III. 1. The autumn 2006 rescue operations at Tell Majnuna By P. KARSGAARD and A. SOLTYSIAK

A two-week salvage operation was undertaken at Tell Majnuna in the autumn of 2006. Investigations were carried out in two areas, MTE and MTW, though most effort was devoted to MTW, on the southwest side of the mound. Here, the spoil heap from the machine-cut trench was heavily strewn with ceramics, animal and human bone, and clay objects: sealings, an animal figurine, ovoids and finger-impressed lumps which may represent discarded sealing clay.

The spoil heap was sampled by retrieval of bone and ceramic material from its surface, in discrete two-metre-wide collection units. In addition, two of these collection units were sampled by sieving with a 2 mm mesh screen. Over 700 human bones or bone fragments were retrieved from the surface collections and sieved units. The south-facing section of the machine-cut trench was also investigated. This entailed a detailed recording of the section, identification and retrieval of clusters of disarticulated and partially articulated human remains, and excavation of a 1.0×0.4 m box trench in order to gain insight into the stratigraphic deposition and to investigate one cluster. Thirteen clusters of human remains were identified in this section, representing at least 24 individuals; 12 further maxillae were identified from the spoil heaps, so that the remains of a minimum number of 24–36 individuals are represented in the salvage sample. Patterns of preservation indicate that crania, femora and humeri were most often found, with a lack of hands and feet. Some long bones had teeth marks compatible with the activity of scavenging carnivores. This pattern of preservation correlates to some extent with modern US forensic cases of scavenged human remains in the last stages of decomposition (Haglund 1997).

Sex determinations in a highly fragmented sample are problematic, but there are indications that no sex predominates strongly. Preliminary age determinations reveal a lack of very young infants, and no single element was found of a child below 4 years of age. The evidence from dentition using Brothwell's (1981) scoring system suggests that the most common age range was 25–35 years. It thus appears that the population retrieved from the salvage operation does not conform to a normal living demographic profile or to a regular cemetery.

The section investigation indicated that large amounts of waste, ash, animal bone and human remains were discarded in sloping tip lines, some 17 m wide east—west, in two main depositional episodes. The box-trench, excavated to virgin soil, confirmed that the strata containing the majority of the discard material sloped downwards from west to east and south to north. This discard is very dense; in addition to the ceramic and human skeletal material, the remains of some 30 sheep and goat, as well as 5–10 cattle, were retrieved from the box trench alone (J. Weber, pers. comm.).

All ceramics retrieved from the spoil heap and box trench are datable to the LC3 Period. These consist mainly of shallow and deeper bowls with flat-topped rims, large ovoid or globular jars with flaring necks and "casseroles", both chaff-tempered and grey-burnished, some with coarse shell tempering. Also present are typical fine wares: carinated bowls and small jars with flaring necks. The lack of other common MNU forms such as "pie-plates" with rounded rims, hammerhead bowls, casseroles with rounded and folded rims, and jar rims with internal corrugations, may represent chronological or functional differences. If functional, these particular forms may have been preferentially used and discarded in the activities which resulted in this accumulation of waste, or certain sub-communities at Brak had preferences for differing forms within the common ceramic assemblage. If chronological, the composition of the assemblage from MTW suggests a date *early* in the Middle Northern Uruk. Similar forms are found in the lowest MNU levels on the HS spur, with comparisons from the earlier pre-contact levels at Hacinebi (Felli 2003 with references).

It appears, therefore, that Majnuna represents an area on the northern periphery of early fourth-millennium Brak devoted to the discard of both household waste (mostly related to consumption events) and human remains. One question that may be asked is whether these residues represent the results of normal mortuary and discard practice or some sort of crisis. The restriction of most of the human remains in this area to two strata suggests their rapid deposition. These bodies might then represent the outcome of widespread sudden death at the site, attributable to either epidemic disease (as in medieval plague pits, cf. Waldron 2001), or warfare. Unfortunately the

sorts of epidemic which quickly result in mortalities do not leave detectible osteological traces, and therefore cannot be directly confirmed. Demographically, the remains do not conform absolutely to the population profile expected for virulent disease, as young children are not present (compare Paine 2000).

