SURFACE COLLECTION AND OFFSITE STUDIES AT TELL HAMOUKAR, 1999

By JASON A. UR

The new program of excavations of the Syrian-American Expedition to Tell Hamoukar, Hassake province, northeastern Syria, began with an initial season in Fall 1999. The project includes among its goals the study of the expansion and contraction of settlement on the site, as well as the relationship of the urbanization process on Hamoukar to regional settlement trends. Our initial step was to document the chronology and scale of this process through a controlled surface collection on Tell Hamoukar itself. In addition, we made some initial attempts at documenting the archaeological landscape near the site by recording traces of ancient roads (hollow ways) and making controlled collection of field scatters.¹

Previous visitors to Tell Hamoukar

Although unexcavated until 1999, Tell Hamoukar has inspired considerable interest among archaeologists since the 1950s. Van Liere and Lauffray, in their discussion of ancient routes in the Khabur region, described Hamoukar as their type IV settlement, consisting of two stepped plateaus with an external ditch 100 m from the foot of the mound proper (1954–55: 134, 137). In addition, they correctly observed its size: “un des plus vastes de toute la haute Jezireh — 1 kilomètre carré” (1954–55: 137).² Later, Van Liere published the first scaled plan of the site, based on aerial photographs (1963: Fig. 3b); from this plan, the size of Tell Hamoukar could be estimated as 116 hectares of mounded area, and 216 hectares within the area of the circular depression (Wilkinson 1994: 488). Because of its large size, Van Liere proposed that Tell Hamoukar be identified as ancient Washshukanni (1963: 120).

Tell Hamoukar was visited by D. Meijer during the course of his eastern Khabur Basin survey in the late 1970s; he reported Uruk/Amuq F sherds, metallic ware and Khabur ware from a brief visit (1986: 19). Hamoukar was recognized as a part of the “Uruk expansion” phenomenon by the 1980s; in informal visits, the Tell Leilan Project recognized southern Mesopotamian ceramics, in addition to Ninevite 5 and “extensive Leilan Period II [ED III-Akkadian] occupations” (Weiss 1983: 44; also Sürenhagen 1986: 14–15). Weiss estimated a 90 hectares size for the site (1983: 44, 49; 1985: 270).

The nature of this 4th millennium presence on the site has been debated. Some visitors have reported purely local chaff-tempered ceramics and bevelled-rim bowls only (Oates and Oates 1991: 140 n. 4; Schwartz 1994a: 164 n. 19), but others have noted exclusively southern Mesopotamian Uruk ceramics (Sürenhagen 1986: 14–15; Schwartz 1988b: 7; Lebeau 1990: 243).

Surface collection and ceramic processing methodology

In order to check these often conflicting observations, it was decided that the initial season of excavation at Tell Hamoukar should include a surface collection. We adopted an intensive systematic approach, with collection units placed at regular intervals across the site. In order to reduce the quantity of sherds to be processed while still recovering a representative sample, we decided to collect from sample squares rather than make collections over broad areas. The site was divided into 100 × 100 m squares, and one 10 × 10 m unit was collected from the centre of each square.

¹ I would like to thank the directors of the Syrian-American Expedition to Tell Hamoukar, McGuire Gibson (University of Chicago Oriental Institute) and Muhammad Maktash (Department of Antiquities, Raqqa) for the invitation to join the team and for entrusting the surface collection to me. I am also indebted to Tony Wilkinson for valuable advice on collection methodology and ceramic chronology. I must thank Joan Oates for her expert advice on 4th and 3rd millennium pottery and for discussing pottery in the Tell Brak laboratory in the McDonald Institute in Cambridge. All errors are my own.

² See also Hrouda 1958: 24.

Iraq LXIV (2002)
(Fig. 1). In many cases it was not possible to place the collection unit directly in the centre of the square due to presence of modern village houses, so the nearest open space was chosen. The collection units were established by means of a handheld GPS unit.4

Within each unit, all sherds greater than 3 cm, both diagnostic and non-diagnostic, were collected, as well as all fine ware sherds. General notes were taken regarding sherd density, land use and slope, sherd visibility, and general context of the collection unit (fallow or ploughed field, tell slope, village, etc.). At the conclusion of the site collection, 111 10 × 10 m units were collected on the mounded site, comprising 15,415 sherds. Almost all areas of the mounded site were collected; within the southern end of the modern village, some grid squares could not be sampled because of the higher density of houses in that area.

We originally intended to extend the grid beyond the limits of the mound proper, in order to test whether there was occupation between the edge of the mounded site and the circular ditch which surrounds it. However, the land around the site is all agricultural land, and in many places it had already been ploughed. In several test squares from these ploughed fields, sherd visibility was much too low to provide reliable results. However, field scatter collections were made in transects radiating out from the site in three areas where fields were fallow (see below).

Sherds were counted by colour and fabric and classified into a type series derived from the North Jazira Project survey (Wilkinson and Tucker 1995), with a few modifications and additions.

3The village at Tell Hamoukar (now called al-Hurriya) covers roughly 40 hectares at a low density. Within this area are paved roads, mudbrick houses and courtyards, and associated exterior areas which are carefully swept clean of all debris (including ancient sherds) by the villagers.

4We originally intended to locate units using a Total Station, but this proved to be unfeasible for several reasons, including the presence of village houses, the large scale of the site, and time constraints. As a result, the actual location of the collection units may vary 10 to 20 m. Given the imprecise nature of surface assemblages, we find this uncertainty acceptable.
That survey was centred on Tell al-Hawa, which is only 40 km distant from Tell Hamoukar across the Iraqi border. The typed sherd counts were then entered into a Microsoft FoxPro database, which was used together with ESRI ArcView to produce the distribution maps which follow.5

Phases of occupation at Tell Hamoukar

Early 4th millennium BC. The earliest occupation of Tell Hamoukar detected by the surface collection is characterized by the ceramic assemblage best known from Tepe Gawra levels XIA–IX (Tobler 1950). It has been referred to as the Middle to Late Gawra period (Porada et al. 1992), the Northern Early Uruk period (Oates and Oates 1997), the Late Chalcolithic II (Tomita 1998b), or the LC2 period (Algaze et al. 1998). A few sherds of this period were recovered from the southern end of the mounded lower town, but their greatest occurrence is in the fields south of the mounded site proper (Fig. 2). This large southern area was initially identified as habitation by Tony Wilkinson on the basis of recently declassified CORONA intelligence satellite photographs and confirmed by reconnaissance.6 On the satellite image, the fields in this area appear blurred or mottled with patches of lighter soil when compared to the fields outside this area.

Because this southern area is characterized by a spread of very low mounds, we attempted to define its boundaries by means of relative sherd density. Using the handheld GPS unit, we plotted the edges of the sherd scatter on a non-systematic basis. Following one week of reconnaissance, our preliminary definition of the site boundaries encompasses an area of 280 hectares. The early 4th millennium sherd scatter may stretch north below the mounded site, but our survey in this area was hampered by recently ploughed fields and irrigated cotton fields.

5 The topographic survey of Tell Hamoukar, from which the following contour maps are derived, was executed by John C. Sanders of the Oriental Institute, University of Chicago, with the assistance of Carrie Hritz, University of Chicago.

6 For the utility of CORONA imagery in archaeology, see Kennedy 1998.
The ceramics associated with the Tell Hamoukar “southern extension” (Fig. 10) are best paralleled at Tepe Gawra in levels XIA–IX (Tobler 1950), Qaljin Agha (Hijara 1973) and Tell al-Hawa Trench LP (Ball, Tucker and Wilkinson 1989). In the Khabur Basin such ceramics are characteristic of Area TW level 18 at Tell Brak (Oates and Oates 1997, “Northern Early Uruk”), and early Phase 2 at Tell Umm Qseir (Tomita 1998a). However, it is possible that occupation began slightly earlier, in the terminal Ubaid or Ubaid–Uruk transitional period. A few “Sprig Ware” sherds (Ball 1997) were found outside of controlled collection, and some types from the site (e.g. Fig. 10: 10) seem to be more characteristic of Gawra XII–XII (Tobler 1950: 145–151). Many more of the collected jar rims show faint traces of paint, but in most cases any paint that may have existed has either been removed by abrasion or covered by a thick layer of calcium carbonate concretions which is characteristic of the surface sherds from this area of the site.

