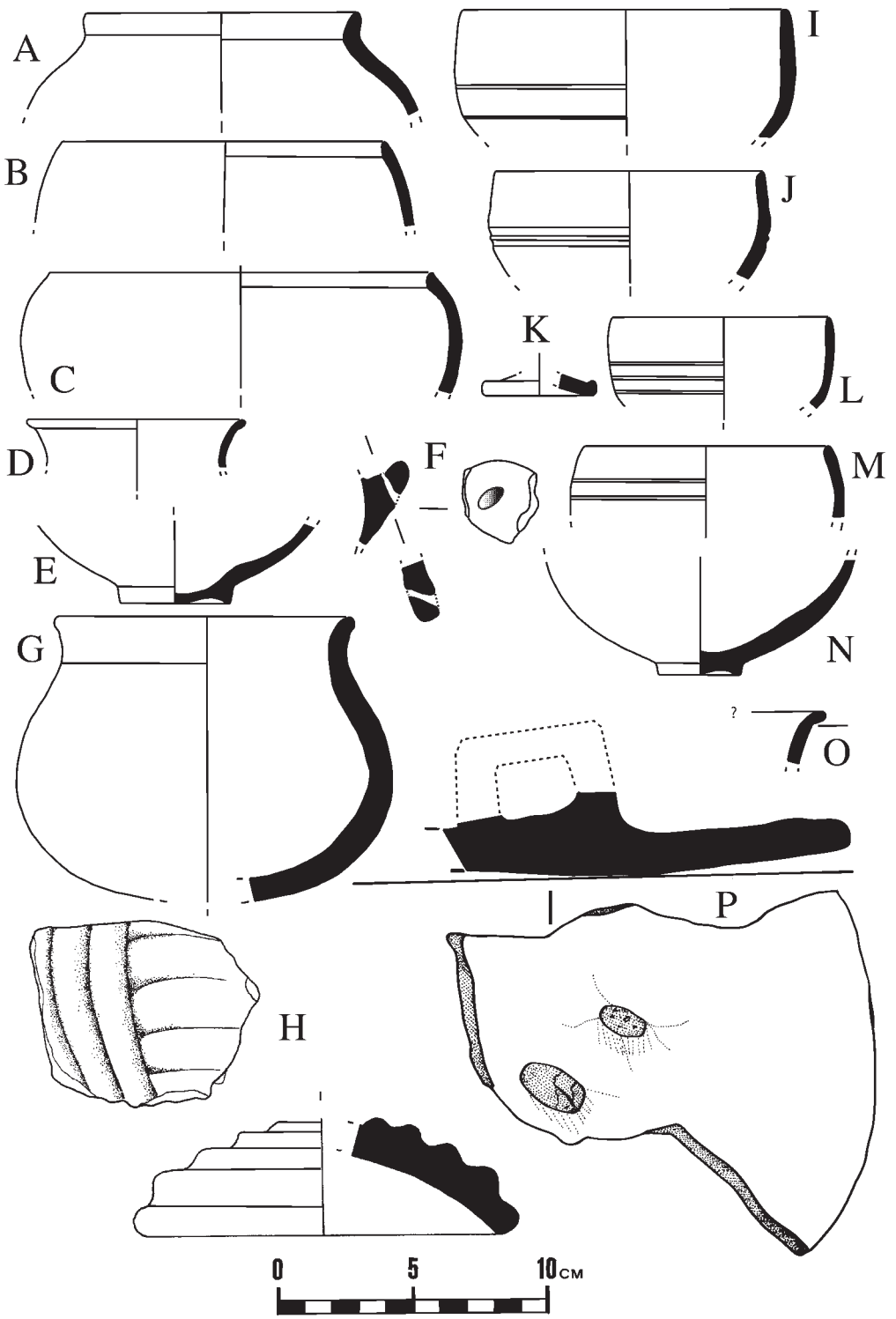


Figure 4

Figure 5 Descriptions

All items from levels two–three, except item C, which is level three or four. A-B, D-E, G-J: Early Bronze Age ware group II. F, K: Early Bronze Age ware group III. C: a special case grey ware similar to ware group II. Colors listed are Munsell values.

A: F8.8024.8163.1: 3.5cmd. Exterior surface and fabric: 10YR 6/4 light yellowish brown grading to mottled, black – grayish brown core of burned out chaff. Fine chaff temper (medium amounts of chaff). Mica (medium amounts). Fine chaff and mica on surface. Smoothed, lightly burnished in places. Pronounced wheel rills on interior.

B: F2.2007.2036.4: 17cmd. Exterior and interior surface, and fabric: 7.5YR 6/4 light brown. Grading to 7.5YR 6/2 pinkish gray core. Fine grit temper (in medium amount), mostly white specks and mica. A few 3mm inclusions. Exterior vertically burnished.

C: F9.9006.9052.2: 1.01cm thick. Exterior and interior surface: 2.5Y 5/1 gray. Fabric: 2.5Y 3/1 very dark grey. No core. Very fine grit temper – white bits (very small amount).

D: F8.8007.8103.7: 0.70cm thick. Exterior and interior surface: 7.5 YR 7/4 pink. Fabric: 7.5YR 6/6 reddish yellow (‘orange’) grading to a light, thin, 10YR 6/6 light red core. Very fine grit temper – white bits (medium amount).

E: F14.3.1: 12cmd. Exterior surface: 7.5 YR 7/4 pink. Interior surface: 7.5 YR 7/6 reddish yellow. Fabric: 7.5 YR 6/6 reddish yellow. No core. Sand temper (medium amount). including white, grey, brown bits. Exterior vertically burnished. Mica on exterior surface.

F: F7.7067.79.2: cmd – uncertain. Exterior surface: 5 YR 4/2 dark reddish grey. Interior surface: 5 YR 4/3 reddish brown. Fabric: 5 YR 4/6 yellowish red. Medium to fine chaff temper (medium amount). Some fine grit temper (white specks), large sand and 0.3mm pebble inclusions. Neck and interior face of rim burnished (horizontally). Comb-tip impressed area NOT burnished.

G: F13.19.1.1: 14cmd. Exterior and interior surface: 5Y 8/2 pale yellow. Fabric: 5 Y 8/2 pale yellow to Gley 1 8/10Y light greenish gray. No core. Medium to fine chaff (medium amount). Round impressions below bowl are up to 0.34cm deep. Exterior of bowl part is lightly smoothed and lightly burnished in some places.

H: F14.16.4.1: Exterior surface:7.5YR 6/4 light brown. Interior surface: encrusted. Fabric: 7.5YR 5/3 brown. No core. Fine grit temper (small amount) –grey bits, some mica, some larger inclusions 1.5 – 2mm, some fine chaff. Exterior burnished. Has finger tip impressions around the neck below the pedestaled vessel. Wheelmade.

I: F2.2003.2017.2: 18cmd. Exterior surface: mottled 7.5 YR 6/6 reddish yellow to 2.5 YR 5/6 red. Interior surface and fabric 5 YR 6/6 reddish yellow. Fine chaff temper. Horizontal burnishing around the rim and vertical burnishing down the body of the pot and pedestal.

J: F14.8.53.1: Base 7.39cmd. Exterior and interior surface: 5 YR 6/ 6 reddish yellow. Fabric: 2.5 YR 6/6 light red. No core in top, but there is an abrupt core in the base: 10 YR 7/4 very pale brown. Exterior and interior vertically burnished. Foot thrown and attached separately.

K: F14.16.10.1: Body sherd with round impressions / gouges made in a diagonal direction (not straight into/perpendicular to the vessel wall). Interior surface: 5 YR 5/4 reddish brown. Exterior surface: 5 YR 2.5/2 dark reddish brown. Fabric: interior 1/3: 5 YR 4/6 yellowish red. Fabric: exterior 1/3: 5 YR 2.5/2 dark reddish brown. Grading to barely perceptible, thin, grayish brown core. Fine sand temper (lots) mostly white specks, and fine chaff temper (lots). Fine chaff faced.

