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**Short Fieldwork Report: Lama and Tol-e-Khosrow (Iran), seasons 2008–2010**

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Voigt M.M. (1976), *Haji Firuz Têpe: An economic reconstruction of a sixth millennium community in Western Iran*, unpublished Ph.D. dissertation, University of Pennsylvania.

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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 northern 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 University 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



**Figure 1.** General view of the Lama cemetery (photograph by M.J. Jafari).



**Figure 2.** Grave 73 from Lama during excavations (photograph by M.J. Jafari).

by Buikstra and Ubelaker (1994) and included more than 90 cranial and postcranial metric measurements, more than 40 nonmetric traits, several sex and age-at-death skeletal indicators, degree of degenerative joint disease in major joints, dental measurements and scores for enamel hypoplasia and dental caries. Also, some pathological conditions such as dental abscess or antemortem tooth loss were noted. However, due to high fragmentation and erosion, only occasionally could these data be recorded.

The minimum number of individuals (MNI) represented by bones and teeth available for the study was 55, including 20 subadult individuals. More detailed distribution of age-at-death in the sample is presented in **Table 1**. It is obvious that there is uneven distribution of age classes, with a few subadults in most graves and grave 63 that contained exclusively the remains of children. Thus, the burial rite at the site included separation of adults and children, although this rule was not very restrictive and occasionally some children were buried together with adults.

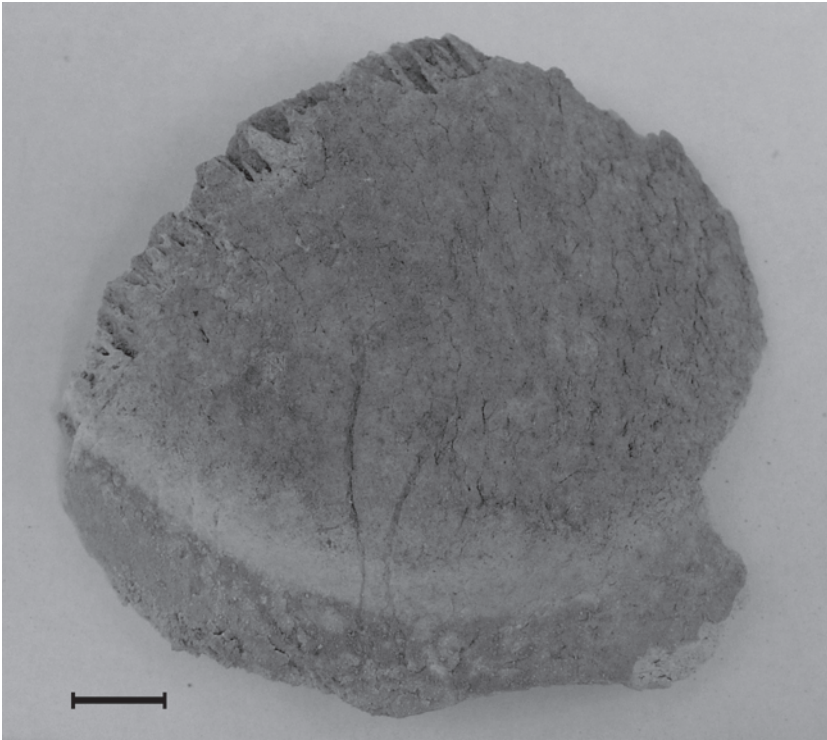
**Table 1.** Age-at-death pattern and the minimum number of individuals in the studied sample.

Grave	0-1	1.5-6	7-14	Adults	Total	Archaeological comments
62		1		4	5	10 recognised crania; one articulated skeleton
63	6	5	2		13	1 recognised cranium; strongly damaged bones
64						one complete articulated skeleton
66		1			1	1 recognised cranium; strongly damaged bones
67		1		3	4	22 recognised crania; one articulated skeleton
68			1	13	14	17 recognised crania; no articulated skeleton
69		1	1	4	6	23 recognised crania; no articulated skeleton
70				1	1	one complete articulated skeleton
71						3 recognised crania; probably one articulated skeleton
72		1		3	4	6 recognised crania; very fragmented bones
73				1	1	2 recognised crania; strongly eroded bones
74				6	6	3 separated crania, long bones arranged in parallel
<b>Total</b>	6	10	4	35	55	

Because the bodies were buried in empty space or covered only by a thin layer of earth, many taphonomic effects were observed. Evidence of weathering and water staining was common (**Figure 3**) and more than 40 cases of insect tunneling were observed. On the other hand, root etching and vertebrate gnawing were rare, although they may have been obliterated by the physical erosion. It seems likely that the bodies were buried not long after death and, if the grave was subsequently reopened, the bones were pushed or more deliberately rearranged to make space for a new addition.

No traces of regular settlement dating to the same period were found in the area and it is likely that the cemetery belonged to a group of nomadic herders. Animal bone assemblages contained chiefly the remains of sheep (Anna Gręzak, personal communication). A high level of mobility in the population buried at Lama, but limited to male individuals, is suggested

by the femoral midshaft geometry, with the pilasteric index higher than in the comparative samples from Northern Mesopotamia (**Table 2**). However, this observation is based on a very small sample size.