Most known sites of this time period are very small: Tepe Gawra is at most 1.5 hectares, Qaljin Agha is 3.3 hectares, Shelginya is 4.5 hectares, and Umm Qseir is only 0.15 hectares (Rothman 1997; Abu al-Soof 1966: 77; Ball 1997: 93; Hole and Johnson 1986–87: 172). Although Tell al-Hawa and Tell Brak could be as large as 33 hectares and 45 hectares, respectively (Ball, Tucker and Wilkinson 1989: 32–33, Emberling et al. 1999: 25–26), the massive size of early 4th millennium Hamoukar demands an explanation. Can we assume that the extent of the sherd scatter corresponds to ancient settlement? We considered that the scatter might represent a smaller site which had been dug out and spread on nearby fields as a form of fertilizer. Dr Amr al-Azm, the project paleobotanist and ethnographer, investigated this possibility during the course of his ethnobotanical studies at Tell Hamoukar; all of his informants replied that while tells were often excavated for brick and especially roofing material, the use of site-derived soil for fertilizer was unknown to them. Although agricultural settlement in the Khabur Basin is relatively recent (Lewis 1987), it seems unlikely that such a process could have created the sherd scatter in antiquity. If all the sherds originated from a compact tell-type settlement, one would expect the sherd scatter to be abundant in the centre but with diminishing density toward the edges, but in the case of the Hamoukar southern extension, some of the densest concentrations of sherds are located on the edges of the scatter, particularly on the eastern, northeastern, and southeastern sides. For the same reason, it is also unlikely that the scatter resulted from mechanized ploughing over a smaller site.

Assuming the sherd distribution represents actual settlement, if one simply applies the standard 100 to 200 persons per hectare figure, it would produce a population estimate ranging between 28,000 and 56,000 persons! Although scholars are beginning to reveal previously unrecognized levels of indigenous complexity in 4th millennium Northern Mesopotamia (Stein 1999; Oates and Oates 1997; Emberling et al. 1999; Rothman 1994), few would be willing to postulate a level of social complexity capable of administering and provisioning a settlement of that size at this period in time, ourselves included. Two interpretations of the southern extension of Tell Hamoukar can be offered at present. Settlement may have been seasonal, with the inhabitants returning annually to different areas within the site through time. Another possibility is that settlement was permanent but dispersed in small clusters of houses. The distribution of sherd density appears to support either of these interpretations. The mottled appearance of the site on satellite imagery from the late 1960s initially suggested pockets of occupation, with open spaces in between; although this pattern has been somewhat blurred by mechanical ploughing over the last 30 years, this is still evident in pockets of very dense sherd scatters and fine grey archaeological soils. While there is a continuous scatter of ceramics across the site at a level above what would normally be called “background noise” or field scatter, certainly there are many localized areas where sherds are even more abundant, in association with thinner, lighter soils. However, these patches are in no way topographically elevated above the intervening areas. In this sense, settlement on this site in the early 4th millennium may have been similar in layout to the modern village at Tell Hamoukar, where roughly 750 persons live in house groups scattered over 40 hectares (19 persons per hectares). The modern pattern resulted from the settlement of pastoral nomads; if the same persons per hectares figure is applied to the early 4th millennium settlement, the ancient population might have been as low as 5,300

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7 Two 10 x 10 m test collection units in such pockets near the northeastern and southeastern edges of the site produced sherd counts of 209 and 165 sherdss, respectively.
persons, assuming all parts of the site were settled simultaneously. We intend to investigate this area with systematic surface collection and excavation in the forthcoming season.

**Late Chalcolithic/Northern Middle Uruk.** The ceramics of this period were clustered on the surface of the high mound only, with scattered sherds beyond its slopes on the lower town to the south (Fig. 3). The overwhelming dominance of Late Chalcolithic sherds on the southern slopes of the high mound can probably be related to the lack of overlying settlement in this area (confirmed by the excavations in Area B) and general principles of tell erosion in the Near East, where the northern slopes of mounds tend to be more stable than the southern slopes (Rosen 1986: 31). In fact, the sherds in the lower town area to the south of the high mound probably represent processes of erosion and slopewash rather than ancient settlement. Thus it appears that the Late Chalcolithic settlement is limited to the 15 hectares of the high mound as defined by the 386 m contour line and the sherd scatter.

Although the full range of local Late Chalcolithic coarse wares and fine wares was recovered, the only southern Mesopotamian diagnostic found on the surface of Tell Hamoukar were bevelled-rim bowls, the distribution of which corresponded precisely with the distribution of the chaff-tempered types.\(^8\) Although this agrees with the observations of some earlier visitors (Oates and Oates 1991: 140 n. 4; Schwartz 1994a: 164 n. 19), it is completely opposed to those of others (Weiss 1983: 44; Sürenhagen 1986: 14–15; Schwartz 1988b: 7; Lebeau 1990: 243), who observed that southern Uruk sherds were exclusively present or at least predominated. Excavations in the Area A

\(^8\)However, one somewhat questionable drooping spout (Fig. 11: 20) was found near the southwestern edge of the lower town, far removed from the bulk of the Late Chalcolithic/Uruk ceramics.
step trench have uncovered the full range of southern Uruk ceramics. This disparity between surface assemblage and excavated material can be explained in part by our sampling collection methodology, but a large supplementary collection (collection unit 117) made in a large eroding gully 75 m west of the Area A step trench, for the purposes of checking the representativeness of our sampling methods on the high mound, also failed to produce southern types other than the bevelled-rim bowl. It is likely that the various informal surface collections made on Tell Hamoukar within the last 30 years, which appear to have targeted the southern Uruk types, have impacted our recovery rates. We must echo the warnings of Reinhard Bernbeck (1995) concerning the damaging effects of such informal collections on later systematic collections.

The local Late Chalcolithic ceramic assemblage consists to a large extent of heavily chaff-tempered, reduced-core storage jars, casseroleas, and hammerhead bowls, but also a series of distinctive fine wares (Fig. 11). These are best paralleled at Brak TW levels 14–17 (Oates and Oates 1991), Leilan V–IV (Schwartz 1988a), and Hacinebi (Pearce 2000). Although most of the ceramics are best known as Northern Middle Uruk or LC3, we cannot rule out the possibility that some represent the later 4th millennium (Late Uruk or LC4), because chronologically sensitive types, such as the lipped conical cup and the drooping spout, are absent or poorly represented in the surface collection. Because the poorly fired chaff-tempered wares tend to erode into shapeless lumps when left exposed on the surface or in the plough zone, we also made counts of non-diagnostic sherds of this fabric, in order to make sure that we were not underrepresenting the local Late Chalcolithic ceramics. The distribution of such body sherds mirrored the distribution of the Late Chalcolithic diagnostics precisely. We conclude that surface erosion has not skewed our recovery of Late Chalcolithic chaff-tempered diagnostic sherds.

Mid-4th millennium Tell Hamoukar is thus sizable by Northern Mesopotamian standards, but not nearly as large as has been supposed. At 15 hectares, it is substantially smaller than Tell Brak, which is larger than 100 hectares at this time (Oates and Oates 1997: 290), and Nineveh, which may be as large as 40 hectares (Stronach 1994: 89–90). However, Hamoukar’s significance as a part of the Uruk expansion phenomenon will have to be assessed through excavation rather than through surface collection.

Early 3rd millennium/Ninevite 5. Ninevite 5 ceramics were scattered across the entire mounded site, but at a low density and with clusters on the high mound and at the edges of the lower town (Fig. 4). We attribute the low density to the presence of subsequent later 3rd millennium occupation which may have effectively sealed it (see below), and allowed the Ninevite 5 sherds to be visible predominantly in the ploughed and eroding edges of the lower town. It appears that all 105 hectares of mounded site may have been occupied at this time, although given the low density of Ninevite 5 period sherds, this preliminary assessment must be tested with soundings.