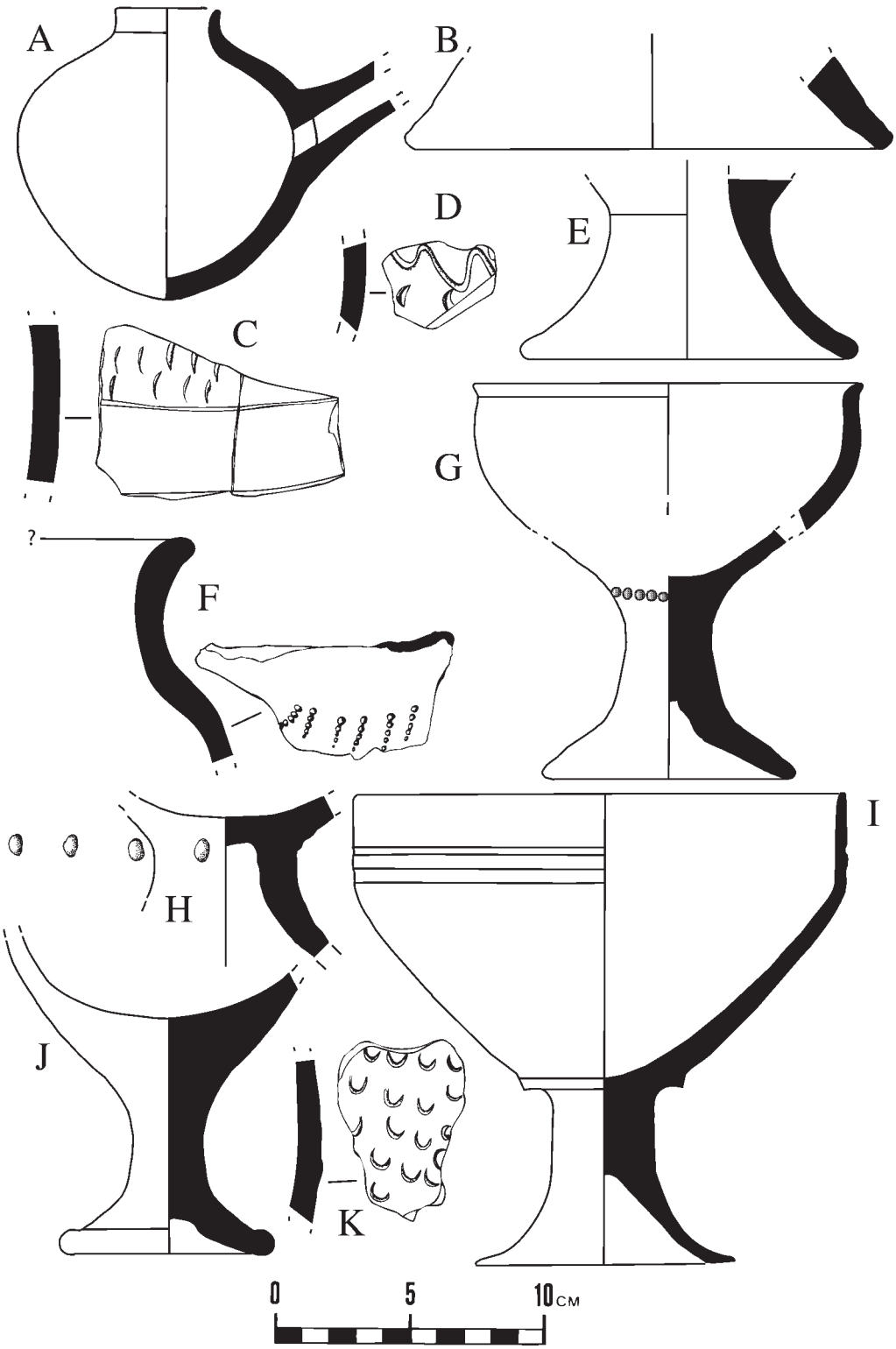


Figure 5

Figure 6 Descriptions

All items from levels two–three. All items belong to Early Bronze Age ware group II. Colors listed are Munsell values.

A: F8.8024.8160.5: 17.5.cmd. Exterior surface: 10YR 7/4 very pale brown mottled with 7.5YR 7/4 pink. Interior surface and fabric: 10 YR 7/4 very pale brown. Fine chaff temper (medium amount), some mica visible on interior surface. Exterior burnished. Interior burnished – including very prominent vertical strokes. Wheelmade.

B: F14.8.50.1: 13.5cmd. Interior and exterior surface, and fabric: 5YR 6/6 reddish yellow. Very little visible temper – some fine chaff and grit, mica.

C: F8.8024.8166.1: 13cmd. Exterior and interior surface, and fabric: 5 YR 6/6 reddish yellow. No core. Medium to fine sand temper (and some 2.5mm inclusions), sand clearly visible on exterior surface. lightly burnished on exterior between rim and zig-zag impression.

D: F7.7068.106.1: 17cmd. Exterior surface: 5 YR 6/6 reddish yellow. Interior surface: encrusted but looks like 5 YR 5/4 reddish brown. Fabric: 5 YR 5/6 yellowish red, with abrupt transition to thin, 10YR 6/4 light yellowish brown core. Fine grit temper – white bits (medium amount), and fine chaff temper (small amount). Interior burnished, exterior burnished below design, rim burnished and sooted.

E: F7.7005.7303.3: 2.90 cmd. Exterior surface: 5YR 6/6 reddish yellow. Interior surface: encrusted but probably 5YR 6/4 light reddish brown. Fabric: 5YR 7/6 reddish yellow. No core. Fine chaff temper (medium amount), mica specks in fabric and on exterior, chaff faced. Exterior burnished, Interior encrusted but probably burnished too.

F: F14.16.4.2: Exterior and interior surface: 2.5 YR 6/6 light red. Fabric: 5 YR 6/6 reddish yellow. No core. Fine grit temper (small amount to none).

G: F7.7075.8.4: Exterior and interior surface: 7.5YR 6/4 light brown. Fabric: 7.5 YR 6/6 reddish yellow. No core. Fine chaff and sand temper (medium amounts), some chaff facing. Exterior lightly burnished in places.

H: F7.7074.51.1 / F7.7069.53.5 (mends). 8cmd. Exterior surface: 7.5YR 6/4 light brown. Interior surface and fabric: 5 YR 6/6 reddish yellow. No core. Fine chaff temper (small amount) and mica. Interior, exterior vertically burnished, base also burnished.

I: F14.16.10.3: 9cmd. Exterior and interior surface, fabric: 7.5YR 6/6 reddish yellow. No core. No visible temper but a few white and grey specks. Exterior burnished.

J: F14.3.2.13: 27cmd. Exterior surface:7.5 YR 6/4 light brown (possibly a slip or wash). Interior surface: 5 YR 6/4 light reddish brown. Fabric: 7.5 YR 4/3 brown. No core. Grit temper (small amt.). a few pieces of grey grit visible in section, some mica on exterior. Interior burnished, exterior smoothed.

K: F2.2003.2014.15: 21cmd. Interior surface: 2.5YR 6/6 light red. Exterior surface: 7.5YR 7/4 pink. Fabric 7.5 YR 6/4 light brown grading to 2.5Y 6/2 light brownish gray core. Fine chaff temper (medium amount), some mica on exterior. Interior and exterior burnished.

L: F2.2003.2014.17: 3.17cmd. Exterior surface: encrusted but probably 2.5YR 5/6 red wash. Interior Surface: 2.5YR 5/6 red wash. Fabric: 5YR 6/6 reddish yellow. Fine chaff temper (medium amount), some mica in section and on interior surfaces. Interior and exterior burnished.

M: F15.7.16.7: 29cmd. Exterior surface: 7.5 YR 7/4 pink. Interior surface: 7.5YR 6/4 light reddish brown. Fabric: 2.5YR 6/6 light red grading to a 10YR 5/2 grayish brown core in some places. Medium chaff temper (medium amounts), with some grey and tan grits. Some chaff facing. Interior and exterior horizontally burnished.

