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SUMMARY

The middle Euphrates valley (Syria) is a very interesting and important region for the history of Mesopotamia. The excavations are currently carried out at Tell Ashara and Tell Masaikh.

The first site is primarily the remains of a Bronze Age (2700–1500 BC). At Tell Masaikh were discovered the remains of settlement from the Chalcolithic (4500 BC), and the middle Bronze Age, as well as a huge governor's palace from the times of the Assyrian empire's days of glory (800–650 BC). The paper is a summary of anthropological research conducted in 2009. We have been excavated 80 human skeletons (50 individuals from Tell Masikh, and 30 from Tell Ashara).

Intensive excavations in the Near East, which have been carried out for over one hundred years, show that this land merits to be called a cradle of civilisation. In this light, the region of Tell Ashara is considered one of the most interesting places. Tell Ashara (ancient Terqa),

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situated on the right bank of the Middle Euphrates, around sixty kilometres north of Mari, is known to have been a site already in the third and second millennium BC. The first records concerning Terqa date from 1897. A series of excavations started in 1975 with the work of scientists from the University of California – the so-called Los Angeles Mission – headed by Profs. G. and M. Buccellati. Since 1987, research at this site and in its surroundings has been continued by a French team, guided by Prof. Olivier Rouault (University Lyon 2 – Lumière). The second archaeological site – Tell Masaikh – is located on the left bank of the Euphrates, some 6 km upstream of Terqa (34°58'23"N 40°33'13"E). For over fourteen years a French-Syrian archaeological excavation team carried out fieldwork at Tell Masaikh. Excavations at the site had begun as a rescue operation, but later on became an academic research project directed by Prof. Maria Grazia Masetti-Rouault (Ecole Pratique des Hautes Etudes – Sorbonne, Paris, France). Since 2001, the projects have also involved research on human remains.

The 14th season of excavations at Tell Masaikh and the 29th season at Tell Ashara (September/November 2009) abounded in discoveries of human skeletons. The human remains were studied in an excavation house on the bank of the Euphrates River in Tell Ashara, and some samples were prepared for analyses in specialist laboratories. Our histological analyses are conducted in two independent research centres (Department of Patomorphology, Specialist Hospital in Siedlce, Poland and Department of Descriptive and Clinical Anatomy, Medical University of Warsaw, Poland) in order to obtain two independent sets of results. Radiological examinations are performed in the Institute of Nuclear Medicine and Magnetic Resonance, Brudnowski Hospital (Poland), and the Radiological Diagnostic Centre in Maiadin (Syria). This season we took some samples (teeth) for genetic analysis. The teeth were complete without cavities or other diseases. The samples were collected with sterile gloves, masks and other appropriate instruments. They were transferred to sterile containers at the archaeological site and

frozen until the beginning of an isolation procedure (Tomczyk et al. 2011).

As in previous seasons, bones and teeth are described with the use of a questionnaire based on *Standards of Data Collection* (Buikstra, Ubelaker 1994). The sex of the individuals was determined on the basis of the Phenice method which assesses morphological indicators of the pelvic bone. Moreover, our analysis was based on the morphological assessment of the skull (according to the Scoring System for Sexually Dimorphic Cranial Features). The age of the individuals was assessed on the basis of changes in the morphology of the pubis using the Suchey-Brooks System and changes observed on the auricular surface.

Apart from new burials, small amounts of human bones excavated in previous years and mixed with animal remains were studied. In sum, the remains of 50 individuals were examined: 20 (3 males, 3 females, the sex of the rest is unknown) were found at Tell Masaikh and 30 at Tell Ashara (6 males, 5 females, the sex of the rest is unknown). The samples from Tell Masaikh and Tell Ashara were dated to the Early Bronze (2800–2600 BC), Old Babylonian (1850–1750 BC), Neo-Assyrian (900–700 BC), Islamic (600–1200 AD) and Modern (1850–1950 AD) periods. In both sites, the skeletons were in an average state of preservation. Tables 1 and 2 present the preliminary general description of these skeletons.

The average stature was around 162 cm for males and 145/146 cm for females (Trotter, Gleser 1952). It is difficult to find the reason for such a tiny stature for both males and females. The most probable explanation is that the preservation of the skeletons was not satisfactory, and stature estimation was based on measurements of some bones only.

Tab. 1. Human remains from Tell Ashara and Tell Masaikh (season 2009).

