

expanding process on the southwestern side of the mound was underway. The quantity of ceramics was minimal and attributable to normal background levels of breakage and discard.

#### *Area EME*

Thirteen skeletons were recovered from this area, at two different elevations within the ash-rich layers which characterise this area. The loose ash made it difficult to delineate any pits into which the bodies may have been laid, but we are assuming there were at least shallow cuts; the burials were not accompanied by grave goods. The skeletons here were articulated and undisturbed, yet the time elapsed for creation of the cemetery is likely to have been quite short, and the skeletons (like those from the mass burial pits) do not match an expected “death population” (see the report by Soltysiak, below). The ceramics indicate that the date of the cemetery is slightly later than that of the western mass burials, so the explanation for this cemetery’s creation does not need to match that of the mass burials. Further analysis is necessary before we can determine whether it could be the result of a separate, perhaps smaller-scale violent event.

### III. 3. *Preliminary report on human remains from Tell Majnuna (spring 2007)*

By A. SOLTYSIAK

During the 2007 spring excavation season, human remains were discovered in all five trenches at Tell Majnuna. The pattern observed during the 2006 salvage operation was repeated, and again partially articulated skeletons together with large quantities of completely disarticulated bones were found in all three trenches in the western part of the tell, MTW, EM and EMS. Two isolated regular burials were revealed in MTE and at least thirteen burials in Area EME, close to the centre of Majnuna.<sup>11</sup>

#### *Majnuna West: The death pit(s)*

The most interesting data were gathered in the western part of Majnuna (MTW). Only the upper layer of bones in the dense bone and sherd deposits could be analysed in the spring of 2007, and the distribution pattern was very similar to that observed in 2006. There were chiefly crania and cranial fragments of at least nine individuals: three fairly complete crania close to previous Cluster H and many small pieces excavated further north, including six large fragments of temporal bones belonging to various individuals. As before, many pieces of long bones and innominates were also found, but almost no hand or foot bones (Fig. 12).

In total, about 70 bones and bone fragments were analysed from these layers. The three best preserved crania belonged to a young male, an adult female and a 10–11 year-old child. Many bones, especially femora and innominates, had been gnawed by carnivores (Fig. 13) and a few also by rodents. No bones of infants were found and most pieces belonged to subadults and young adults. Only two articulations were observed, both very close to the modern trench section: one femoral head still in *acetabulum* and at least five lumbar and thoracic vertebrae in a row together with broken ribs.

The edge of another “death pit” was found in the northern corner of EM. Only the uppermost layer could be explored during the 2007 season; this contained some 300 identified human bones and bone fragments, together with ceramics and single animal bones. Since some long bones were oriented almost vertically and the upper parts of a few skulls were identified below the excavated layer, it is expected that this dense layer of human remains continues to slope down and to the north. On the upper southern edge, no articulations were observed, but to the north and deeper within the layer some connections — especially between vertebrae — were quite frequent. It is possible that the stratigraphy is analogous to that of the MTW “death pit”, where articulated parts of human skeletons were covered by disarticulated human and animal bones mixed with

<sup>11</sup> The human remains excavated at Majnuna were studied in the excavation house at Tell Brak, and taphonomical documentation was produced for most bones found in MTW, EM, and EMS, including *in situ* sketches and photographs, identification of articulations, and description

of all observed ancient and fresh *post mortem* alterations of bones. Sex and age diagnosis, as well as all possible measurements, were based on standards developed in the Field Museum of Natural History (Buikstra and Ubelaker 1994).