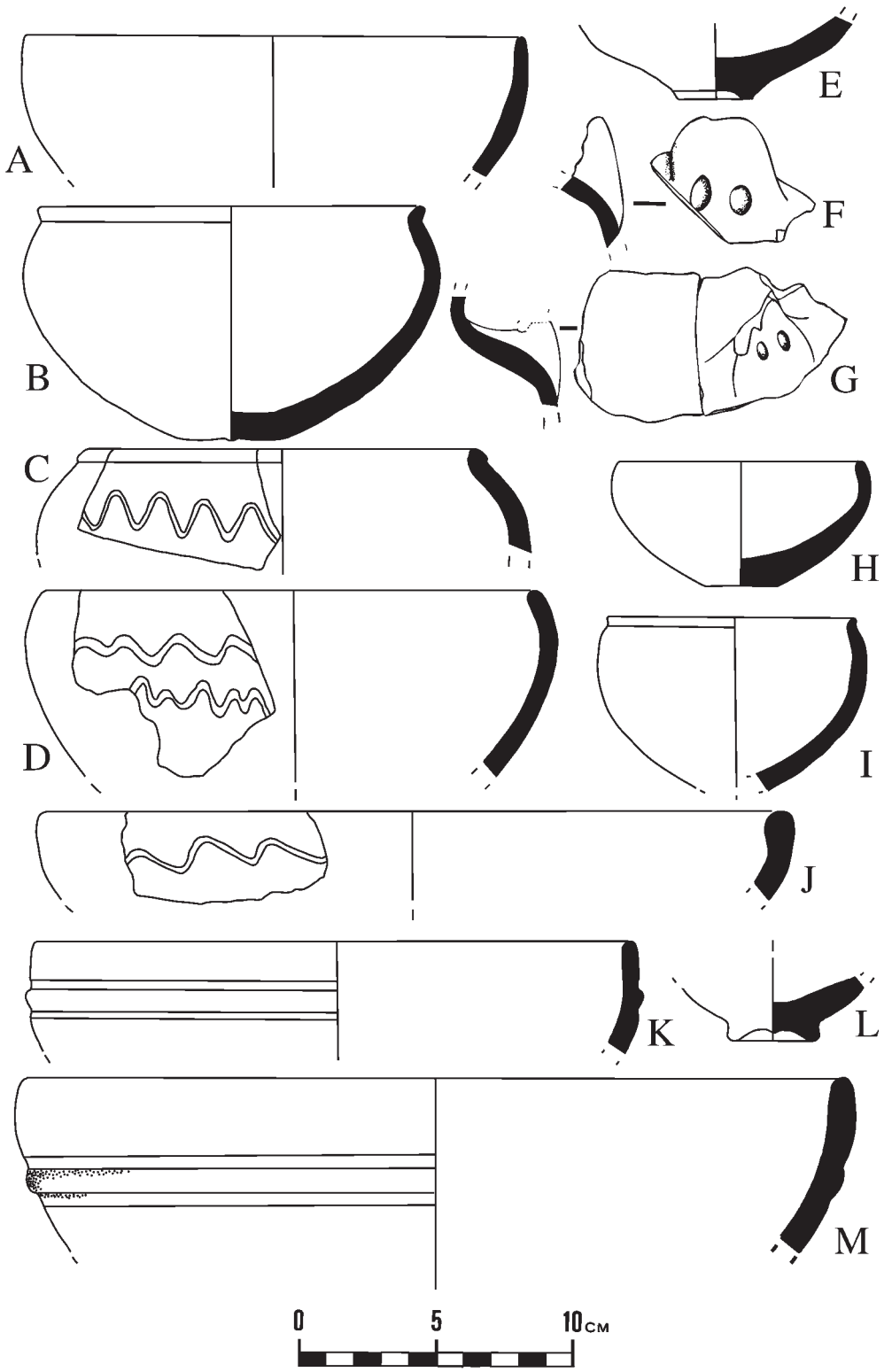


Figure 6

Figure 7 Descriptions

Items A-G, I, from levels two–three. Item H probably from level four. Items A,B,C: Transcaucasian or related. D, E, F, I: Early Bronze Age ware group III. G, H: Early Bronze Age ware group II. Colors listed are Munsell values.

A: F7.7024.7261.1: 16cmd. Exterior surface: 2.5 Y 2.5/1 black. Interior surface: 2.5 YR 4/6 red (mottled). Fabric: interior 1/3: 5 YR 4/6 yellowish red, exterior 1/3: black. Abrupt transition to a 10 YR 4/1 dark gray core. Fine grit temper (lots of sand), mostly white and grey bits with occasional 3-4mm inclusions. Mica visible on interior, exterior. Interior smoothed, exterior and rim burnished.

B: F7.7083.5.6-7: 18cmd. Exterior and interior surface: mottled reddish brown. Fabric: mottled/ uneven, ranging from reddish brown to pale brown. Medium grit and chaff temper, large quartz and lime inclusions. Lightly burnished exterior.

C: F14.8.15.1: 13cmd. Exterior and interior surface, fabric: 5YR 6/4 light reddish brown. Abrupt, thick black core. Medium grit and fine chaff temper. Exterior and parts of interior lightly burnished. Handmade; relatively thin body in places.

D: F8.8010.8131.2: 20cmd. Exterior surface: 10 YR 8/2 very pale brown. Interior surface: 7.5YR 7/2 pinkish grey. Fabric: surface colors are thin margin grading to 2.5Y 5/1 gray core. Fine chaff temper (medium amount), and fine grit temper – white specks (large amount). Fine chaff, lime bits and white grits on exterior surface. Possibly slipped or washed exterior and interior.

E: F7.7024.7250.8: 18cmd. Exterior surface and fabric: 10 YR 7/4 very pale brown. Interior surface encrusted. Grading to 2.5Y 6/3 light yellowish brown core. Fine chaff temper (medium amount), medium grit temper (medium amount), and mica. Mica on exterior surface. Exterior lightly burnished.

F: F7.7009.7111.8: 22cmd. Exterior surface: 10 YR 8/2 very pale yellow, sooted in some places. Interior surface: 10 YR 8/3 very pale brown. Fabric: exterior and interior colors at margins with abrupt change to 2.5YR 5/1 gray core. Fine chaff temper (medium amount) with some white specks. Fine chaff facing, some mica on exterior. Exterior burnished. Probably handmade.

G: F8.8010.8131.1: cmd uncertain. Exterior and interior surface, and fabric: 5YR 7/4 pink. Grading to a ‘dirty’ or grayish pink core. Fine chaff temper (medium amount) with some white grits. Exterior well burnished.

H: F9.9009.9079.1: Exterior surface: 10YR 5/2 grayish brown to 6/3 pale brown. Interior surface: 10YR5 /2 grayish brown to 6/3 pale brown. Fabric: 10 YR 4/2 dark grayish brown. No core. No visible temper, some mica on exterior. Exterior lightly vertically burnished.

I: F8.8021.8144.7: 22cmd. Exterior surface: 5 YR 5/4 reddish brown. Interior surface: 5 YR 4/4 reddish brown. Fabric: surface color grading to 2.5 Y 5/4 light olive brown core. Sand temper (medium amount). Mica on surface. Exterior well smoothed and burnished.

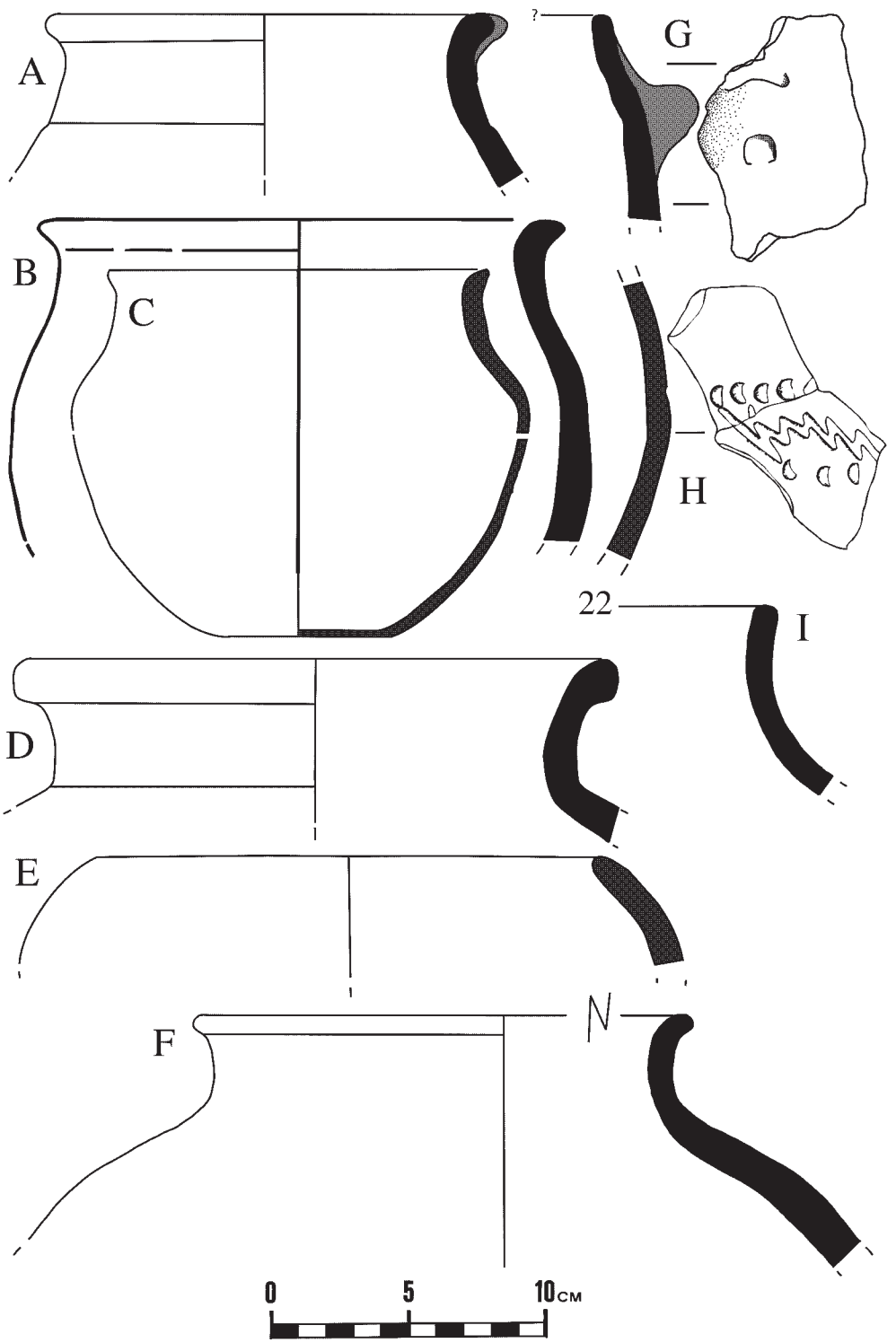


Figure 7

Figure 8 Descriptions

All vessels from trench F7 locus 7094 (level four). A, D, E, H, K: Early Bronze Age ware group III. B, C, F, G, L, M, N, O: Early Bronze Age ware group II. I,J: Early Bronze Age ware group I. Colors listed are Munsell values.