The ceramics recovered are mostly late in the Ninevite 5 sequence (Fig. 12). Of the decorated Ninevite 5 types, no painted sherds were recovered from controlled collection, although a few strays were found in the course of walking across the site. Other surveys have noticed the rarity of painted Ninevite 5 sherds in surface assemblages (Stein and Wattenmaker in press; Bucchelli and Kelly-Bucchelli 1988: 44–45; Wilkinson and Tucker 1995: 95), so their absence could reflect the poor preservation of paint in surface assemblages rather than an absence of occupation. While a few incised sherds were found (e.g. Fig 12: 11), the majority of decorated Ninevite 5 sherds were of the somewhat carelessly done late excised tradition, which is typical of period IIIId at Tell Leilan (e.g. Fig. 12: 3). The other diagnostic types (such as pointed and pedal bases, Fig. 12: 8–10, 14) have a long lifespan within the period (Schwartz 1988a: Table 19, Appendix 5). Thus we suspect that the 105 hectare scatter should be related to the terminal end of the Ninevite 5 period, and that Hamoukar’s rapid expansion parallels that of Tell Leilan (Weiss and Court 1993: 35–36) in both scale and chronology. However, we cannot yet estimate the size of the settlement, if any, in the early Ninevite 5 period.

Later 3rd millennium. Ceramics of the later 3rd millennium are distributed evenly and densely across the entire surface of the 105 hectare mounded site (Fig. 5). The plan of the surface distribution of sherds represents all later 3rd millennium ceramic types, from immediately post-Ninevite 5
"ED III" in the southern chronology, Period IIa at Leilan, and the "ED III destruction level" at Brak) to the post-Akkadian period (known from Brak, Mozan, Nineveh, Tell al-Hawa, and Chagar Bazar).

The division of this time period into smaller historically-defined units such as the "Akkadian" or "Ur III" periods is not yet possible for surface collections. It is now becoming clear that ceramic forms continue through political changes, and it is very difficult to define types which are specifically "ED III" or "Akkadian." Bertille Lyonnet attempted to make this subdivision in her collection of Tell Muhammad Diyab, but she cautioned that most of her types occurred in both periods (1990: 74–75). In her subsequent survey of the western Upper Khabur Basin, she has analysed the later 3rd millennium BC as a single unit (Lyonnet 2000: Table 4). We have followed Lyonnet, as well as Stein and Wattenmaker (1990, in press) and Wilkinson and Tucker (1995), in treating the post-Ninevite 5, pre-Khabur Ware period as a single unit.

Diagnostics for this period (Fig. 13) include several types well known from excavations. Stone wares (Fig. 13: 17–20), predominantly of the non-calcareous variety common at Tell Brak (Schneider 1989), are found across the entire site, with concentrations on the high mound and on the northwestern quarter of the lower town. Other well-known types include a wide-mouthed jar with a band or grooved rim (Fig. 13: 1–2), a large vat with a flaring folded rim (Fig. 13: 6–7), a large bowl with a slightly bevelled flat rim, sometimes with an attached lug (Fig. 13: 14–16), and a flat or slightly concave beaker base (Fig. 13: 21–23).

However, great strides are being made with excavated ceramic sequences for the 3rd millennium. See now the published preliminary results of the Syrian Jazira Field Workshop (Lebeau 2000). The forthcoming publication of the 3rd millennium levels at Tell Brak will allow this sequence to be anchored to the southern Mesopotamian historical chronology.
Several other types are less well known from publications, but appear in close association exclusively with these later 3rd millennium types, particularly in the lower town. These include a flat extended-footed base (Fig. 13: 24–25), a slightly convex lug-footed base (Fig. 13: 26–27), a shallow flaring-sided basin (Fig. 13: 8–10), a rolled-rim bowl which often occurs in a burnished grey ware (Fig. 13: 11–13), and a coarse grit-tempered triangular cooking ware rim (Fig. 13: 3–5).

Comb-incised sherds, characteristic of the late Akkadian and post-Akkadian periods (McMahon 1998: 16–17), are also fairly evenly distributed across the entire site (Fig. 13: 28). A few of the green and red-streaked post-Akkadian stone wares were recovered from the lower town.10

Tentatively we suggest that Hamoukar was occupied to its full 105 hectare extent from the late Ninevite 5 period through the Akkadian period and into the post-Akkadian period. Therefore it must be included along with Leilan, Mozan, Brak, Chuera, Kazane, Taya, Khoshi, and Hadhail in the discussion of the appearance of urbanism in the mid-3rd millennium in Northern Mesopotamia (Table 1). Furthermore, its size and dating lend further support to a roughly 100 hectare limit to Early Bronze Age urban centres in dry-farming regions (Wilkinson 1994).11

This 105 hectare figure must be considered as an approximation. The 1999 topographical mapping emphasized the high mound and the lower town; the surrounding fields were less intensely measured. Therefore the interface between field and mound site is not as well defined as we would wish. Furthermore, it is difficult to discern where the settlement ends because of colluvial debris. At Tell Brak, this question was recently investigated through a series of test pits along the site edges, and preliminary results suggest that the mound could be as much as 15 hectares larger than

10These are known from Tell Brak (J. Oates, personal communication) and from Area D at Chagar Bazar (personal observation).
11Fletcher (1995) has also proposed a 100 hectare limit to early urban settlements, based purely on internal communication and interaction stress factors.
Table 1: Comparative size of mid-later 3rd millennium urban sites in Northern Mesopotamia

<table>
<thead>
<tr>
<th>Site</th>
<th>Size</th>
<th>Reference</th>
</tr>
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<tbody>
<tr>
<td>Tell Taya</td>
<td>155 hectares</td>
<td>Reade 1997</td>
</tr>
<tr>
<td>Tell Mozan</td>
<td>120–150 hectares&lt;sup&gt;12&lt;/sup&gt;</td>
<td>Buccellati and Kelly-Buccellati 1999: 15, Abb. 3, 5</td>
</tr>
<tr>
<td>Tell Hamoukar</td>
<td>105 hectares</td>
<td>1999 Field Survey</td>
</tr>
<tr>
<td>Kazane Höyük</td>
<td>100 hectares</td>
<td>Watt enmaker 1997: 82</td>
</tr>
<tr>
<td>Tell Leilan</td>
<td>90 hectares</td>
<td>Weiss 1986</td>
</tr>
<tr>
<td>Tell Khoshi</td>
<td>90 hectares</td>
<td>Kepinski 1990</td>
</tr>
<tr>
<td>Tell Hadhail</td>
<td>90 hectares</td>
<td>Weiss 1983: Fig. 11</td>
</tr>
<tr>
<td>Tell Farfara</td>
<td>75 hectares&lt;sup&gt;15&lt;/sup&gt;</td>
<td>Meijer 1986: Fig. 6</td>
</tr>
<tr>
<td>Tell al-Hawa</td>
<td>66 hectares</td>
<td>Ball, Tucker and Wilkinson 1989: 34, Fig. 9</td>
</tr>
<tr>
<td>Tell Brak</td>
<td>40–65 hectares</td>
<td>Emberling et al. 1998: 16; J. Oates, pers. communication</td>
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<tr>
<td>Tell Chura</td>
<td>65 hectares</td>
<td>Orthmann 1997</td>
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previously supposed (Larsen and Skulboel in Emberling et al. 1999: 15–26). Based on the Area D geomorphological trench at Hamoukar, it appears that the edge of the site may represent midden deposits rather than occupation, but this may only be the case at this particular corner of the site. In any case, the total mounded area is unlikely to fluctuate by more than five hectares.

If our preliminary assessment of the post-Akkadian settlement at Tell Hamoukar is correct, it would appear that not only did the Upper Khabur Basin remain settled at this time, it remained urbanized. The large structure with recessed doorways in Area D at Chagar Bazar (Tunca, McMahon and Bagdo 2000) seems to confirm that there was a stratified society capable of supporting elites at this time. Post-Akkadian occupation in Northern Mesopotamia is also now recognized at Mozan (Buccellati and Kelly-Buccellati 1988: 44–45), Brak (Oates and Oates 1994: 167), Arbid (P. Bielinski, pers. communication), Tell al-Hawa (Ball, Tucker and Wilkinson 1989), Tell Taya (Reade 1997) and Nineveh (McMahon 1998).

Following the post-Akkadian period, Tell Hamoukar was completely abandoned for at least one thousand years. Although earlier visitors have reported 2nd millennium pottery (van Liere 1963: 120; Meijer 1986: 19), we found no Khabur ware, Mitanni or Middle Assyrian types anywhere on the mounded site. Although Hamoukar was abandoned at this time, preliminary reconnaissance in the immediate area revealed Khabur Ware sherds on four tells within 5 km, as well as on several low sites. A similar profusion of sites in the early 2nd millennium was documented by Meijer for the area to the northwest of Tell Hamoukar (1986, 1990) and by Weiss around Tell Leilan (1986).

