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Bakr Āwa (Iraq), seasons 2010–2011

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The site of Bakr Āwa (35°13'14"N, 45°56'26"E), in the Sulaymaniyah Province of Northern Iraq, was first described by James Felix Jones in 1844. Regular excavations at the site were undertaken in 1960-1961 by the Iraqi General Directory of Antiquity and then resumed in 2010 by the German-Kurdish archaeological team directed by Professor Piotr Miglus from the Institute of Pra- and Protohistory, University of Heidelberg. A preliminary report of excavations carried out in 2010, together with a historical introduction, has already been published (Miglus et al. 2011).

The site of Bakr Āwa, with an area of ~40 ha, is the largest site in southern area of Shahrizūr-Ebene. It consists of two parts: a Citadel and a Lower Town. Graves and pits containing human remains have been found in two trenches opened in the Lower Town. During two seasons of excavations at the Lower Town, as many as 56 features containing human remains were explored and were dated to the Islamic period (~25), the Iron Age (~15), the Middle/Late Bronze Age (~12), and Akkadian Period (~4). Most of these features were simple grave pits with primary burials containing one individual. There were, however, a few exceptions, eg. a secondary burial of male individual, a grave containing the remains of two individuals (one of them moved to the corner to make room for next burial), and another double burial with a female skeleton covered with waste deposit and a male skeleton in a secondary context above. There was also a multiple burial that contained portions of a few skeletons still in anatomical order as well as many disarticulated bones. Single fragments of human remains were also retrieved from several animal assemblages.

One of the skeletons studied by the present author was found outside the trenches. During our work at the site, a Kurdish-Iraqi energy company placed the electric poles to bring electricity to the village of Bakr Āwa. One of pits dug for the electric pole was located on top of a modern graveyard and a part of the grave was disturbed by the workers. Bones from the dump were collected and described.

In general, a state of preservation of human remains was not good (average percentage of recognizable human remains is 39% per skeleton). Root etching and other taphonomic effects has been found on several bones. Also, nest and bones of small rodents were found in a few grave pits, but no rodent tooth marks were observed on bones.

Table 1. Age and sex distributions of individuals from the site of Bakr Āwa.

Age	MNI	Male	Female
0-0.9	4	-	-
1.0-6.9	12	-	-
7.0-14.9	2	-	-
15.0-19.9	4	-	2
20.0-29.9	7	2	3
30.0-54.9	13	6	4
55.0+	0	0	0
Adult	25	5	3
Total	67	13	12

Human skeletal remains were studied in the dig house in Halabja (~3 km from the site) using standard protocol (Bukistra & Ubelaker 1994). When possible, age and sex were assessed using more recent methods (White & Folkens 2005; Scheuer & Black 2000). Apart from skull and postcranial measurements as well as non-metric trait scores, several pathological conditions and stress markers were described (Ortner 2003; Waldron 2008). Standard osteological protocol was augmented by scores of several activity-related morphological features (e.g. geometry of bones, non-pathological modifications of articular surfaces, and asymmetry of the first metacarpals). All remains are stored in the dig house except for a few samples of teeth, ribs, and long bones that have been moved to the Department of Bioarchaeology, University of Warsaw, Poland.

The minimum number of individuals (MNI) from two years of excavations at Bakr Āwa is 66 (including 20 subadults). Sex was assessed for 25 adults (51%), and age was estimated for all individuals, although with various levels of precision and of confidence.

The most interesting context containing human remains was Old Babylonian chamber tomb 1108. Human remains were found in several places within the tomb and eight partial skulls were recorded *in situ*, as well as some skeletal portions still in anatomical order. The

minimum number of individuals, however, was only six based on the number of preserved mandibles; there were males and females as well as two children aged 6 and 11 years.

Oral pathological conditions were most common in the studied sample. Carious lesions were very frequent and affected 14/41 individuals. In most cases carious lesions were located at the cemento-enamel junction, only a few occurred on the occlusal crown part. Enamel hypoplasia was also common and affected 10/41 individuals. In four cases per 38 individuals with remains of alveoli, osteological signs of gingivitis (e.g., alveolar resorption and/or remodelling) were found.

Degenerative joint disease (DJD) was the most common pathological condition noted in the vertebral column. Schmorl's nodes and spondylosis were noted on the bodies of lumbar vertebrae in two individuals per 51 and another skeleton exhibited a fracture of the lumbar body. The DJD was noted on one occasion in the cervical spine. One case of spina bifida was noted in the sacrum. The DJD of finger segments was noted in 3/50 individuals. Cribra orbitalia was found in one adult per 30 and one child per 17.

There was no great variability in bone geometry among examined individuals. In one case the lateral asymmetry of several bones was probably related to a high level of physical activity. Also, in one case probably pathology-related difference in length of humerus and ulna (in both cases left bone was shorter than right one more than 10mm) has been noted.

More detailed report about human skeletal remains from Bakr Āwa will be published in *Zeitschrift für Orient-Archäologie* as an appendix to the general paper on excavations at the site.

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