A: F7.7094.35.22: 20cmd. Exterior surface: 5 YR 6/6 reddish yellow. Interior surface: 7.5 YR 6/6 reddish yellow. Fabric: surface colors as thin margins with abrupt transition to thick black core. Medium chaff and grit temper (medium amounts). Grits are mostly white specks. Medium chaff facing, mica and grit on exterior surface. Interior, rim, and neck well burnished horizontally. Shoulder (with fingernail impressions) smoothed before impressions (but not burnished).

B: F7.7094.5.14: probably less than 10cmd. Exterior surface:7.5YR 7/4 pink. Interior surface: 2.5YR 6/6 light red (may be a slip or wash). Fabric: 2.5YR 7/6 light red. No visible temper but contains some fine chaff and mica on interior and exterior faces. Exterior and exterior burnished.

C: F7.7094.5.11: cmd uncertain. Exterior and interior surface, fabric: 5Y 8/2 pale yellow. Fine sand temper (medium amount) with some fine chaff in the form of grey, tan, and white bits.

D: F7.7094.34.8-17: 21cmd. Exterior and interior surface, fabric: 7.5YR 6/4 light brown. Grading to dark grey core. Medium grit/sand and chaff temper (medium amounts) with large pebble inclusions (up to 0.75cm). Exterior partially chaff faced and variably sooted. Rim sooted. Exterior neck, rim, and inside edge of rim burnished. Shoulder decoated with vertical rope impression (from a string-wrapped paddle?) and fingernail impressions. This area was smoothed before the decoration was applied. Lumpy, large inclusions, variable – handmade.

E: F7.7094.5.18: 20cmd. Exterior and interior surface, fabric: 10YR 5/3 brown. Abrupt transition to thick black core. Medium chaff temper (medium amount). Chaff faced.

F: F7.7094.26.13: 13cmd. Interior Surface: encrusted. Exterior Surface: 5 YR 6/4 light reddish brown. Fabric: 7.5 YR 6/4 light brown. Fine chaff temper (small amount). Interior and exterior burnished.

G: F7.7094.34.7: 4.5cmd. Exterior surface: 7.5YR 6/4 light brown. Interior surface: 7.5YR 6/3 light brown. Fabric: Thin 7.5YR 6/4 light brown margins with thick black core (abrupt). Fine Chaff Temper (lots of chaff) with some fine white grits. Fine to medium chaff faced. Lumpy, handmade.

H: F7.7094.37.1: 8cmd. Exterior and interior surface, fabric: 10 YR 7/4 very pale brown, somewhat mottled. Grading to black core. Fine chaff temper (lots of chaff) with some white grits and 0.35cm pebble inclusions. Exterior, interior fine chaff faced, with mica on exterior. Exterior lightly smoothed. Possibly wheelmade or finished (some chaff alignment).

I: F7.7094.41.4: 12cmd. Exterior and interior surface: 2.5 Y 8/2 pale yellow. Fabric: 2.5 Y 7/4 pale yellow. No visible temper.

J: F7.7094.19.5: Exterior and interior surface: Gley 1 8/10Y light greenish grey. Fabric: 5Y 8/2 pale yellow. Fine grit temper – grey specks (medium amount), and some fine chaff temper. Interior and exterior rough, not smoothed, grit visible on surface, some chaff too.

K: F7.7094.38.6: Exterior surface: 5 YR 5/4 reddish brown. Interior surface: 5 YR 3/2 dark reddish brown. Fabric: 5 YR 4/3 reddish brown exterior half, 5 YR 2.5/2 dark reddish brown interior half. Fine sand temper (medium amount). Smoothed, then combed.

L: F7.7094.6.4: Exterior surface: 7.5YR 7/4 pink. Interior surface: encrusted. Fabric: 5 YR 6/6 reddish yellow. No core. Medium chaff and fine grit (white grits and mica) temper (medium amount). Mica on exterior surface.

M: F7.7094.5.1: 15cmd. Exterior and interior surface, fabric: 7.5 YR 6.6 reddish yellow. Fine chaff temper (medium amount). Interior and exterior burnished.

N: F7.7094.6.9: 14cmd. Interior surface and fabric: 5YR 6/6 reddish yellow. Exterior Surface: 7.5 YR 7/4 pink. No core. Fine chaff temper (small amount), with some mica on exterior. Interior and exterior burnished (interior vertically).

O: F7.7094.35.19: 16cmd. Exterior and interior surface, fabric: 2.5YR 6/6-6/8 light red (mottled). Fine grit temper – white and grey bits (medium amount). Exterior vertically burnished.