Iron Age/Neo-Assyrian. Ceramics from the first half of the 1st millennium BC were limited to the northeast corner of the lower town, immediately east of the high mound (Fig. 6). Although this area was occupied in the 3rd millennium as well, it shows very little distinct mounding, unlike the Seleucid settlement (see below). Therefore we assume that the Iron Age settlement at Hamoukar was fairly short-lived, and the excavation in Area C appears to confirm this. We estimate that this occupation was slightly more than 3 hectares in size.

The ceramic forms from the Iron Age village (Fig. 14) are similar to assemblages known from Nimrud, Qasrj Cliff, Khirbet Khatuniyeh, Tell Beydar, and elsewhere (Oates 1959; Curtis 1989; Curtis and Green 1997; Bretschneider 1997); however, a high percentage have grit temper as opposed to the normal chaff temper. It has been suggested (Wilkinson and Tucker 1995: 101; Curtis 1989: 46, 52; Goodwin 1995) that such features may be indicative of a post-Assyrian date, so the exact date of the Iron Age village at Tell Hamoukar remains unclear.<sup>14</sup>

Seleucid/Hellenistic. Pottery from the Seleucid period (3rd–2nd centuries BC) clusters on a topographically distinct mound along the eastern edge of the lower town (Fig. 7). This mound rises 6 m

<sup>12</sup>Buccellati and Kelly-Buccellati (1999: 15) indicate that Mozan in the second half of the third millennium BC was 150 hectares; however, the scaled plans in Buccellati and Kelly-Buccellati 1999 Abb. 3 and 5 measure 120 hectares when their areas are calculated in the ArcView GIS program.

<sup>13</sup>This figure is based on measurement of Meijer 1986: Fig. 6 in ArcView GIS. It is unclear whether the later 3rd millennium BC ceramic scatter covers all 75 hectares of Tell Farfara.

<sup>14</sup>See also Green 1999: 115–116 on Assyrian versus post-Assyrian pottery.
above the level of the lower town and is separated from the high mound by a shallow depression. Using the 385 m contour as the limit, the Seleucid village was 4 hectares.

The ceramics from the Seleucid village (Fig. 15) are easily distinguished from the ceramics of the other periods present on Tell Hamoukar by their abundant sand and dark grit temper and also by the frequent occurrence of red paint on rims. Most forms have close parallels to the east at Nimrud (Oates and Oates 1958) and sites in the Saddam Dam salvage zone (Curtis 1989; Curtis and Green 1997; Numoto 1988), and to the west at Tell Hammam et-Turkman (Lázaro 1988) and Tell Sweeney (Holland 1976). Other sherds lack published close parallels but feature the distinctive Seleucid fabric.

Subsequent settlement. In addition to a single Sassanian stamped body sherd, Islamic green glazed ceramics appear scattered across the site at extremely low density, but particularly on the high mound and under the modern village. A few Islamic handles, bottle rims, and bowls were recovered in non-systematic areal collection in a gully west of Area A, but other types were rare among the systematic collection units. The uppermost level of the Area A step trench, however, was dated to the early Islamic period. There was certainly a small Islamic settlement on the high mound, but Islamic settlement on the lower town was either very diffuse (like the current pattern of houses) or was non-sedentary. We can offer no size estimate, but based on the high mound topography the Islamic settlement there probably covered one hectare at the most.

Offsite studies at Tell Hamoukar

Human activity, while concentrated on ancient sites, is not limited to them. Human activity in the intervening spaces between sites most obviously includes agriculture and animal husbandry,
but also general human movement between settlements for economic and social purposes. Such activities are important for all sedentary societies, but they are particularly significant for the 3rd millennium BC urban systems of Northern Mesopotamia, where economic interaction between urban centres and their rural hinterlands is what allowed these systems to remain viable over a period of almost half a millennium (Wilkinson 1994; Schwartz 1994b). Such offsite activity is notoriously difficult to document archaeologically, however. During the 1999 season at Tell Hamoukar, we utilized two offsite methods to investigate ancient land use and intersite movement.

**Hollow ways.** These are broad and shallow linear depressions on the landscape, which most commonly radiate outward from tells in a spokelike pattern. They are generally 50–100 m wide and 50 cm to 2 m deep. Hollow ways are formed when the continuous passage of human and animal traffic breaks up the soil structure. During the dry season this trampling creates dust, which is then blown away. In the wet season, compaction occurs, which increases runoff and thus water erosion. Over time, these two processes cause the path to sink. Hollow ways in Northeast Syria were first recognized by van Liere and Lauffray (1954–55), who mapped the entire Upper Khabur Basin using aerial photographs, and proposed an initial dating to the Early Bronze Age based on their association with tell sites. More recently Tony Wilkinson has examined hollow ways comparatively throughout the semi-arid regions of the Near East as well as through intensive survey in the Iraqi North Iazira (Wilkinson 1993; Wilkinson and Tucker 1995: 24–28).\(^\text{15}\)

Using CORONA satellite imagery from December 1969 (Fig. 2), we documented several distinct groups of hollow ways around Tell Hamoukar (Fig. 8). At the northeast, a set of three hollow ways

\(^{15}\) For hollow ways in the Negev, see Tsoar and Yekutieli 1993.
Fig. 8 Hollow ways in the vicinity of Tell Hamoukar (based on CORONA satellite photograph in Fig. 2)

converges on the northeastern corner of the high mound. A second group of at least seven hollow ways on the west side converges on a single point on the perimeter of the mounded lower town. This point is a topographical depression which probably represents a main access route into the ancient city (see Fig. 1). The fact that Hamoukar’s hollow ways focus on a few points on the perimeter suggests to us that access into Hamoukar was restricted, probably by a city wall. The edge of the lower town mound does not form a distinct ridge, as is seen at obviously walled sites such Tell Leilan and Kranzhügel-type sites such as Beydar and Chueri; however, the very regular square shape of the mound suggests some form of constraint to organic growth.

Hamoukar’s system of hollow ways is not the classic radial pattern found around Early Bronze Age tells in the Khabur Basin and in the Iraqi North Jazira (see maps in Van Liere and Lauffray 1954–55 and Wilkinson and Tucker 1995). Furthermore, what we can document on the ground and from CORONA imagery differs radically from the pattern illustrated in Van Liere and Lauffray (1954–55), although the more detailed sketch map of Van Liere (1963: Fig. 3b) agrees with the 1969 CORONA imagery. Based on our own work, the pattern around Hamoukar would appear to have been related to routine movements of people and animals from the site to adjacent agricultural and pastoral land, rather than intersite movement. The Hamoukar hollow ways generally terminate at a distance of three to five kilometers from the edge of the site, which agrees well with general principles of preindustrial agricultural movement (Chisholm 1962). At present we are unable to link Tell Hamoukar directly to the long interregional routes which connect the North Jazira with

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16 Using CORONA imagery from December 1967 and December 1969, especially well-preserved radial systems can be found around Tell Effendi, Tell Cholma Foqani, Tell Aswad Foqani and Tell Brak (for a different interpretation of the Brak radial system see McClellan and Porter 1995). The North Jazira survey documented well-preserved radial systems around Kharaba Tibr and Abu Kula as well as Tell al-Hawa (Wilkinson and Tucker 1995: Figs. 6, 20).
Nineveh, although the southerly route through Tell al-Samir is generally aligned with Hamoukar and Leilan (Wilkinson and Tucker 1995: 26, Fig. 6).

Field scatters. The continuous carpet of low-density ceramic debris which stretches across the archaeological landscape in semi-arid regions of the Mediterranean and the Middle East has increasingly drawn the attention of landscape archaeologists (Wilkinson 1982 and 1989; Bintlish and Snodgrass 1988; Gallant 1986). Although there is disagreement, the most convincing interpretation suggested thus far is that this scatter represents the deliberate deposition of settlement-derived refuse onto fields in order to raise crop yields (Bintlish and Snodgrass 1988: 507–508). Thus it is possible to demonstrate archaeologically the agricultural intensification which models of rural agriculture predict (Chisholm 1962; Wilkinson 1982).

The landscape immediately surrounding Tell Hamoukar currently consists of rain-fed cereal fields and irrigated cotton fields. Unfortunately, at the time of the survey, the majority of these fields had already been ploughed or furrowed for the next growing season, which rendered sherd visibility extremely low, and thus not comparable to other field-scatter collections. However, in three areas (north of the main mound, northeast of the northeastern corner of the lower town, and southeast from the southeastern corner of the lower town), fallow fields made it possible to collect field scatters in transects.

