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## Tepe Khaleseh (Iran), season 2009

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During archaeological survey in the Abharrud basin (north-western Iran), 92 archaeological sites were identified, among them Tepe Khaleseh (36°11'22"N, 49°10'28"E, ~1600m.a.s.l.), a small settlement occupied during the Late Neolithic, ~6000-5600 BCE, and perhaps also during the Lower Palaeolithic (Aali 2006; Alibaigi & Khosravi 2009). The site, covering less than 1ha, was recently damaged as a result of illegal trenches and because of intensive land use in the area (**Figure 1**). For these reasons, rescue excavations were carried out during the summer and autumn of 2009 by Hamid Reza Valipour from the Department of Archaeology, Free Islamic University of Abhar, Zanjan, Iran (Valipour et al. 2012).



Figure 1. Tepe Khaleseh, general view of the site.

Several deposits of animals remains were found in the centre of the site (Trenches V and VI) as well as two human burials east to the main mound (Trench II, see **Figure 2**). The bones were transported to the Department of Archaeology, University of Tehran and studied by Gręzak (animal remains) and Sołtysiak (human remains) in August 2010, using standard fieldwork protocol (Reitz & Wing 2008; Buikstra & Ubelaker 1994). All animal and human remains are roughly dated to the Late Neolithic phase of the occupation of Tepe Khaleseh.



Figure 2. Tepe Khaleseh, topographic map of the site and location of the trenches.

The animal remains comprised of fragmentary post-consumption assemblages. Approximately 13600 animal remains were counted in studied assemblages from the Trench V. Almost 9700 (-71%) pieces were identified anatomically and zoologically. Because a large proportion of the skeletal material was fragmentary, it was difficult to determine whether these remains were the result of butchering practices or some other kind of taphonomic process. Few skeletal elements bore signs of butchering (less than 0.5%). Some of the marks were slices and others were chop marks. Some of the animal remains exhibited evidence of being exposed to moderate heat.

Taxon/context	5001	5002	5005	5006	<b>500</b> 7	5008	5010	5011	5012
Bovidae	59	67	49	8	121	26	20	28	92
Caprinae	1198	1205	431	109	1245	349	423	492	1467
Susidae	20	-	-	-	10	-	-	-	-
Equidae	27	1	8	-	38	3	21	-	16
<i>Gazella</i> sp.	-	6?	-	-	-	-	-	-	-
Carnivora	14	7	3	2	7	-	-	-	3
<i>Lepus</i> sp.	-	-	-	-	2	-	-	-	13
Mustelidae	-	-	-	-	-	-	-	-	-
Rodentia	-	-	-	-		1	1	-	-
Mammalia	1318	1286	491	119	1423	379	465	520	1591
Aves	-	-	-	-	-	-	-	-	-
Reptilia	1	-	-	-	7	-	-	-	6
Unidentified	630	540	200	64	804	132	155	220	107
Total	1949	1820	691	183	2234	511	620	740	1704

Table 1. Preliminary frequency of identified bone and tooth fragments (number of identified specimens).

Taxon/context	5015	5017	5018	5020	5022	5023	5024	Total
Bovidae	2	71	41	4	119	-	2	709
Caprinae	55	17	445	60	1166	39	9	8716
Susidae	-	-	-	-	-	-	-	30
Equidae	-	1	-	-	16	-	21	152
<i>Gazella</i> sp.	-	-	-	-	-	-	-	6
Carnivora	-	-	6	-	-	-	-	42
<i>Lepus</i> sp.	-	-	-	-	6	-	-	21
Mustelidae	-	-	-	-	1	-	-	1
Rodentia	-	-	-	-	5	-	-	7
Mammalia	57	89	492	64	1313	39	32	9678
Aves	1	-	-	-	-	-	-	1
Reptilia	-	-	-	-	6	-	-	20
Unidentified	45	6	225	50	700	30	13	3936
Total	103	95	717	114	2019	69	45	13614

The vast majority of the skeletal material was mammal bone. These were accompanied by one bird bone (0.01% of all identified elements) and 20 tortoise bones and pieces of carapace (0.21%). The mammal remains belonged to the following taxa (see **Table 1**): *Bovidae* (domestic cattle), *Caprinae* (sheep and goat, domestic and wild), *Susidae* (probably domestic pig), *Equidae* (onager), *Gazella* sp., *Carnivora, Lepus* sp., *Mustelidae* and *Rodentia*.