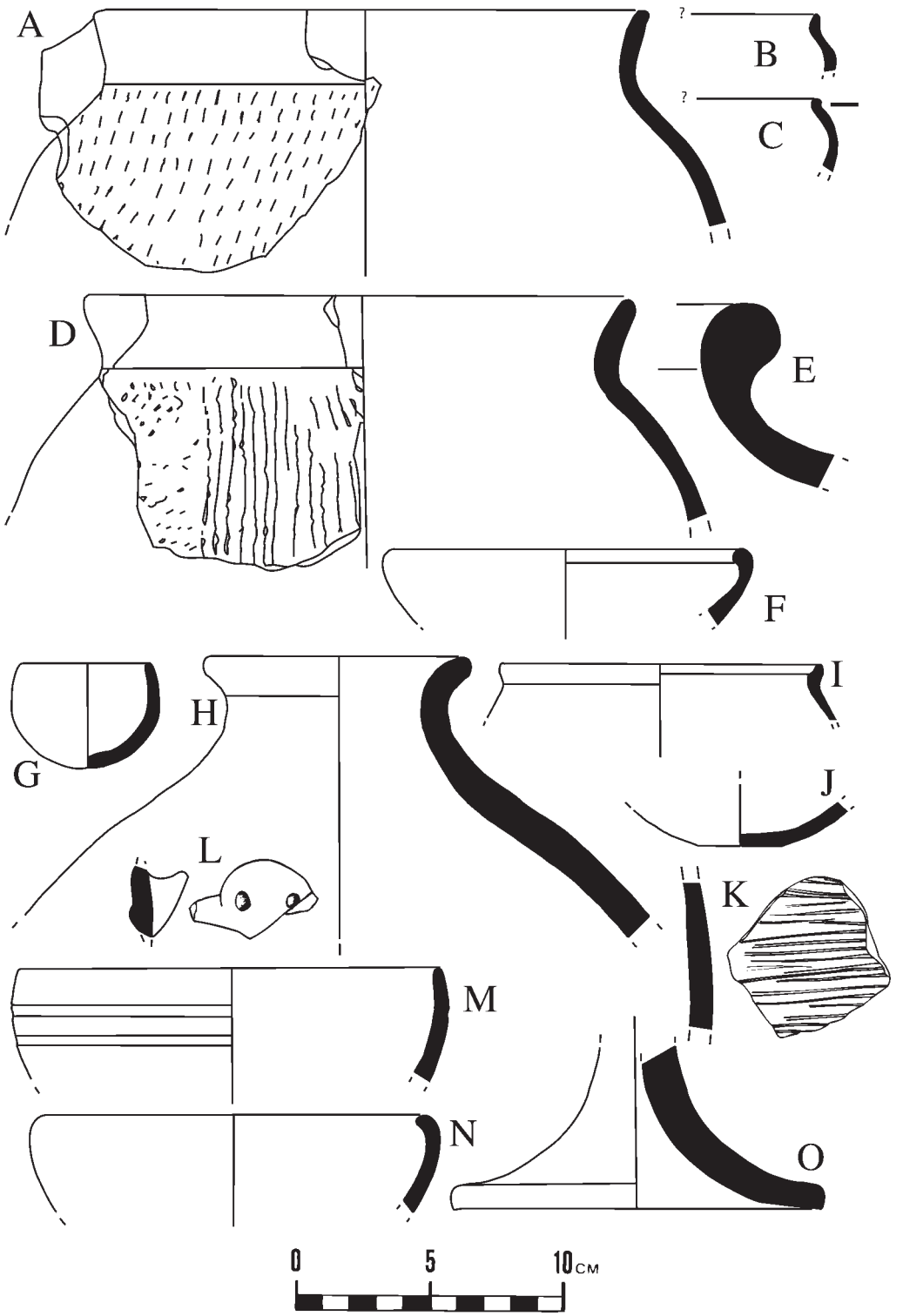


Figure 8

Figure 9 Descriptions

Item F: level four. Items A-D, G, J-M: level 5A–5B. Items E, H, I, N-Q: level six. Late Chalcolithic and transitional forms from F1, F4. Items A, H, I, K, L, M, N, P are Late Chalcolithic and transitional ware group I. Items B, C, D, E, F, G, J, O, Q are Late Chalcolithic and transitional ware group II. Colors listed are Munsell values.

A: F1.1098.9.1: 21cmd. Exterior and interior surface: 10YR 7/3 very pale brown. Fabric: 7.5YR 6/4 light brown margins grading to a 2.5YR 6/3 light yellowish brown core. Very fine grit / no visible temper. Mica visible on interior, exterior surfaces. Wheelmade (striations exterior.)

B: F1.1086.3.2: 17cmd. Exterior and interior surface: 10YR 5/4 to 6/4 yellowish to light yellowish brown. Fabric: 10 YR 4/3 brown grading to thin 2.5Y 6/3 light yellowish brown core. Fine chaff temper in small amounts. Exterior and interior lightly burnished. Probably wheelmade.

C: F1.1085.8.1:16cmd. Exterior and interior surface, fabric: 7.5YR 6/6 reddish yellow. Interior surface: 7.5YR 6/6 reddish yellow. Grading to a slightly lighter core. Fine chaff temper (medium amount chaff), and chaff faced.

D: F1.1103.4.4: 17cmd. Exterior surface: 7.5YR 7/3 pink (slip or wash). Interior Surface: 7.5YR 7/4 pink mottled to 10YR 5/3 brown. Fabric: 10 YR 5/3 brown. No core. Fine chaff temper (small amount). Wheelmade (striations, rills interior).

E: F4.4020.4018.8: Base 5.5cmd. String cut base. Exterior and interior surface, fabric: 7.5YR 6/4 light brown. Grading to brown and black burned chaff at core. Fine chaff temper, with mica on surface and in fabric. Lightly burnished exterior.

F: F1.1042.1213.7: 4.08cmd. Exterior surface: 7.5YR 7/4 pink. Interior surface: 10 YR 8/4 very pale brown. Fabric: 7.5 YR 6/6 reddish yellow. Medium to fine chaff in small amount. No core. Chaff facing exterior. Interior and exterior and base well burnished.

G: F1.1098.9.2: 12cmd. Exterior surface: 10 YR 5/3 brown. Interior surface: 5YR 5/3 reddish brown. Fabric: exterior or interior color with abrupt transition to black core. Fine chaff temper (small amount), and sand temper (large amount). Exterior and rim burnished, interior lightly burnished. Some sooting on exterior and on rim.

H: F4.4034.4195.1: 7.5 cmd. Exterior surface and fabric: 7.5 YR 6/4 light brown. Interior surface: 5YR 6/4 light reddish brown (pinkish wash?). Grading to 5YR 5/6 yellowish red core. Fine sand temper (medium amount). Wheelmade (striations interior).

I: F4.4023.4171.1/ 4150.2 / 4120.9 / 4170.1 (mends): 18cmd. Exterior and interior surface, fabric: 7.5YR 7/4 pink. Abrupt, thick 2.5YR 6/8 light red core. Tiny white grits (medium amount) and fine chaff (very little) temper. Fast wheel striations.

J: F1.1089.2.5: 8cmd? Exterior surface: 2.5Y 7/4 pale yellow (possibly a wash). Interior surface: 10.5YR 7/4 very pale brown. Fabric: 10YR 6/4 light yellowish brown grading to 7.5YR 6/6 reddish yellow core. Fine chaff and grit (white and grey grits) temper (medium amount). Some fine chaff facing interior and exterior. Exterior lightly burnished. Wheelmade (striations interior).

K: F1.1085.5.8: 10cmd? Exterior and interior surface: 7.5YR 7/4 pink. Fabric: 7.5 YR 6/6 reddish yellow. Very fine grit temper (white specks) in small amounts. Mica on interior and exterior surface. Interior and exterior lightly burnished and smoothed. Wheelmade (striations interior and exterior).

L: F1.1103.4.3: 8cmd? Exterior surface: 5 YR 6/4 light reddish brown. Interior surface and fabric: 5 YR 6/6 reddish yellow. No core. Fine chaff temper (very small amount). Mica on interior, exterior, paste. Probably wheelmade.

M: F1.1075.17.2: 10cmd. Exterior surface: 7.5YR 5/4 brown mottled with 10 YR 6/3 pale brown. Interior surface: 10YR 5/4 yellowish brown. Fabric: 7.5YR 4/4 brown. No core. No visible temper. Mica on interior and exterior surface. Exterior lightly burnished. Interior diagonally burnished.

N: F4.4007.4077.1: 6.5cmd. Exterior and interior surface, fabric: 7.5 YR 6/4 light brown. No core. No visible temper but lots of mica on exterior surface and some white grits too. Wheelmade (interior, exterior striations).

O: F4.4024.4140.5: 9cmd. Exterior surface: 10 YR 7/4 very pale brown. Interior surface: 10 YR 6/6 light brownish yellow. Fabric: 10 YR 7/4 very pale brown grading to thick, black core. Fine chaff temper (lots of chaff). Some mica in fabric and on interior, exterior surface. Some fine chaff facing on interior, exterior. Wheelmade (striations interior).

P: F4.4044.4310.1: 13cmd. Exterior surface: 5YR 6/6 reddish yellow. Interior surface: 10 YR 6/4 light yellowish brown. Fabric: 7.5YR 5/4 brown. No core. Very fine sand temper in medium amounts. Exterior surface has lots of white lime bits that have spalled. Wheelmade (striations interior and exterior).

Q: F4.4034.4248.1: Reserved slip body sherd. Exterior surface: 2.5YR 6/4 light reddish brown. Slip: 2.5Y 8/2 pale brown. Interior surface: 10YR 6/2 light brownish gray. Abrupt thick black core. Fine chaff temper (medium amt. chaff) with white grits. Some chaff facing. Burnished interior. Wheel striations.