In our initial season, we only investigated 500–700 metres out from the mound. The three transects revealed different patterns (Fig. 9). The northeastern transect showed densities between 24 and 45 sherds/100 m² out to 500 metres. Sherds densities in the southeastern transect were between 68 and 95 sherds/100 m² before declining to 11–24 sherds/100 m², with a spike at 500 metres. The northern transect showed site-like density (217 sherds/100 m²) near the site before declining to 130–145 sherds/100 m² and then 60–90 sherds/100 m² beyond 500 meters. With the exception of the closest four units of the northern transect, which had a sherd density comparable to collections from the mound itself, the other units produced densities comparable to field scatters from Tell Sweyhat and the Iraqi North Jazira (Wilkinson 1982: 329, Fig. 4, Wilkinson and Tucker 1995: Fig. 12).18

The few diagnostic sherds recovered were predominantly later 3rd millennium, although the northeastern transect produced a few Iron Age rounded jar rims as well; this is not surprising, given its proximity to the Iron Age village at the northeastern corner of the lower town.

The field-scatter collection in the 1999 season has established that sherd scatters continue beyond the mounded area of Tell Hamoukar proper. However, in order to document intensely used land zones, we will need to extend our transects much further in future seasons. At this time, however, it does appear that the inhabitants of Hamoukar did engage in agricultural intensification through manuring, probably during the height of settlement expansion in the later 3rd millennium BC, as predicted by Wilkinson’s model of early dry-farming state dynamics (1994, 1997).

Conclusions

Surface collections cannot offer the range of socioeconomic data or chronological sensitivity of excavation. We intend to test the conclusions of the surface collection with a series of soundings on the lower town of the mound site as well as within the area of the southern extension in upcoming seasons. Offsite studies will continue with ground documentation of hollow ways and further exploration of field scatters.

The 1999 surface collection at Tell Hamoukar has established the rough outlines of the history of settlement at the site. We have been able to address two major issues, the long-discussed size and nature of settlement in the mid-4th millennium as well as the place of Tell Hamoukar in the rapid urbanization of the mid-3rd millennium. The early 4th millennium site on the southern extension is unparalleled and demonstrates the existence of site morphologies previously unsuspected.

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17 It is doubtful that these high densities close to the mound site represent actual settlement for several reasons: the sherds are small and abraded, which is typical for field scatter; there are no signs of settlement, such as brick or basalt, which are the standard reddish-brown rather than the finer greyish soils which are characteristic of human occupation.

18 For comparative field-scatter sherd densities from England to Oman, see Bintlish and Snodgrass 1988: Fig. 2.
Future work at Tell Hamoukar on all of these themes promises to add to our understanding of settlement and society at important points in their development in upper Mesopotamia.

Addendum
Since this article was finished, the Yale Khabur Basin Project has published a detailed radiocarbon chronology (Hole 2001) for the prehistoric periods which makes it clear that the Hamoukar
southern extension is to be dated to the second half of the 5th millennium BC, rather than the early 4th millennium BC.

Bibliography


Fig. 10 Early 4th millennium pottery from Tell Hanounak Southern Extension surface collection.

1. Pale yellow surfaces, brown core; common–frequent medium chaff temper, rare medium grit temper. Rim dm 15 cm. A.866.4. Tobler 1950: Pl. CXLII: 349, 351 (Gawra XI-A); Pl. CXLVIII: 431 (Gawra below X-A); Hijara 1973: Pl. 21: 5–21 (Qal'ain Agha IV); Ball et al. 1989: Fig. 6: 7–7 (Tell al-Hawa Trench LP); Ball 1997: Fig. 4: 9 (Tell Sheligya); Wilkinson and Tucker 1995: Fig. 65: 11–12 (North Jazira survey, type 11).

2. Orange-brown surfaces, orange-pink core; abundant fine sand temper. Rim dm 16 cm. A.866.1.

3. Pale yellow slipped surfaces, brown core; abundant fine sand temper. Rim dm 14 cm. A.866.3.

4. Pale buff (slipped?) surfaces, brown core with orange margins; common fine-medium chaff temper. Dark brown painted rim. Rim dm 18 cm. A.866.11. Tobler 1950: Pl. CXLIV: 376 (Gawra). (Note: this form seems to be more typical of Gawra XII and XII-A; see Pls. CXXXVII and CXXXVIII.)

5. Pale yellow surfaces, light brown core; common fine chaff temper. Rim dm 19 cm. A.866.10.

6. Pale orange surfaces, brown core; common fine-medium chaff and rare fine sand temper. faint traces of red-brown paint on exterior. Rim dm 16 cm. A.838.4.

7. Pink-buff surfaces, pale orange core; common medium chaff and occasional coarse-medium grit temper. Rim dm 9 cm. A.838.20. Tobler 1950: Pl. CXLV: 385–388 (Gawra XI–X-A; note that these examples have horizontal incision rather than horizontal raised ridges).

8. Orange surfaces, brown core; common fine sand and white grit temper. Traces of dark brown to black paint on exterior. Rim dm 14 cm. A.866.20.

9. Pale yellow surfaces, pale yellow core with thick brown margins; occasional fine white grit temper. Dark brown-black paint on rim exterior. Traces of roulette (?) on exterior above carination. Rim dm 11 cm. A.838.28. Tobler 1950: Pls. CXXVIII: 1–5 (Gawra XI–X-I) and CXLIV: 392–93, 395, 397 (Gawra XI–X); Oates 1987: Fig. 3: 6 (Tell Brak CH “Level XII” fill”); Lloyd 1940: Pl. III Fig. 7: 5 (Grai Reshi); Wilkinson and Tucker 1995: Fig. 65: 13–14 (North Jazira survey, type 16).

10. Yellow-green surfaces and core; frequent medium chaff and frequent fine-medium light and dark grit temper. Rim dm ca. 40 cm. A.838.7. Tobler 1950: Pl. CXLVII: 414 (Gawra XI); Ball 1997: Fig. 3: 1–2, Fig. 4: 7–8 (Tell Sheligya).

11. Pale orange surfaces, red-orange core; occasional fine chaff and frequent-abundant fine grit/sand. Traces of black-brown paint on all exterior surfaces. Inner rim dm 38 cm. A.838.13. Tobler 1950: Pl. CXLII: 346, CXLVI: 405–6 (Gawra XI–X-I); Hijara 1973: Pl. 21: 1–4 (Qal'ain Agha IV); Tomita 1998: Fig. 64: 1 (Tell Umm Queir Phase 2); Wilkinson and Tucker 1995: Fig. 65: 9–10 (North Jazira survey, type 10).


13. Pale orange surfaces, thick black core; frequent-abundant medium chaff. Traces of buff external slip. Rim dm 33 cm. A.838.10. Tobler 1950: CXLIV: 375, 382, and 384 (Gawra XI–X-A); Lloyd 1940: Pl. III Fig. 7: 8 (Grai Reshi); Hijara 1973: Pl. 14: 13 (Qal'ain Agha IV); Ball et al. 1989: Fig. 28: 2–4 (Tell al-Hawa Trench LP); Wilkinson and Tucker 1995: Fig. 65: 17–18 (North Jazira survey, type 21).


15. Pale yellow surfaces, yellow-grey core; frequent medium chaff temper. Exterior scraped below carination. Rim dm 27 cm. A.838.16. Tobler 1950: CXL: 333–34 (Gawra XI–A); Ball et al. 1989: Fig. 28: 23, 25 (Tell al-Hawa Trench LP); Tomita 1998: Fig. 63: 4 (Tell Umm Queir Phase 2); Hijara 1973: Pl. 15: 4, 6 (Qal'ain Agha IV).


19. Pale orange-brown surfaces, orange-pink core with brown margins; common-frequent fine sand, rare fine-medium chaff temper. Rim dm 18 cm. A.866.21.

Fig. 10 Early 4th millennium pottery from Tell Hamoukar Southern Extension surface collection.
Fig. 11 Mid-4th millennium (Urak/Late Chalcolithic) pottery from the Tell Hamouskar surface collection.