No	Chronology	Sex	Age	SP	EH	CR	Comments
Tell Ashara							
TQ29 F1	Early Bronze	M?	adult	5			See below
TQ29 F11	Modern	F?	adult	4			
TQ29 F27	Modern	F?	adult	4			
TQ29 F44	Modern	M?	adult	3			
TQ29 F45	Modern	M?	adult	3	-	+	
TQ29 F60	Modern	?	2y	3	+	-	Teeth only
TQ29 F73	Modern	?	0/7y	2			
TQ29 F75	Modern	?	20/25y	3	-	-	Teeth only
TQ29 F76	Modern	?	2y	4	-	-	<i>Cribra orbitalia</i> on the left orbit
TQ29 F77	Modern	?	adult	4			
TQ29 F78	Modern	?	adult	2	-	+	Teeth only
TQ29 F85	Modern	M	~ 40y	4	+	-	<i>Cribra orbitalia</i> on the right orbit
TQ29 F86	Old Babilonian	?	adult	2			
TQ29 F89	Modern	?	adult	1			
TQ29 F94	Modern	?	adult	1			
TQ29 F95	Modern	?	adult	3	+	-	
TQ29 F98	Modern	?	1/1.5y	4	-	-	
TQ29 F102	Modern	M	adult	3			
TQ29 F103	Modern	?	?	3			
TQ29 F105	Modern	?	3y	3	-	-	
TQ29 F107	Modern	?	9y	2	+	+	Teeth only
TQ29 F108	Modern	F	adult	4	+	+	Compression of Th vert. body. <i>Cribra orbitalia</i> on the right orbit
TQ29 F110	Modern	?	2y	2	-	-	<i>Cribra orbitalia</i> on the left orbit
TQ29 F116	Old Babilonian	F	adult	4	-	-	Individual from sarcophagus. Significant thickening of the right tibial tuberosity.
TQ29 F117a	Modern	?	15y	3	-	-	

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TQ29 F117b	Modern	?	0/7y	2			
TQ29 F122	Modern	M	35/40y	4	+	+	See below
TQ29 F138	Modern	?	adult	3	+	-	
TQ29 F150	Old Babilonian	F	adult	4	-	-	
Tell Masiakh							
MK14 G1	Modern	?	adult	2			
MK14 G7	Islamic	M	20/25y	4	+	+	See below
MK14 G8	Islamic	?	0/7y	3			
MK14 G9	Islamic	?	0/7y	2	-	-	
MK14 G23	Islamic	F	17/18y	3			
MK14 G28	Islamic	?	adult	1			
MK14 EN30	Old Babilonian	F	18/20y	3	+	+	Individual from sarcophagus
MK14 G32	Islamic	M?	30y	2			
MK14 EN33	Islamic	?	0/7y	4			
MK14 G55	Islamic	?	8/9y	3	-	-	
MK14 G58	Islamic	?	0/7y	2			
MK14 G61	Islamic	?	1y	4	-	-	
MK14 G62	Islamic	?	adult	1			
MK14 G67	Islamic	F	18/19y	4	+	+	Assymetry in axis vert.
MK14 K92	Neo-Assyrian	?	0.9/1y	4	-	-	<i>Cribra orbitalia</i> on both orbits

SP - state of preservation (1 - very poor, 2 - poor, 3 - average, 4 - good, 5 - very good); EH - enamel hypoplasia, CR - caries (+ present, - absent); Chronology: Modern (1850-1950AD); Islamic (600-1200AD); Neo-Assyrian (900-700BC); Old Babilonian (1850-1750BC); Early Bronze, phase V (2800-2650BC).

Tab. 2. Human remains from Tell Ashara and Tell Masaikh (season 2008).

No	Chronology	Sex	Age	SP	EH	CR	Comments
MK13 G169	Islamic	?	adult	1	-	-	
MK13 G170	Islamic	?	0.9/1y	2	-	-	
MK13 G173	Islamic	?	adult	3			
MK13 G178	Islamic	?	adult	2			
MK13 G180	Islamic	M?	30/35y	4	-	-	
TQ28 F319	Old Babilonian	?	1y	1			

SP - state of preservation (1 - very poor, 2 - poor, 3 - average, 4 - good, 5 - very good); EH - enamel hypoplasia, CR - caries (+ present, - absent); Chronology: Islamic (600-1200AD); Old Babilonian (1850-1750BC)

Palaeopathological analysis constitutes a significant part of anthropological research and allows researchers to obtain information concerning the type of pathological conditions and occasionally the etiology and trauma of past populations. The skeletal analysis of particular cases provides a glimpse into the health norm of past populations.

A very interesting case from Tell Masaikh was labeled MK 14G7. The skeleton was recognized as a 20-25 years old male. The diagnosis of the age is based on the pubis, auricular surface and the skull. According to the Suchey-Brooks System this individual represented phase 2: lower extremities show an early stage of delimitation, the ventral margin begins formation. The observation of the left auricular surface shows phase 1: the surface displays a fine granular texture, without porosity. Sutures on the skull were a minimal closure (*lambda*, *bregma* and *mid-coronal*). We observed a flattened area, on the anterior view, on the left shaft of the clavicle (Fig.1).