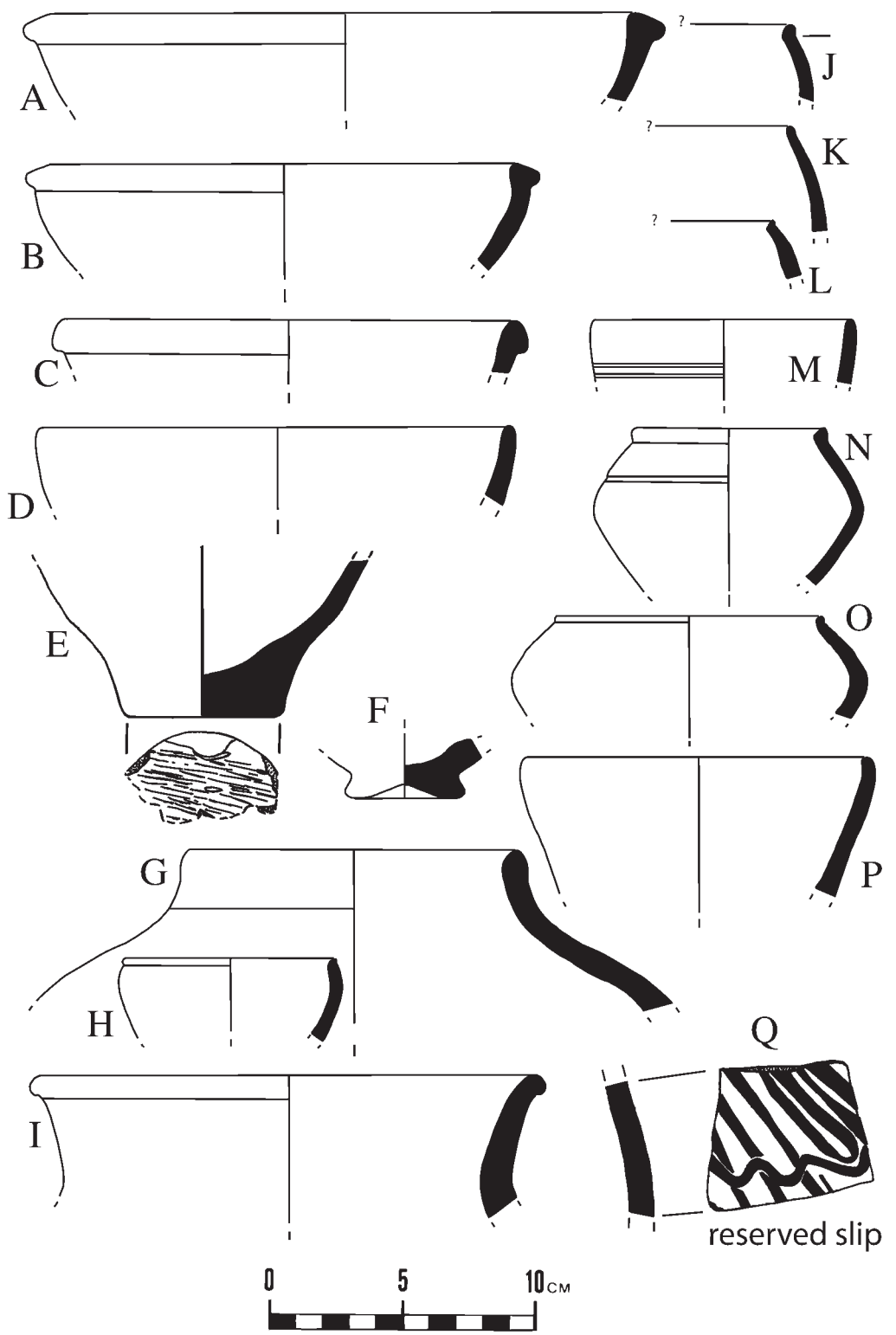


Figure 9

Figure 10 Descriptions

Items A-G, I: level six. Item H: not assigned to a level. Late Chalcolithic forms from F4 (one example from G6). Items B, D, F, G, H: Late Chalcolithic and transitional ware group I. Items A, C, E, I: Late Chalcolithic and transitional ware group II. Colors listed are Munsell values.

A: F4.4021.4022.3: 24cmd. Exterior surface 10 YR 7/4 pink. Interior surface 7.5 YR 7/4. Fabric 10 YR 6/4 light yellowish brown. Grading to 10 YR 4/2 dark grayish brown core. Medium chaff temper. Interior, exterior and rim burnished.

B: F4.4023.4150.4: 42cmd. Exterior surface 2.5 YR 5/6 red. Interior surface 7.5 YR 6/6 to 5 YR 6/6 reddish yellow. Fabric 7.5 YR 5/5 reddish yellow. Grading to 7.5 YR 6/4 light brown core. Little fine chaff, much fine black and white grit. Some chaff facing.

C: F4.4026.4145.1: 34cmd. Exterior surface 7.5 YR 6/4 light brown. Interior surface 10 YR 6/3 pale brown. Fabric 7.5 YR 6/6 reddish yellow. Abrupt very dark gray core. Much medium chaff and some fine grit. Chaff facing. Interior, exterior and rim burnished.

D: F4.4028.4138.1: 21cmd. Exterior surface 7.5 YR 6/4 light brown. Interior surface 2.5 YR 6/3 light reddish brown. Fabric 5 YR 5/6. Grading to 5 YR 4/1 dark reddish brown core. Very little temper: a little fine chaff and grit temper. Some chaff facing. Interior, exterior and rim burnished. Wheelmade (wheel striations on interior).

E: F4.4025.4118.1: Cmd? Exterior surface and fabric 5 YR 6/8 reddish yellow. Interior surface 5 YR 6/6 reddish yellow. Grading to 10 YR 7/3 very pale brown core. Medium chaff temper. Two horizontal incised lines below rim, exterior.

F: F4.4027.4319.1: 16cmd. Exterior and interior surface 5 YR 6/6 reddish yellow. Fabric F YR 5/6 yellowish red. Abrupt transition to thin, tan core. Some medium chaff, much very fine chaff and fine grit (sand?) and mica. Interior and exterior vertically burnished.

G: F4.4023.4233.3: Exterior surface 5 YR 5/8 yellowish red. Interior surface 5 YR 6/6 reddish yellow. Fabric 5YR 5/6 yellowish red. Grading to 5 YR 5/8 yellowish red core. Fine chaff with fine sand temper. Incised design; traces of red slip.

H: G6.8.1.5: Cmd uncertain. possibly 14cmd?; Possibly a ‘lip spout’ or pouring rim. Exterior surface: 5Y 8/2 pale yellow. Interior surface: 2.5Y 7/4 pale yellow (wash). Fabric: 7.5YR 6/6 reddish yellow. No core. Fine chaff temper (small amount). Some chaff on exterior face. Exterior well burnished.

I: F4.4044.4317.1: 27cmd. Exterior surface 5YR 7/4 pink. Interior surface 7.5 YR 7/4 brown. Fabric 5YR 6/8 reddish yellow, with abrupt transition to thick, 5 YR 4/1 gray core. Fine grit and chaff temper. Interior, exterior and rim burnished.

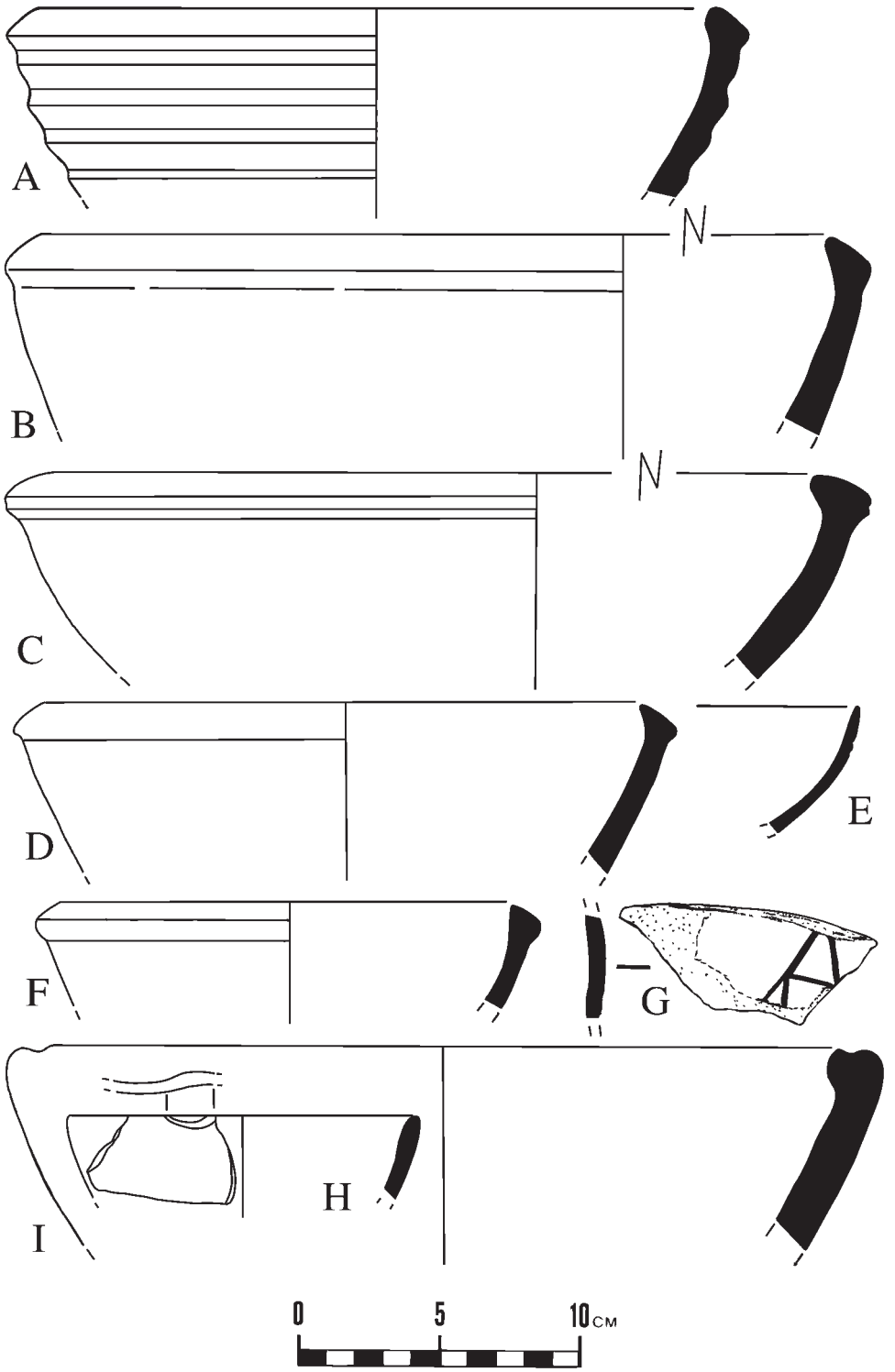


Figure 10

Figure 11 Descriptions

Items A-F, H: not assigned to a level, but probably date to level six-seven or earlier. Items G, I, J: level six. Late Chalcolithic forms from trenches F4, F6. Items C, G, I: Late Chalcolithic and transitional ware I. Items A, B, D-F, H: Late Chalcolithic and transitional ware II. Colors listed are Munsell values.

