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Short Fieldwork Report: Tepe Sialk (Iran), seasons 2008–2009

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enthesophytes were present in the enthesis of the Achilles tendon in the preserved left calcaneus. Advanced osteoarthritis was observed in at least three cervical vertebrae, but only on the right side (**Figure 7**), which was perhaps related to habitual mechanical load on the head. The only articulated skeleton (#3) belonged to a subadult individual, ~15 years old. Bone size and robusticity suggest that it was also a male individual. Although the skull was damaged, some areas of dense porosity were observed on the vault.

In all three individuals the linea aspera was very developed but smooth; the femora labelled as individual #2 were asymmetrical in the midshafts and it is possible that one of them belonged to fourth male individual, represented only by this single bone. The pilasteric index is high or very high in all cases, with an average of 117.3, s.d. 9.0 for four measured bones (two assigned to individual #2). Again, it was likely due to a high level of mobility in the mountainous terrain.

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Tepe Sialk (Iran), seasons 2008–2009

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Among the few large archaeological sites of the Iranian Plateau, Tepe Sialk (33°58'08"N 51°24'17"E) has attracted the most attention from modern scholars. Tepe Sialk includes two mounds, a northern one that was occupied primarily during the 6th millennium BCE and a southern mound that was inhabited from the 5th millennium to the early 3rd millennium BCE, then deserted and re-settled for a brief time in the Late Bronze and Early Iron Age. The southern mound includes the remains of a famous temple built on terraces, sometimes called

a *ziggurat*. This temple dates to the early 3rd millennium BCE and was much older than the first recognised Mesopotamian *ziggurats*.

Both of the mounds at Tepe Sialk were excavated by a French expedition directed by Roman Ghirshman between 1933 and 1937 (Ghirshman 1939). Following a long gap between excavations, in 2001 the Iranian Center for Archaeological Research launched the *Sialk Reconsideration Project*. This project was directed by Sadegh Malek Shahmirzadi and was focused on the early phases of occupation at the southern mound. Results of these investigations, which continued until 2006, have been published in several volumes of the *Sialk Reconsideration Project Monographs* (Shahmirzadi 2003, 2004, 2005, 2006). Since 2008, the northern mound has been excavated by an Iranian team supervised by Hassan Fazeli Nashli (University of Tehran, Iran) and supported by Robin Coningham (Durham University, UK). Recently, an open air exhibition has been organised at the site, which is located at the border of the town of Koshan.

Thirty nine human skeletons, dating from the late 5th to the early 1st millennium BCE (excavated by Roman Ghirshman), were studied by Henri Vallois (1939). This sample included

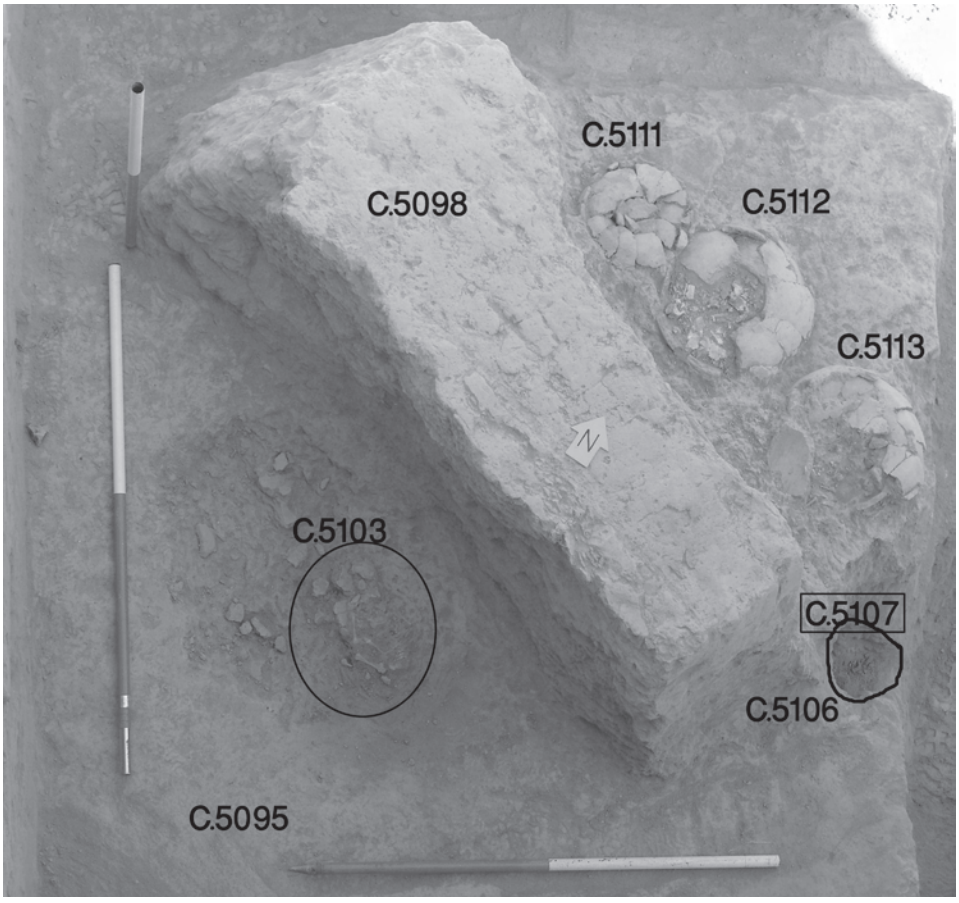

Figure 1. Burials 5103, 5110, 5112, and 5113 *in situ*.

six individuals from the late 5th, five individuals from the early 4th, five from the middle 4th, three from the late 4th, two from the late 2nd, and as many as 18 individuals from the early 1st millennium BCE. Vallois' investigation included basic information about sex, age, and the prevalence of carious lesions, as well as a comparison of cranial indices with skulls from Mohenjo Daro. Although Vallois focused on skull indices, no craniofacial diameters were published. Later, these data were compared with skulls from Jericho and other Neolithic and Chalcolithic sites from the Near East (Kurth & Röhrer-Ertl 1981).