Fig. 1 The left shaft of the clavicle (MK14G7).

This region does not contain any muscle so we think it is reaction to mechanical pressure e.g. supporting transported objects on the shoulders. One of the most common areas which indicate physical activity is the tuberosity for the insertion of the deltoid muscle onto the humerus. This structure is very strong and distinct. A similar structure was also found on the *extremitas acromialis* on the clavícula. It corresponds with a very strong acromial process on the scapulas and points to a long-term and heavy use of this muscle (e.g. *m. deltoideus*). Moreover, we have also found a strong structure on the shaft of the left ulna. Large exostosis, located on the ulnar olecranon processes, reflects a heavy use of the lower insertion of the tendon for *triceps brachii* – the main elbow extender. *Crista musculi supinatoris* is well developed, which proves that the supinator muscle was also unusually pronounced. On the left distal radius we observed a deep depression with elevated margins between the articular surfaces of the scaphoid and the lunate. This led us to the conclusion that movements of the wrist had to be signifi-

cant. There is *cribra orbitalia* on the right orbit. We observed enamel hypoplasia on the anterior teeth (DDE index No 4), and caries on the posterior. We also found periapical abscess around the upper left premolar. Many abscesses developed from periapical granuloma from pus. After the death of pulp, inflammation passed down the root canal and through the bone along the fistula (Fig. 2).



Fig. 2 Periapical abscess around the upper left canine (MK14G7).

The second interesting piece of material belonged to an adult, probably male (TQ 29F1). The diagnosis of the sex and age of this individual is not satisfactory since we found few diagnostic bones (like the pelvis or the skull). Thus, our diagnosis relied solely on the robustness of the femur and the tibia. The skeleton was dated to the Early Bronze Age (2800–2650 BC). In section C3 – C6 there is a certain asymmetry in the size of the surface of the articular process which is much smaller on the right side. Moreover, there is bony overgrowth of the surface of the inferior articular facets (Fig. 3).



Fig. 3 Asymmetry in the size and bony overgrowth of the surface of the inferior articular facets (TQ29F1).

The bodies of all cervical vertebrae are characterized by a considerable compression. The morphology of the section in question may suggest a significant strain of the neck and may be due to the carrying of heavy items on the head, which was characteristic of the culture of this region. We found some morphological changes – osteoarthritis – in the left knee. We observed asymmetry in proximal fibulas – the right superior tibiofibular surface is a little bigger, with elevated margins (Fig. 4).



Fig. 4 Asymmetry in proximal fibulas (TQ29F1).

The patellar surfaces were well-developed, with elevated margins, and pores on the posterior side. There is small enthesophyte on the medial surface on the left patella (Fig. 5).



Fig. 5 The elevated margins and enthesophyte on the medial surface on the left patella (TQ29F1).

The damages of knee joints could be due to long-term kneeling. The squatting position could also be observed on the talus and phalanges. Our assumptions are only based on the superior surface of the neck of the talus (there is face on the lateral side of the right talus) and the metatarsal-phalanges joints. The proximal face on the phalange is a little flattened, with additional articular surface located on the anterior side.

The third skeleton (TQ 29F122) belongs to a man, 35–40 years old. It comes from the modern period (1850–1950 AD). The diagnosis of the age is based on the pubis and the skull. According to the Suchey-Brooks System this individual represented phase 4: the surface is fine grained, ligamentous outgrowths on the ventral margin. The cranial suture closure – pars intermedia (*midlambdoid*) and pars lamdbica (*lambda*) have a minimal closure. The skull is massive, with a well-developed mastoid processes and mental eminence (the Scoring System for Sexually Dimorphic Cranial Features: No 4) and strong expression of the occipital external protuberance (No 5). The supra-orbital margins are not sharp (No 4). The thyroid cartilage is ossified, which additionally confirms the sex of the individual. In this specimen we found quite an unusual construction of the 7th cervical vertebra. It is over-developed in the frontal plane. The transverse processes and the foramens transversarium are wide (width of the vert. is 84.5 mm, length of the process – 29 mm). The bodies of this region are characterized by a considerable compression (Fig. 6).



Fig. 6 The seventh thoracic vertebra (TQ29F122).

Moreover, we observed many osteophytes on the ribs. Some parts of the right ilium are the existing remains of the pelvis. The gluteal region (posterolateral surface of the blade) is very well developed. The top of the iliac crest (and iliac tuberosity) is extremely advanced. This region is connected with *musculus gluteus medius* – it is the main abductor of the thigh. The development of this surface is thus connected with well-developed muscles. There is a *cribra orbitalia* on the right orbit.

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