A: F6.6002.6008.1: 56cmd. Exterior surface 5YR 7/4 pink. Interior surface 7.5 YR 7/4 brown. Fabric 5YR 6/8 reddish yellow, with abrupt transition to thick, 5 YR 4/1 gray core. Fine grit and medium chaff temper. Fine white grits and much fine to medium chaff impressions on surface. Interior, exterior and rim lightly burnished.

B: F6.6009.6031.1: 24cmd. Exterior surface 7.5 YR 2.5/1 brown. Interior surface 7.5 YR 5/6 strong brown. Abrupt, black core. Fine grit (white bits) and chaff temper.

C: F6.6013.6042.5: 16cmd. Exterior and interior surface 5Y 8/2 pale yellow. Fabric 5 Y 8/3 pale yellow. Very fine grit temper.

D: F6.6010.6037.1: 27cmd. Exterior and interior surface, fabric: pale brown. Medium to large chaff temper.

E: F6.6015.6045.8: 22cmd. Exterior surface 7.5 YR 7/6 reddish yellow. Interior surface 7.5 YR 7/4 pink. Fabric 7.5 YR 6/8 reddish yellow. Abrupt 7.5 YR 4/1 dark gray core. Fine chaff temper.

F: F6.6014/5.6045.1: 21cmd. Exterior surface 5 YR 5/3 reddish brown. Interior surface 7.5 YR 6/6 reddish yellow. Fabric 7.5 YR 4/6 strong brown. Abrupt black core. Medium chaff and medium to fine grit (white grits and mica) temper with some gravel. Chaff faced. Rim slightly sooted, self-slipped. Interior and exterior burnished. Handmade.

G: F4.4033.4210.2: 10cmd. Exterior and interior surface 7.5 YR 6/4 light brown. Fine grit temper.

H: F6.6015.6045.3: Cmd? Exterior surface 7.5 YR 6/4 light brown. Interior surface 7.5 YR 4/3 brown. Abrupt, thick 7.5 YR 2.5/1 black core. Fine grit (white bits) and chaff temper.

I: F4.4025.4179.1: 11cmd. Reddish brown fabric, abrupt transition to pale brown core. Reddish-brown paint over cream slip. Fine grit temper.

J: F4.4020.4021.3: 30cmd. Exterior surface 7.5 YR 7/3 pink. Interior surface 7.5 YR 7/4 pink. Fabric 7.5 YR 6/3 light brown. Grading to 10 YR 4/1 dark gray core. Medium chaff temper.

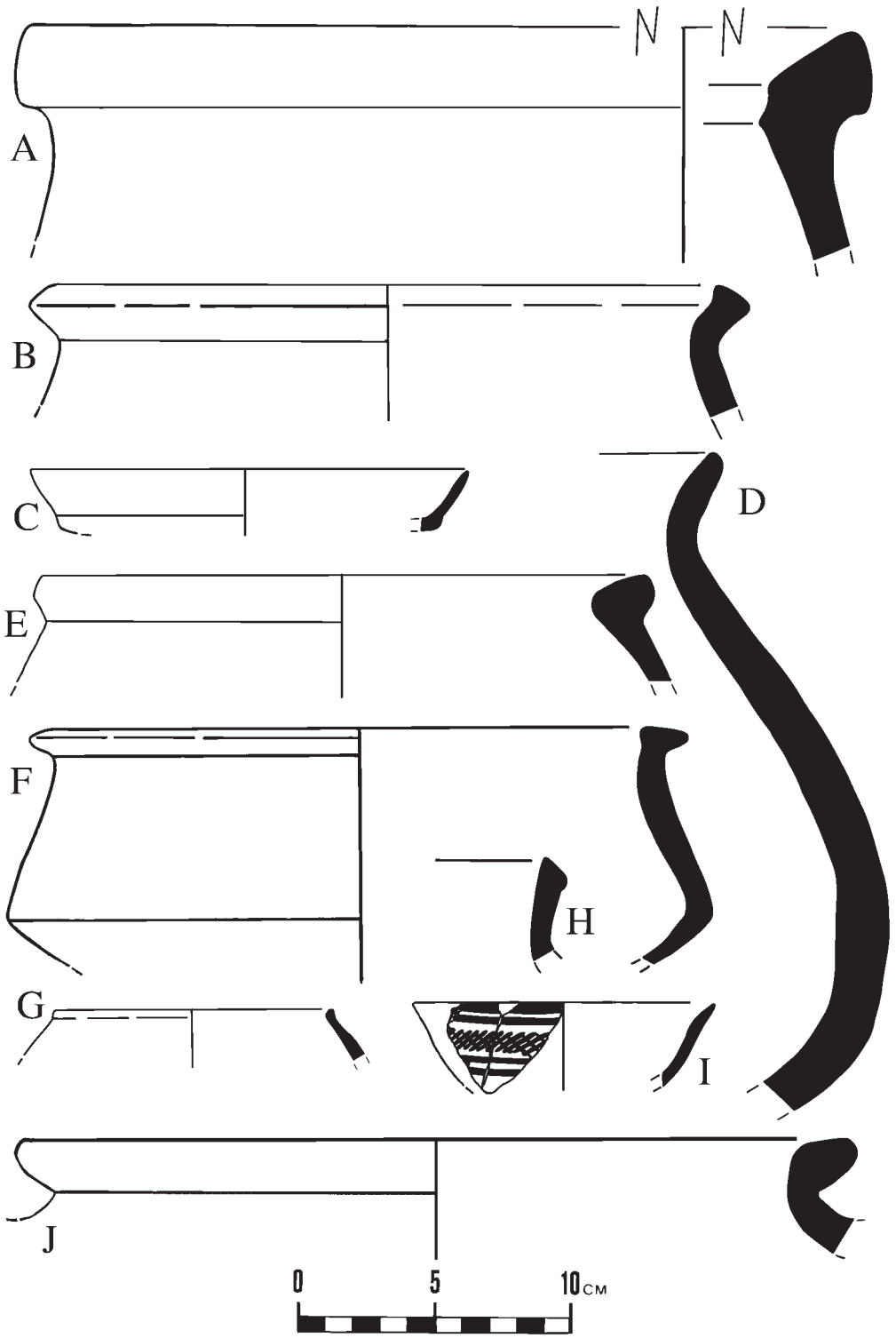


Figure 11

Figure 12 Descriptions

Items A-I: not assigned to a level, but probably belong to levels six-seven or earlier. Late Chalcolithic forms from F6. All items Late Chalcolithic ware group II. Colors listed are Munsell values.

A: F6.6014/5.6045.6: 40cmd. Exterior surface 7.5 YR 6/4 light brown. Interior surface 7.5 YR 4/3 brown. Fabric 7.5 YR 5/6 strong brown. Abrupt transition to 7.5 YR 4/1 dark gray core. Fine to medium chaff temper, white grits, mica. Interior and exterior burnished.

B: F6.6002.6008.2: 34cmd. Exterior surface 5 YR 7/5 pink to reddish yellow. Interior surface and fabric 5 YR 6/4 light reddish brown. Some medium chaff, lots of fine grit temper. Interior and exterior lightly burnished.

C: F6.6012.6040.2: 27cmd. Exterior surface 10YR 6/4 light yellowish brown. Interior surface 10 YR 5/4 yellowish brown. Fabric 10 YR 4/4 dark yellowish brown. Abrupt transition to 10 YR 4/1 dark gray core. Much medium and fine chaff, some grit. Chaff faced. Interior, exterior and rim burnished horizontally.

D: F6.6012.6040.1: 32cmd. Exterior surface 10 YR 7/3 very pale brown. Interior surface 5 YR 7/6 reddish yellow. Fabric 5 YR 6/6 reddish yellow. Grading to 10 YR 4/1 dark gray core. Lots of fine to medium chaff, some white grits. Chaff faced. Interior, exterior and rim burnished.