Could these "waste deposits" be the result of normal practice? One possibility is that these human remains represent the secondary redeposition of bodies from a pre-existing cemetery. However, in this case one would expect that the secondary burial of wholly defleshed remains would result in wholly disarticulated bones, while many of the clusters investigated contained partially and well articulated elements. Assumptions have been made that, from the fifth millennium at least, when 'Ubaid-Period extra-mural cemeteries are well attested, individual inhumation was the norm for later prehistoric Mesopotamia. No such cemeteries from the fourth millennium have been found (excepting the case of ENU/LC2 Tepe Gawra), however, and it is increasingly clear that burial practice in northern Mesopotamia was quite diverse (e.g., Tell Banat and Umm el-Marra). Very young infants and neo-nates were often buried in pits and urns below houses or in temporarily abandoned areas of the high mound, as in TW. There is also sporadic evidence for older child and adult human internments in pits associated with "waste", at both Brak and further afield, for the same period as MTW. For instance, at Brak, Trench HS1 revealed in Level 1 a small pit, less than one metre across, containing a 5-8 year-old child associated with sherds, a horn core, and other debris (Felli 2003: 66); at Kurban Höyük adult skeletons were "sprawled" in a pit (Algaze 1990: 32). None of these examples is of the scale of the Majnuna mortuary deposits, however. MTW does lack the very portion of the ancient population for which we have good evidence elsewhere, namely the very young. That these two practices dovetail might indicate that they were complementary, and that the disposal of some section of the population's remains along with what we consider to be household waste might indeed be a part of normal practice.

It may also be that these remains represent the results of large-scale inter-community violence or warfare. Later third-millennium Mesopotamian practice, as commemorated, for instance, on the Stele of the Vultures, appears to include the making of large mounds of the bodies of defeated enemies (birûtu or humûsum: Durand 2005; Marti 2005);9 these examples are of course later, from Mari and lower Mesopotamia. Some crania retrieved bear possible indications of interpersonal violence, including two instances of healed depressed fractures: in Cluster D, there was a fragment of left parietal with a regular 9×8 mm oval depression, located near the parietal foramen. Surrounding it is a partially obliterated inflammatory bone reaction. In a Cluster M cranium, a well-obliterated irregular depression on the right parietal close to the coronal suture was noted. Another irregular well-obliterated depression was noted just above the auditory canal on a left temporal fragment from the spoil heap, and a deformed mastoid process on a cranium came from the box-trench excavations. Most of these injuries are consistent with the use of blunt weapons such as mace-heads, but the lack of common metal weaponry in the fourth millennium might mean that osteological evidence of fatal trauma would remain scarce even in cases of war fatalities. It is notable that this unique concentration of human remains is contemporaneous with Brak's massive urban growth in the MNU phase when the site reached unprecedented levels of settlement (Ur et al. 2007), processes which may not have occurred without conflict. The stratigraphic evidence may be interpretable as the dumping of a large number of fleshed and partly de-fleshed individuals in a short space of time in an open refuse area, disturbed by the action of scavenging carnivores, and subsequently mixed and covered with household waste. The demographic evidence is not inconsistent with the dumping of bodies resulting from political violence, which must remain a possibility.

III. 2. The 2007 excavations at Majnuna

By A. McMAHON and A. STONE

The formal investigation of the Majnuna mass burials was a key focus of the 2007 excavation. Area MTW, designed to explore the northern extent of this burial, was a 2.5×14 m trench perpendicular to the modern trench at the southwestern side of the mound in the same area as

⁹ Karsgaard is indebted to Eddie Peltenburg for the birûtu/humûsum references.