1. Orange surfaces, thick black core; abundant coarse chaff. Rim dm 33 cm. A.94.3; unit 44. Pearce 2000: Fig. 9a–f (Hacinebi Phase B); Oates and Oates 1993: Fig. 52: 43 (TW early 14) and 44 (TW 16); Schwartz 1998a: Fig. 52: 5, 7 (Leilan IV) and Fig. 57: 1–3 (Leilan V); Alagze 1990: Pl. 31A–F (Kurban VI).
2. Pale orange surfaces, brown core; abundant medium–coarse chaff. Rim dm 36 cm. A.94.4; unit 44.
3. Orange surfaces, thin black core; abundant medium chaff. Rim dm 33 cm. A.94.5; unit 44.
4. Orange surfaces, black core; frequent fine–medium chaff temper. Rim dm 33 cm. A.79.3; unit 29.
5. Pale orange surfaces, thick black core; frequent medium chaff, common very fine white grit temper. Rim dm 26 cm. A.385.19; unit 117.
7. Orange surfaces, brown core; abundant medium–coarse chaff; bottom roughly scraped; rim dm 32 cm. A.94.2; unit 44.
8. Orange surfaces, brown core; frequent–abundant medium–coarse chaff; scraped and scored exterior base bottom. Rim dm 35 cm. A.373.2; unit 108. Fielden 1981: Fig. 1: 31 (Brak CH).
9. Pale grey surfaces, dark grey core; abundant medium–coarse chaff, common fine white grit. Rim dm 47 cm. A.385.28; unit 117. Pearce 2000: Fig. 5a–e (Hacinebi Phase A).
10. Pale orange surfaces, grey–brown core; abundant medium–coarse chaff; handmade with roughly scraped base. Rim dm 23 cm. A.82.2; unit 32.
11. Pale orange surfaces and core; common fine–medium chaff, frequent fine white grit. Smooth interior, rough exterior surface. BRB. Rim dm ca. 16 cm. A.385.26; unit 117.
12. Pale orange surfaces, orange core; frequent medium chaff; rough exterior, smoother interior. BRB. Rim dm ca. 11 cm. A.79.1; unit 29.
13. Pale orange surfaces, black core; frequent–abundant medium–coarse chaff. Rim dm 37 cm. A.82.1; unit 32. Fielden 1981: Fig. 2: 16 (Brak CH); Pearce 2000: Fig. 4e–f (Hacinebi Phases A–B); Alagze 1990: Pl. 41C (Kurban VI).
14. Orange–red surfaces, thick black core; frequent medium chaff, common fine white grit temper. Rim dm 20 cm. A.385.15; unit 117. Fielden 1981: Fig. 2: 7–9 (Brak CH); Wilkinson and Tucker 1993: Fig. 66: 3 (North Jazira survey type 12); Schwartz 1998a: Fig. 60: 1–2 (Leilan V) and Fig. 54: 7–8 (Leilan IV); Alagze 1990: Pl. 35K–L (Kurban VI).
15. Pale orange surfaces, thick black core; frequent medium chaff temper. Rim dm 29 cm. A.385.16; unit 117.
17. Red–orange surfaces, black core; frequent–abundant coarse chaff, common fine white grit, rare coarse dark grit. Rim dm 32 cm. A.94.7; unit 44.
19. Pale orange surfaces, brown core; abundant medium chaff, rare coarse dark grit. Rim dm 25 cm. A.82.3; unit 32. Pearce 2000: Fig. 10a–d (Hacinebi Phase B); Schwartz 1998a: Fig. 59: 1–5 (Leilan V) and Fig. 54: 1–3 (Leilan IV); Alagze 1990: Pl. 35D–J, Pl. 34A–B (Kurban VI).
20. Buff–brown surfaces, orange core; common sand and white grit. A.158.7; unit 57. Oates and Oates 1993: Fig. 49: 3, Fig. 50: 13 (Brak TW 12).
21. Pale yellow surfaces and core; no visible temper, occasional fine–medium voids. Rim dm 10 cm. A.94.15; unit 44. Schwartz 1998a: Fig. 58: 10 (Leilan V); Tomita 1998a: Fig. 63: 3 (Umm Qeir phase 2).
22. Pale yellow–green surfaces and core; no visible temper, rare voids; sandy fabric. Rim dm 11 cm. A.94.14; unit 44.
23. Pale buff surfaces, orange core; no visible temper, occasional fine voids; rim dm 12 cm. A.94.13; unit 44.
24. Orange smoothed surfaces, brown core; very rare fine grit, common very fine voids. Rim dm 14 cm. A.94.8; unit 44.
25. Yellow–buff surfaces, pink–buff core; no visible temper, rare fine voids. Rim dm 15 cm. A.385.17; unit 117. Fielden 1981: Fig. 1: 5 (Brak CH).
26. Orange–brown surfaces, grey core; no visible temper, rare very fine voids; rim dm 14 cm. A.94.10; unit 44. Fielden 1981: Fig. 1: 2, 3 (Brak CH); Pearce 2000: Fig. 8g–h (Hacinebi Phases A–B); Matthews et al. 1994: Fig. 3: 5 (Brak HSI); Oates and Oates 1993: Fig. 51: 24 (Brak TW 16); Schwartz 1998a: Fig. 53: 13 (Leilan IV).
27. Pale yellow–buff surfaces; no visible temper; corrugated interior. Rim dm 8 cm. A.94.11; unit 44. Fielden 1981: Fig. 1: 14 (Brak CH); Oates and Oates 1993: Fig. 51: 19–20 (Brak TW 16).
Fig. 11 Mid-4th millennium (Uruk/Late Chalcolithic) pottery from the Tell Hamoukar surface collection.
Fig. 12 Early 3rd millennium Ninevite S pottery from the Tell Hamoukar surface collection.
1. Pale yellow-green exterior, pale orange interior and core; no visible temper. Wide horizontal grooves, diagonal incisions, and parallel vertical notched incisions. A.54.3; unit 4. Schwartz 1998a: Fig. 47: 3 (Leilan IIIa).
2. Pale green surfaces and core; no visible temper. Rectangular vertical excisions. A.80.1; unit 30.
3. Pale yellow surfaces and core; no visible temper; generally sandy fabric. Vertical and chevron incisions over horizontal incisions. A.167.3; unit 66. Schwartz 1998a: Fig. 31: 12 (Leilan IIc).
4. Pale green surfaces, grey-green core; occasional fine sand, generally sandy fabric. Incised and excised grooves. A.70.6; unit 20. Schwartz 1998a: Fig. 31: 1–2 (Leilan IIc).
5. Grey-green surfaces, grey core; sandy fabric with no visible temper. Excisions over incised lines. A.167.4; unit 66.
6. Pale yellow surfaces and core; no visible temper. Excised grooves. A.75.1; unit 25.
7. Pale green surfaces and core; rare fine sand. Vertical excisions over horizontal incised lines. A.54.2; unit 4.
8. Grey-green surfaces and core; common fine-medium chaff visible on interior surface. Dm at carination 11 cm. A.169.1; unit 66. Schwartz 1998a: Fig. 42: 1–2, 8.
9. Green-buff surfaces, buff core; no visible temper. Dm at carination 10 cm. A.169.2; unit 66.
10. Buff surfaces and core; common medium chaff below carination, no visible temper above carination. Dm at carination 10 cm. A.169.3; unit 66.
11. Yellow-buff surfaces, grey-green core; no visible temper. Rim dm 11.5 cm. A.169.4; unit 66. Schwartz 1998a: Fig. 42: 9–14 (Leilan IIIb).
12. Grey-green surfaces and core; no visible temper. Rim dm 12 cm. A.60.1; unit 10.
13. Red-brown surfaces with burnished exterior; abundant medium-coarse dark grit. Horizontal lug handle. Rim dm 16 cm. A.371.2; unit 106. Schwartz 1998a: Fig. 35: 1–2 (Leilan IIc), Fig. 45: 2–3 (Leilan IIIb).
Fig. 12  Early 3rd millennium/Ninevite 5 Pottery from the Tell Hamoukar surface collection.
Later 3rd millennium pottery from the Tell Hamoukar surface collection.

1. Pale yellow surfaces, orange-pink core; common fine chaff, occasional fine sand temper. Rim dm 38 cm. A.167.1; unit 66. Wilkinson and Tucker 1995: Fig. 69: 23–24 (North Jazira type 103); Matthews et al. 1994: Fig. 7: 1 (Brak HS, “Akkadian”); Matthews 1996: Fig. 18: 1 (Brak HF1, “Mid-third millennium”); Lebeau 1993: Pl. 142: 1–6 (Melebiya Niveau 2, EDIII); Curvers and Schwartz 1990: Fig. 6: 1, 4, 7 (Raqa‘i Lev. 2).