During the 2009 spring excavation season at Tepe Sialk North, a cluster of six burials was excavated from within the Late Neolithic stratum (level I 5, ~5400 BCE). Of the six burials, one was a double burial with both cremated and non-cremated human bone (C5113), four were cremations (C5091, C5102, C5110, C5112), and one included the articulated skeleton of an infant (C5103) placed in a plain pit grave that was filled with numerous sherds (**Figure 1**, **Table 1**). The vessels (including their contents) as well as the articulated skeleton were transported to the dig house in the town of Kashan where they were studied in early May 2009. Only a part of the burial C5113, which was covered by hard clay, was cleaned and described in August 2010. The final report on these activities is forthcoming (Sołtysiak in press).

Table 1. General description of the human remains included in a small cluster of burials around the context 5098.

Id	Cremation	Colour	Filling	Red ochre	Sex	Age	Pattern
C5091	+	white?	none	+++	–	0.5	not observed
C5102	+	white	clay particles	–	–	~15	unclear
C5103	–	–	compact clay	–	–	0.0	primary burial
C5110	+	black	clay particles	+	?	25–30	trunk on bottom
C5112	+	white	none	++	M?	30–50	none
C5113a	–	–	compact clay	–	–	0.5–1.0	secondary burial?
C5113b	+	white	compact clay	++	F?	adult	skull on top?

The vessels with cremains were divided into two (C5102 & C5110) or four (C5112) arbitrary sectors and each sector was explored by two arbitrary levels. The pattern of distribution of the bones from various body sectors was analysed using Correspondence Analysis. All recognised bone fragments were briefly described in the following manner: 1) bone unit, 2) fragmentation, 3) side, 4) colour (if other than dominant one), 5) sex determination and age assessment (if applicable), and 6) pathological conditions, nonmetric and metric measurements (if applicable).

Although cremation is rare in all periods in the Near East, as many as five examples were discovered at Tepe Sialk. Whereas cremains have been recovered at Yarim Tepe II in northern Iraq in levels dating to the Halaf period (Merpert & Munchaev 1987), the distance in time and space precludes any direct connection with Tepe Sialk. Obviously, cremation at Tepe Sialk was not accidental, although burial customs appear to have been varied. At Tepe Sialk, the bodies of adults were burned, whereas the bodies of infants were both cremated or buried without burning. In addition, the use of red ochre, although frequent, did not appear to fol-

low a recognisable pattern (see **Table 1**). In two cases, fragments from various body units were completely commingled (or at least no pattern was revealed). In two individuals (C5110 and C5113), however, the rough sequence of collection of the bone fragments from the funeral pyre may be reconstructed; in both burials skull fragments were located on top. Of note is the double burial (C5113) that included a cremated adult individual and some disarticulated bones from an unburned skeleton of an infant that were most likely in a secondary context.

Apart from the above described cluster of graves, several other human remains were found in other contexts at Tepe Sialk North. These bones were studied in the dig house in Kashan in August 2010. Among them were two fairly complete uncremated skeletons, one belonging to a 12-13 year old child (C5011) with prominent linear enamel hypoplasia on anterior teeth. The other was a 15–18 year old adolescent (C5025) with carious lesions in 5 of their 8 fully erupted molars. Although no enamel hypoplasia was observed, linear hypocalcification of the enamel was recorded. Both individuals were dated to the Transitional Chalcolithic period (~5200-5000 BCE).

Table 2. Human skeletal elements retrieved from the animal bone assemblages.

Id	Sex	Age	Bones	Teeth	Remarks
C5002	?	15-20	11		small quantity of broken random bones
C5003	–	7-14	8		a few foot bones
C5009	?	adult		1	fragment of first permanent molar
C5017	?	adult	1		broken cervical vertebra
C5020a	F??	15-20	2		both damaged femora
C5020b	?	adult	1		fragment of left femur
C5020c	–	5		1	germ of a first permanent molar
C5093	?	adult		1	third permanent molar
C5095a	–	0	13		a few fragments of a newborn child skeleton
C5095b	–	1	4		a few fragments from the upper part of the body
C5097	?	?	1		small fragment of a cranial vault
C5109	?	adult	9		small amount of cremains with red ochre
C6000	–	foetus	9		chiefly long bones from the lower extremity
C6003	–	0	5		a few strongly eroded bones
C6014	?	adult	1		fragment of a talus
C6021	?	15-20	4		random bones from various body parts
C6022	?	15-20	6		random bones from various body parts
C6031	?	15-20	2		fragments of parietal bone and scapula
C7008	–	5		1	germ of a first permanent molar

In addition, several human bones were retrieved from the animal bone assemblages; basic data of this sample is presented in **Table 2**. Only one context (C5109) contained a few cremated bones that may have derived from one of the vessels that were found in the same area. Bones from other contexts show no traces of burning. The minimum number of individuals

represented by these loose bones is 11, apart from the 9 complete skeletons. The whole sample seems to show an age-at-death bias in distribution, with a smaller than expected proportion of adults (there are 7 infants 0/1 years old, 2 children 2-6 years old, 2 children 7-14 years old, 4 adolescents, and only 5 adults). Thus it is likely that subadults were more often buried in intramural contexts at the site.

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