**Figure 3.** Evidence of water staining, cranium. Grave 74, locus 4 (photograph by A. Soltysiak).

**Table 2.** Pilasteric index for Lama skeletons and comparative samples from Northern Mesopotamia (Soltysiak 2010).

Site, Chronology	Males			Females		
	n	mean	s.d.	n	mean	s.d.
Lama, Late Bronze / Early Iron Age	5	117.1	11.1	5	104.4	9.5
Tell Majnuna, Late Chalcolithic	41	113.1	12.2	60	104.1	9.6
Tell Ashara and Tell Masaikh, historical periods	11	105.7	6.9	11	104.9	5.6
Chagar Bazar, Middle Bronze Age	3	108.5	7.4	4	102.9	7.2

A more detailed report on the human remains from Lama has been submitted for publication in a final report on recent archaeological excavations at the cemetery (in Farsi). The English version will be published in one of the future volumes of *Iranica Antiqua*.

Some 60km upstream of the Beshar river, ~4km south to the town Yasouj, a relatively small but high mound called Tol-e-Khosrow (30°36'34"N 51°34'42"E, 1800 masl) was excavated



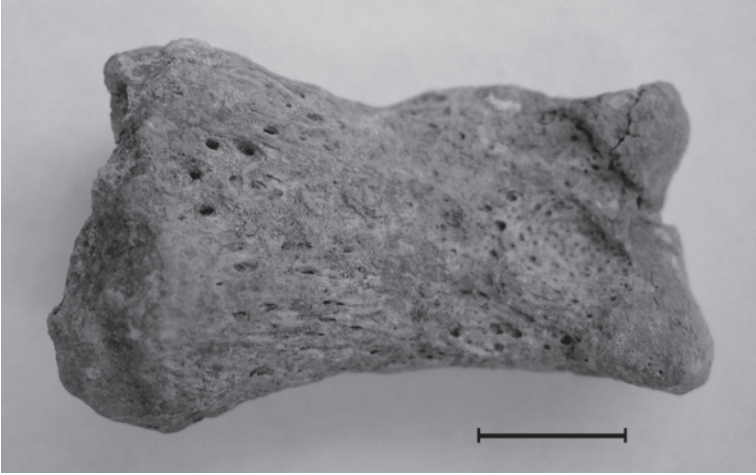
in the summer 2008 by Norooz Rajabi from the Azad University of Marvdasht (**Figure 4**). One grave containing the remains of three individuals was found in locus 0053, dated to the 4<sup>th</sup> millennium BCE. There was one articulated skeleton (#3) with flexed legs and two disarticulated skeletons (#1 and #2) heaped in the western part of the chamber (**Figure 5**).



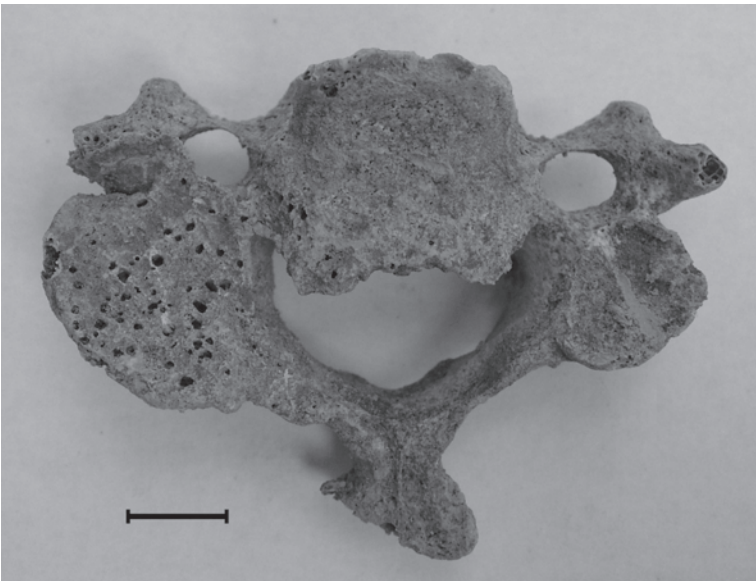
**Figure 4.** Tol-e-Khosrow, general view (photograph by N. Rajabi).



**Figure 5.** Human remains found at Tol-e-Khosrow (photograph by N. Rajabi).



**Figure 6.** Healed fracture of the first toe segment, Tol-e-Khosrow (photograph by A. Sołtysiak).



**Figure 7.** Osteoarthritis in a cervical vertebra, Tol-e-Khosrow (photograph by A. Sołtysiak).

Skeleton #1 belonged to a 30-35 year old male and was relatively complete and well preserved. As many as 5 of 11 recovered teeth were affected by dental caries and two molars were lost antemortem. The radii were asymmetrical, the left slightly more robust than the right. A healed fracture with dislocation was observed in the first toe segment (**Figure 6**). Also, the less complete skeleton #2 belonged to a mature male with dental caries (3 per 18 teeth) and advanced periodontal disease—the alveolar process was reduced by ~7mm on average. The right second metacarpal of this individual was fractured and healed with dislocation; very clear

enthesophytes were present in the entheses 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 6<sup>th</sup> millennium BCE and a southern mound that was inhabited from the 5<sup>th</sup> millennium to the early 3<sup>rd</sup> 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