2. Pale yellow surfaces, yellow-grey core; common fine sand; sandy fabric. Rim dm 38 cm. A.73.1; unit 23.


4. Orange-brown burnished surfaces, black core; occasional fine chaff, abundant fine-medium dark grit. Rim dm 29 cm. A.189.6; unit 87.

5. Pale orange surfaces, red-brown core; abundant medium-coarse dark grit (visible in surfaces). Rim dm 26 cm. A.158.4; unit 57.

6. Pale yellow surfaces, orange-brown core; frequent fine-medium chaff, occasional fine grit. Rim dm 36 cm. A.184.1; unit 83. Oates 1982: Fig. 5: 82, 84.

7. Pale yellow-green surfaces and core; frequent fine sand and fine chaff. Rim dm 46 cm. A.151.5; unit 50. Oates 1982: Fig. 5: 83.


9. Blackened surfaces, brown core; common–frequent medium chaff temper. Rim dm 40 cm. A.352.20; Area D.


11. Pale grey surfaces, grey core; occasional fine sand. Rim dm ca. 40 cm. A.172.6; unit 71. Numoto 1988: Fig. 23: 171–176 (Fisna Vaj); Lyonnet 1990: Fig. 11: 1–2, 4 (Muhammad Diyab surface collection).

12. Grey burnished ext, green-grey interior, thin grey core with brown margins; common fine chaff. Rim dm 34 cm. A.370.8; unit 105.

13. Grey surfaces and core; common fine sand. Rim dm 30 cm. A.66.1; unit 16.

14. Yellow-green surfaces and core; frequent–abundant chaff, rare sand. Rim dm 40 cm. A.353.9; Area D. Wilkinson and Tucker 1995: Fig. 69: 25–26 (North Jazira type 154); Oates 1982: Fig. 2: 43; Fielden 1977: Pl. XII: 9 (Brak CH “phase 2”); Breternicher and Jans 1997: Taf. IV: 4–5 (Tell Beydar Area F); Lebeau 1993: Pl. 186: 8 (Melebiya Niveau 2); Weiss 1983: Fig. 10: 20 (Leilan II).

15. Pale green surfaces and core; common–frequent medium chaff temper. Rim dm ca. 30–40 cm. A.160.3; unit 59.

16. Pale yellow-green surfaces and core; common fine sand, occasional fine chaff. Rim dm 51 cm. A.54.1; unit 4.

17. Blue-grey surfaces and core, with horizontal yellow striations; no visible temper. Hard fired. Rim dm 12 cm. A.370.7; unit 105.


20. Dark red surfaces with horizontal black-grey striations, grey core; no visible temper. Hard fired. Rim dm 14 cm. A.181.1; unit 80. Oates 1982: Fig. 1: 16; Curvers and Schwartz 1990: Fig. 5: 5 (Raqa‘i Lev. 2).

21. Grey-green surfaces, green core; occasional fine lime; sandy fabric. Base dm 7 cm. A.69.6; unit 19. Wilkinson and Tucker 1995: Fig. 69: 5–7 (North Jazira type 30); Oates 1982: Fig. 1: 7–13; Fielden 1977: Pl. XII: 14 (Brak CH “phase 2”); Matthews et al. 1994: Fig. 7: 3 (Brak HS, “Akkadian”); Weiss 1983: Fig. 10: 1–2 (Leilan II).

22. Pale yellow surfaces, yellow-green core; occasional sand; sandy fabric. Base dm 9 cm. A.78.2; unit 28.


24. Pink to yellow surfaces, pink-orange core; common fine sand, occasional fine white grit. Base dm 26 cm. A.53.1; unit 3. Oates 1982: Fig. 3: 50 (Brak ER, “ED destruction level”); Lyonnet 1990: Fig. 14: 2 (Muhammad Diyab surface collection).

25. Pale yellow surfaces, pink-orange core; common fine chaff and fine–medium white grit. Base dm 23 cm. A.366.1; unit 102.

26. Pale green surfaces and core; common chaff and sand. Dm at carination 39 cm. A.151.16; unit 50. Numoto 1988: Fig. 25: 216–217 (Tell Fisna).

27. Pale yellow surfaces, pale orange core; common fine chaff and occasional sand. Dm at carination 8 cm. A.165.15; unit 64.

28. Pale green surfaces, light brown core; common medium chaff, rare fine sand; interior scraped vertically; 3 bands of 3–pronged comb incision. Dm at lower band 15 cm. A.74.1; unit 24. Wilkinson and Tucker 1995: Fig. 69: 18–22 (North Jazira type 32); Ball, Tucker and Wilkinson 1989: Fig. 22 (Tell al-Hawa, Later 3rd millennium); McMahon 1998: Fig. 5: 27, 30–31; Fig. 8: 24–25, 30–31; Fig. 9: 5, 10, 12, 14 (Nineveh KG levels VII-VIB); Reade 1968: Pl. LXXXV: 20 (Taya level VII).
Fig. 13  Later 3rd millennium pottery from the Tell Hamoukar surface collection.
Fig. 14 Iron Age/Neo Assyrian pottery from Tell Hamoukar Area C and surface collection

1. Red-brown surfaces with roughly burnished exterior, thin black core; abundant medium-coarse white grit. Rim dm 8 cm. A.202.6; Area C locus 1. Lumsden 1999: Fig. 7: 43 (Nineveh MG22); Curtis and Green 1997: Fig. 32: 81 (Khirbet Khattinijeh Level 6).

2. Orange-brown smoothed exterior, pale orange interior; occasional-common fine lime, rare fine chalk. Rim dm 23 cm. A.201.2; Area C locus 1.

3. Pale green surfaces and core; common fine sand. Rim dm 19 cm. A.205.1; Area C locus 2. Curtis and Green 1997: Fig. 42: 188–189, Fig. 41: 183, 185, 187 (Khirbet Khattinijeh Level 4); Lumsden 1999: Fig. 7: 40–41 (Nineveh MG22); Schmidt 1999: Abb. 6b: 1 (Kar-Tukulti-Ninurta Bauphase 4); Jamieson 1999: Fig. 3: 1 (Tell Ahmar Area C); Wilkinson and Tucker 1995: Fig. 73: 17 (North Jazira survey).

4. Yellow-buff surfaces, pale orange core; occasional chalk, frequent fine lime. Rim dm 22 cm. A.205.2; Area C locus 2.

5. Yellow-green surfaces, green core; frequent chalk. Rim dm 14 cm. A.164.5; surface collection. Oates (Lines) 1954: Pl. XXXIX: 1–3 (Nimrud); Oates 1959: Pl. XXXVIII: 97 (Nimrud); Curtis and Green 1997: Fig. 41: 179–181 (Khirbet Khattinijeh Level 4); Wilkinson and Tucker 1995: Fig. 73: 21–22 (North Jazira survey, type 114).

6. Green surfaces and core; frequent fine sand, occasional chalk. Rim dm 11 cm. A.205.5; Area C locus 2.

7. Pale orange surfaces, orange core; common-frequent fine-medium chalk. Rim dm 13 cm. A.68.3; unit 18. Lumsden 1999: Fig. 6: 25 (Nineveh MG22).

8. Buff surfaces, orange core; frequent chalk, common sand and fine-medium lime. Rim dm 27 cm. A.164.20; surface collection. Oates 1959: Pl. XXXV: 12 (Nimrud); Lumsden 1999: Fig. 5: 12–14 (Nineveh MG22); Curtis 1989: Fig. 27: 71–72, Fig. 28: 82–84 (Khirbet Qasrîj); Wilkinson and Tucker 1995: Fig. 73: 1–3 (North Jazira survey, type 57).


10. Pale orange surfaces, grey-brown core; common medium chalk, rare fine white grit. Rim dm 27 cm. A.68.6; unit 18. Wilkinson and Tucker 1995: Fig. 73: 19 (North Jazira survey, type 112).

11. Yellow-buff surfaces, orange core; frequent chalk, common fine sand. Rim dm 25 cm. A.205.12; Area C locus 2. Oates 1959: Pl. XXXV: 23 (Nimrud); Lumsden 1999: Fig. 5: 23 (Nineveh MG22); Wilkinson and Tucker 1995: Fig. 73: 4–6 (North Jazira survey, type 38).