*Ovis/Capra* is the most common taxon at the site (almost 90% of the identified skeletal material). It appears as though the majority of both species belonged to domesticated animals, which could not be confirmed given the fragmentary nature of the collection. Similar conclusions could be drawn in the case of the cattle and pig bones.

During excavations, three human burials were identified. These individuals were placed beneath the floors of occupied spaces, or near walls. Two of them were pit burials with the skulls covered with potsherds and a mud and straw mixture. The third burial was placed in a vessel; the upper part of the vessel had been broken and the lower part had been used for the burial. Also, the body was covered with the potsherds of other vessels. Similar burial customs have been observed at Tepe Hajji Firuz, a Neolithic site in Azerbaijan (Voigt 1976).

Two of the studied human skeletons were determined to be subadult. One of them was a neonate buried in a jar (C2009) having a damaged skull and cervical vertebrae, but an almost complete postcranial skeleton (**Figure 3**). The other individual was assessed as being a 3-year old child (C2016). This individual was buried in an earlier stratum compared to the jar C2009. The skeleton was in poor condition and only a few small fragments were retrieved (**Figure 4**). Deciduous teeth and most germs of the anterior permanent teeth were present. The skeleton was covered with red ochre that was still visible on most of the fragments.



Figure 3. Trench II, context 2009: infant burial inside a broken pottery vessel.



Figure 4. Trench II, context 2016: infant burial covered with mud and straw mixture.

Only two small fragments of human remains were found in Trench V. One of them (C5007) was a fragment of a left ilium of an subadult individual (auricular surface present; height 38mm). Also left upper first permanent molar was recovered (C5011). This tooth exhibited advanced wear, a considerable amount of dental calculus, and a moderate carious lesion on the medial CEJ. The number of individuals is too small for any conclusion, but the recorded measurements may be included in a larger regional sample analysis.

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## Lama and Tol-e-Khosrow (Iran), seasons 2008–2010

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The cemetery near the modern village of Lama (31°02'35"N 51°13'19"E) was found accidentally in 1999 during road construction work. The rescue excavations carried out by the Iranian Center for Archaeological Research and the Cultural Heritage, revealed the presence of as many as 53 graves. In 2005, five additional graves were found during a small scale operation accompanying a regional survey. Finally, between 2009 and 2010 regular archeological excavations directed by Mohammad Javad Jafari aimed at more detailed examination of another 13 selected graves.

The cemetery is located in Beshar valley, ~1470 masl, on the slope of a hill in the southern Zagros Mountains, with surrounding peaks reaching more than 4000 masl (**Figure 1**). Most graves were carefully constructed and covered with flat stones. Some of them contained single inhumations, but most were re-opened and served for multiple burials. All articulated skeletons were buried with flexed legs, most on their right side, and disarticulated elements were usually heaped towards the nothern part of the burial chamber. On occasion, however, more care was taken to arrange some of the bones (**Figure 2**). Many vessels and sherds as well as other grave goods were found and they enable the dating of the cemetery to the Kaftari-Ghale/Shogha-Teimuran period, i.e. from the end of the Late Bronze Age through the Early Iron Age in the late 2<sup>nd</sup> and early 1<sup>st</sup> millennia BCE.

According to the archaeological documentation, thirteen graves excavated in 2009 and 2010 contained the remains of at least 90 individuals (based on the number of crania). Two boxes of selected human remains from the Lama cemetery were transported to the Institute of Archaeology at Tehran Univesity and there studied by Sołtysiak in August 2010. The sample was not representative, with cranial fragments (especially of the vault) more abundant compared to postcranial elements that were present in a greater quantity only in a few contexts. Many bags contained only teeth, sometimes with fragments of maxillae or mandibulae.

Since elements belonging to various individuals were commingled, each bone or bone fragment was described separately for completeness, degree of erosion, taphonomical effects, and osteological data. The fieldwork data sheet was based generally on the standard proposed