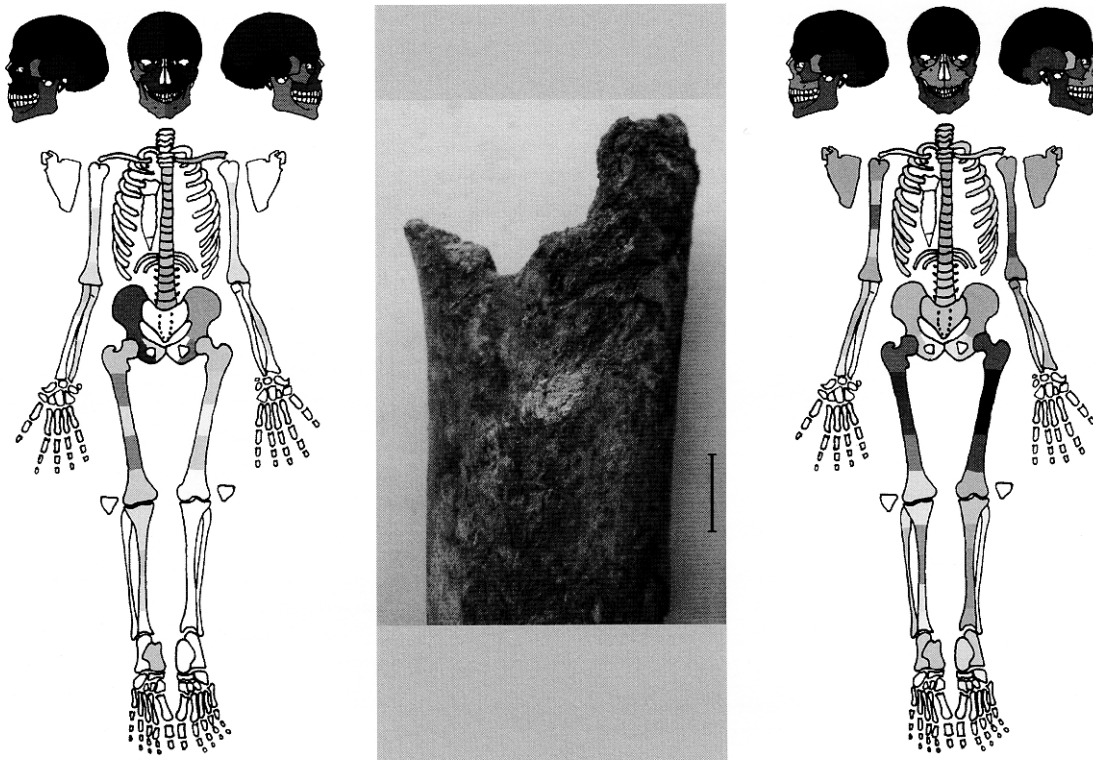


Fig. 12 (left) Pattern of bone distribution in MTW Loci 59.2, 64 and 65 (all bones pooled).

Fig. 13 (centre) Furrows and punctures made by carnivore teeth in a right femur from MTW Locus 65.

Fig. 14 (right) Pattern of bone distribution in EM Locus 6 (all bones pooled).

pottery. There is, however, one important difference: in EM sherds and animal bones were much less common. Moreover, the disarticulated human bones on the top seem to be distributed non-randomly: at least two clusters or groups of long bones were easily identified. Traces of animal damage were found almost as frequently as in MTW contexts.

The parts of the skeleton most often found in EM were crania, and the minimum number of individuals based on their number is 28, including 12 adults and 12 older children/juveniles. The distribution of bones in EM repeats the pattern known from MTW: there are many crania, humeri and femora, and very few hand and foot bones (Fig. 14). Again, no remains of infants were found, but the number of older children and juveniles is very high and certainly does not reflect the expected frequency in a regular cemetery. The frequency of child/juvenile bones among the skulls is as high as 48%, in upper limbs 38%, and in lower limbs 41%. Such a pattern again strongly points to the hypothesis of a sudden catastrophic event (cf. Paine 2000).