12. Pale orange smoothed surfaces, grey core; common-frequent medium chalk. Rim dm 23 cm. A.203.3; Area C locus 1.


15. Red-orange surfaces, brown core; common fine chalk, occasional fine sand. Rim at carination 6 cm. A.70.8; unit 20. Lumsden 1999: Fig. 8: 52–53 (Nineveh MG22); Curtis and Green 1997: Fig. 32: 77 (Khirbet Khattinijeh Level 6); Schmidt 1999: Abb. 6b: 30 (Kar-Tukulti-Ninurta Bauphase 4); Wilkinson and Tucker 1995: Fig. 73: 7–8 (North Jazira survey, type 59).

16. Blackened brown surfaces (exterior smoothed); common fine chalk, frequent sand. Dm at carination 5 cm. A.203.9; Area C locus 1.

17. Buff-yellow exterior, buff interior, orange core; common chalk, occasional fine sand. Base dm 4 cm. A.205.20; Area C locus 2. Curtis and Green 1997: Fig. 58: 396 (Khirbet Khattinijeh Level 6); Wilkinson and Tucker 1995: Fig. 73: 23 (North Jazira survey, type 118).

18. Red-brown exterior, orange-brown interior, thick black core; abundant chalk. Base dm 12 cm. A.164.30; surface collection. Curtis and Green 1997: Fig. 53: 319 (Khirbet Khattinijeh Level 4); Wilkinson and Tucker 1995: Fig. 73: 12 (North Jazira survey, type 61).

Fig. 14 Iron Age/Neo Assyrian pottery from Tell Hamoukar Area C and surface collection.
Fig. 15 Seleucid/Hellenistic pottery from the Tell Hamoukar surface collection.

1. Pale orange ext, orange-brown interior, brown core; occasional fine chalk, common fine–medium dark grit and sand; shallow impressed grooves under rim. Rim dm 55 cm. A.97.1; unit 47. Holland 1976: Fig. 6: 29 (Sweyat Area IIA phase G); Oates and Oates 1958: PL. XXVII: 14 (Nimrud) (note: these parallels both have a horizontal notched ridge which is not preserved on the Hamoukar examples.)

2. Pale orange surfaces, orange core; common dark fine–medium grit; red painted int and top, traces on exterior. A.97.2; unit 47.

3. Grey-brown surfaces and core; common fine dark grit; smooth ext; rim dm 33 cm. A.389.15; unit 127.

4. Pale orange-beige surfaces, thin grey core; frequent–abundant fine sand and fine white grit (visible in surfaces); rim dm 31 cm. A.389.12; unit 127. Gerritsen 1996: Fig. 5: 52 (Balikh Survey).

5. Pale orange surfaces, orange core; common fine sand; rim dm 33 cm. A.389.13; unit 127.

6. Grey-brown surfaces, grey core; abundant fine–medium dark grit, very hard fired; rim dm 25 cm. A.389.1; unit 127.

7. Grey-brown surfaces, grey core; common fine–medium dark grit; ext slipped or smoothed; rim dm 21 cm. A.389.2; unit 127.

8. Orange surfaces, orange-brown core; frequent fine sand, occasional medium dark grits; rim dm 26 cm. A.389.3; unit 127.

9. Orange-red ext, pale orange interior, brown core; abundant dark and light grit (visible on surfaces); rim dm 22 cm. A.69.5; unit 19.


11. Pale orange surfaces, orange-brown core; frequent fine sand; rim dm 21 cm. A.389.10; unit 127. Curtis and Green 1997: Fig. 59: 408 (Khirbet Khattushah Level 2).

12. Pale orange slipped (?) ext, orange-pink interior and core; frequent–abundant fine white grit; rim dm 12 cm. A.389.11; unit 127.

13. Pale grey-green surfaces and core; frequent–abundant dark and light fine grit; rim dm 12 cm. A.97.3; unit 47. Gerritsen 1996: Fig. 6: 54–63; Holland 1976: Fig. 6: 33 (Sweyat Area IIA phase G); Oates and Oates 1958: PL. XXVII: 11 (Nimrud); Wilkinson and Tucker 1995: Fig. 75: 5–7 (North Jazira survey type 65); Numoto 1988: Fig. 32: 367 (Fisna Lev. II); Lázaro 1988: Pl. 165: 60–92 (Hamman et-Turkman X).

14. Pale yellow-buff surfaces, yellow-grey core; frequent fine white grit and sand (visible in surfaces); rim dm 14 cm. A.389.7; unit 127.

15. Pale orange-buff surfaces, brown core; frequent dark grit/sand (visible on surfaces); rim dm 20 cm. A.97.8; unit 47.

16. Yellow-cream slipped ext, pale orange interior, orange-brown core; frequent fine white grit and sand; rim dm 19 cm. A.389.6; unit 127.

17. Pale yellow-buff surfaces, grey-yellow core; frequent fine white grit (visible in surfaces); rim dm 17 cm. A.389.8; unit 127.

18. Grey-brown surfaces, grey core; common fine sand; rim dm 17 cm. A.389.9; unit 127.

19. Orange-brown surfaces, brown core; red-brown painted top of rim; frequent fine sand and fine white grit; rim dm 27 cm. A.389.5; unit 127.

20. Pale yellow-buff surfaces, orange-brown core; red-brown painted top of rim; frequent fine white grit, occasional fine sand; rim dm 26 cm. A.389.4; unit 127.

21. Red-brown painted orange slipped ext, grey-brown interior, orange core; frequent fine dark grit (visible in surfaces); dm at carination 4 cm. A.389.22; unit 127. Gerritsen 1996: Fig. 6: 66–69 (Balikh Survey); Oates and Oates 1958: PL. XXVII: 2, 11 (Nimrud); Wilkinson and Tucker 1995: Fig. 75: 21–23 (North Jazira survey type 158); Lázaro 1988: Pl. 169: 145–148 (Hamman et-Turkman X).

22. Pale orange surfaces, thin brown core; common fine white grit, occasional coarse dark grit; dm at carination 4.4 cm. A.77.5; unit 27.

23. Pale orange ext, orange-red interior, red core; frequent fine–medium dark and lt. grit; base dm 8.5 cm. A.97.11; unit 47.

24. Pale orange surfaces, orange-brown core, frequent fine grit (visible in surfaces); possible thin int slip; rim dm 13 cm. A.389.16; unit 127. Oates and Oates 1958: PL. XXIII: 14–16 (painted), 29–31 (unpainted) (Nimrud); Gerritsen 1996: Fig. 3: 1–10 (Balikh Survey); Lloyd 1954: Fig. 1: 28–30 (Sultantepe); Holland 1976: Fig. 6: 5, 9–10, 13 (Sweyat Area IIA phase G); Wilkinson and Tucker 1995: Fig. 75: 1–4 (North Jazira survey type 64); Numoto 1988: Fig. 31: 340–342 (Fisna Lev. II).

25. Pale orange (slipped?) surfaces, brown core; red painted ext; common sand; rim dm 20 cm. A.97.13; unit 47.

26. Bulb surfaces, brown core; occasional fine dark grit; traces of red and black paint on all surfaces; rim dm 23 cm. A.97.4; unit 47. Oates and Oates 1958: PL. XXIII: 8–11 (Nimrud); Wilkinson and Tucker 1995: Fig. 75: 18 (North Jazira survey type 116).

27. Bulb surfaces, brown core; occasional fine dark grit; traces of red and black paint on all surfaces; rim dm 20 cm. A.97.5; unit 47.

28. Pale yellow surfaces and core; black painted rim; common–frequent sand; rim dm 17 cm. A.97.7; unit 47. Gerritsen 1996: Fig. 3: 11–17; Holland 1976: Fig. 6: 6 (Sweyat Area IIA phase G); Oates and Oates 1958: PL. XXIII: 2–4 (Nimrud); Numoto 1988: Fig. 31: 335–336.

29. Pale orange slipped surfaces, red painted top and interior, brown core; common fine sand and white fine grit; rim dm 19 cm; “fishplate.” A.389.17; unit 127.

30. Bulb surfaces, orange core; frequent fine white grit; rim dm 20 cm. A.97.9; unit 47.
Fig. 15  Seleucid/Hellenistic pottery from the Tell Hamoukar surface collection.