E: F6.6011.6033.1: 24cmd. Exterior surface 10 YR 5/2 grayish brown. Interior surface 7.5 YR 6/2 pinkish gray. Fabric 7.5 YR 5/4 brown. Grading to 10 YR 5/3 brown core. Much chaff and some fine grit temper (white bits, mica). Wheelmade (striations on interior surface)

F: F6.6014/15.6045.3: 22cmd. Exterior surface 10 YR 7/3 very pale brown. Interior surface 5 YR 7/6 reddish yellow. Fabric 5 YR 6/6 reddish yellow. Grading to 10 YR 4/1 dark gray core. Lots of fine to medium chaff, some white grits. Chaff faced. Interior, exterior and rim burnished.

G: F6.6014/5.6045.9: 21cmd. Exterior surface 10 YR 7/3 very pale brown. Interior surface 5 YR 7/6 reddish yellow. Fabric 5 YR 6/6 reddish yellow. Grading to 10 YR 4/1 dark gray core. Lots of fine to medium chaff, some white grits. Chaff faced. Interior, exterior and rim burnished.

H: F6.6013.6042.2: Cmd? Exterior surface 5 YR 6/6 light reddish brown. Interior surface 5 YR 6/4 reddish yellow. Fabric 7.5 YR 8/6 reddish yellow. Abrupt transition to 2.4 Y 3/1 very dark gray core. Large chaff temper, chaff faced.

I: F6.6013.6042.3: Cmd? Exterior surface 5 YR 6/4 reddish yellow. Interior surface 5 YR 6/6 light reddish brown. Fabric 7.5 YR 6/6 reddish yellow. Abrupt transition to 10 YR 3/1 very dark gray core. Large chaff temper. Interior, exterior and rim burnished.

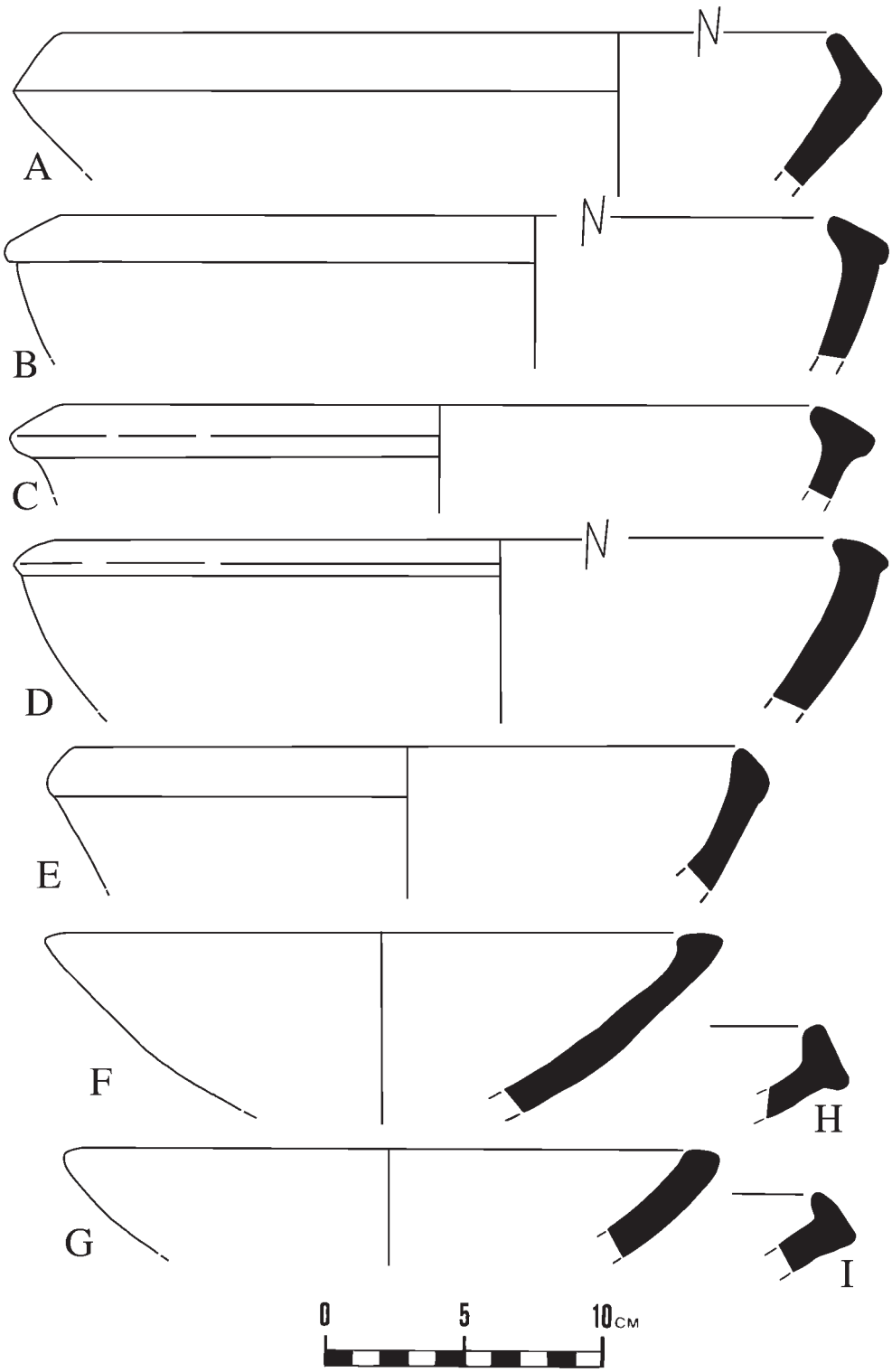
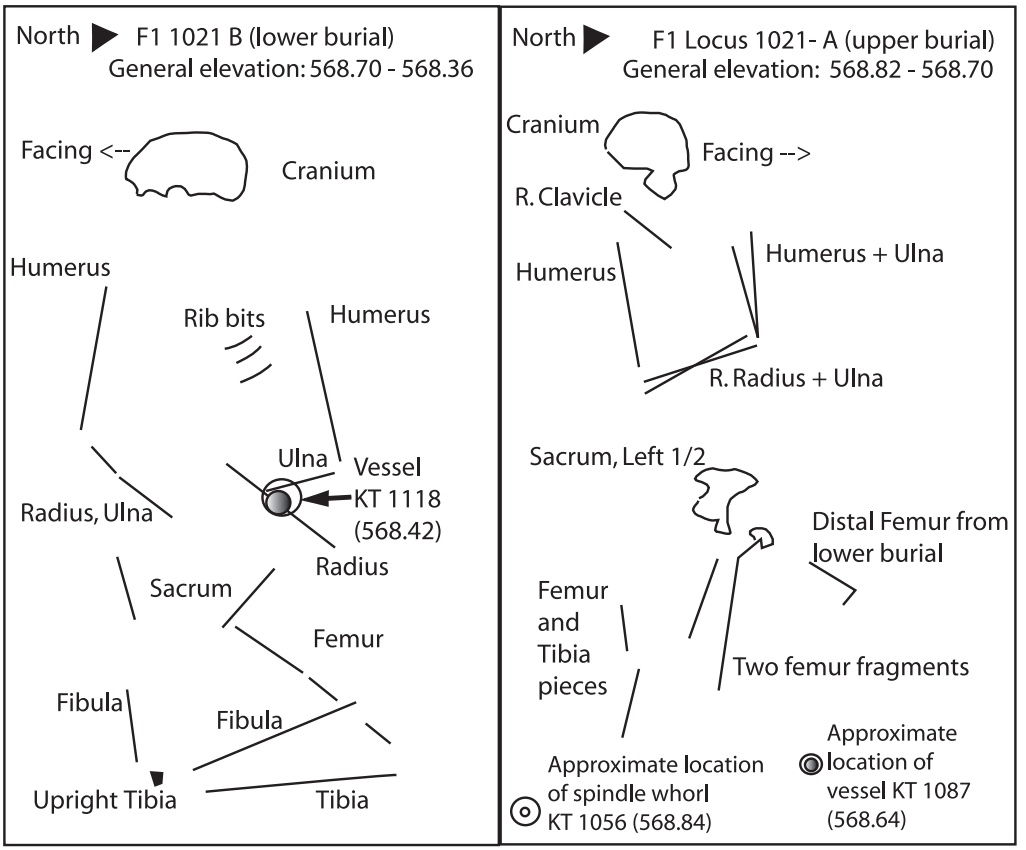


Figure 12



Schematic plan of burials L1011/21A and L1011/21B, showing orientation, position, and location of associated artifacts.