In the EMS trench some disarticulated and partially articulated skeletons were also found, but this time the pattern was completely different. There was no "death pit", but one dense cluster of mixed human and animal bones close to an almost complete human skeleton, one human leg and scattered animal remains. The cluster of bones chiefly contained animal elements, together with four more or less complete human crania, two heavily broken human mandibles and several fragments of long bones, innominates, vertebrae and at least one other cranium. Some bones had been gnawed by rodents, some were heavily weathered, and some have traces of plant roots on their surfaces. All this suggests that they were collected from various places after complete decay of the bodies. The only observed articulations were connections between Th11 and Th12 and between L3 and L4 of a juvenile individual, but such pairs of vertebrae may have been stuck together by earth. All four crania belonged to adult individuals, some cranial pieces to an older child and the mandibles to an adult and a child about 9 years old. All postcranial pieces were of adult or sub-adult age, and again no infant remains were found. The context and outline suggest

that the cluster had originated in a large basket or bag. Northwest of this cluster there was part of a bent and articulated right leg of a juvenile, with almost complete femur, patella, tibia and fibula. The femoral head was partially fused, other epiphyses were missing except femoral distal and tibial proximal epiphyses. However, the individual was almost fully grown with the maximum length of the femur equal to 44.9 cm, which gives a stature estimate of 168 cm for a male (Trotter and Gleser 1952).

East of this leg, close to the northern section of the trench, there was an almost complete skeleton of a 7–10 year-old child. The lower body was placed on its right side, with both legs flexed and continuing into the northern section. Since the body was originally located on a slope, innominates, leg bones and the left foot were dislocated after decay of the ligaments by 10 to 20 cm. There are also minor dislocations in the spine, dorsal sides of lower vertebrae northwards, upwards in upper vertebrae. The left arm was almost complete, but the right humerus, scapula and clavicle, as well as skull (except perhaps one tiny piece of cranial vault) and hands were missing. Traces of carnivore teeth were observed on innominates, left scapula, clavicle and some ribs; rodent toothmarks are also abundant on the right ulna. The occurrence of toothmarks chiefly in less exposed parts of the skeleton suggests that the body was transported from elsewhere with some parts already gnawed and was then thrown away on the slope of the mound.

#### *Majnuna East: The cemetery*

More burials were found in the EME trench. The skeletons were regularly articulated and placed on their sides. Only a few measurements were taken *in situ*, but preliminary sex and age diagnosis on a selection of the skeletons has been completed. Among the thirteen individuals there were at least five adults (including two young males and one female), one juvenile and two 9–10 year-old children. The teeth of the adult individuals were only slightly worn, which suggests that they were relatively young when they died.

#### *Final remarks on the human remains*

Excavations in the spring season of 2007 confirmed the interpretation of the “death pit” discovered and sampled in autumn 2006. It now appears, however, that much of the western part of Majnuna may contain a similar level of human remains. Thus far, the minimum number of individuals from all contexts in MTW, EM and EMS is 67 (79, including bones from the spoil heaps in 2006). However, only a small part of the pits at Majnuna has been explored, and it may safely be assumed that there remain bones of hundreds of individuals.

The most likely explanation of the deposits of human remains in the western part of Tell Majnuna is a massacre of a local population. Dead bodies were obviously transported from elsewhere in an advanced state of decay (but some still partially articulated) and thrown into the pits. Since the pattern of preservation and the age profile is very similar in all the observed contexts, the objective for the next excavation season may be not the confirmation of the massacre hypothesis, which seems already well grounded, but the gathering of data to reconstruct the quality of life, diet, activity patterns and other biological characteristics of the local population. On the other hand, detailed descriptions of bone distribution may be used for modelling the sequence of bone transportation and the method of clearing of the location of the presumed massacre.

### IV. Late Chalcolithic sealings

By A. McMAHON

Ninety-one sealings from Levels 18 to 21 were recovered during the 2006–7 excavations in Area TW, while the 2007 excavations on Majnuna provided an impressive 267 additional examples. The majority of the latter (130) came from the rubbish layers in Area MTE, with smaller, but still significant, numbers from the burial pits in Areas MTW (66), EM and EME (27 each) and from the ash layers surrounding the skeletons in Area EMS (17).<sup>12</sup> A few stamp seals were

<sup>12</sup> These figures are provisional, from initial assessment in the field, and may change slightly with further analysis. Omitted from the figures for the moment are squashed

lumps of sealing clay with obscured impressions, found in all the Majnuna trenches.