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Short Fieldwork Report: Kültepe/Kanesh (Turkey), season 2007

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Kültepe/Kanesh (Turkey), season 2007

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Kültepe, the capital city of the Kanesh Kingdom, lies just 21 km northeast of modern Kayseri (ancient Caesarea), the capital of the Kingdom of Cappadocia, and is located at the crossroad between the natural and ancient main east-west and south-north highways (38°51'00"N, 35°38'04"E). The city's strategic location improved its importance in ancient world trade and politics especially at the end of the 3rd millennium and the first quarter of the 2nd millennium BCE (Özgüç 2003). Its ancient name was Kanesh or Nesha and it was one of the few Assyrian trading colonies in Anatolia.

Kültepe has been recognized since 1871 when the “Cappadocian tablets” were first revealed in world museums and in illegal markets. Research on the ancient history of Anatolia began with the discovery of these tablets during excavations at the ancient site of Kültepe. In 1948 the first scientific excavations were conducted by Prof. Dr. Tahsin Özgüç under the Turkish Historical Association. Following his death in 2005, Karum and Tepe continue to be excavated by Prof. Dr. Fikri Kulakoğlu of Ankara University, Turkey.

The city-mound of Kültepe is 21m higher than the surrounding plain and measures 550m north-south and 500m east-west. The mound is nearly circular in appearance and is one of the largest central Anatolian mounds. It is badly damaged because of random excavations and soil has been removed by the local peasants to fertilize their fields. At the lower city of Kültepe, Kanesh-Karum encircles the city-mound. It is approximately 2-2.5m higher than the plain level and its diameter extends 2 km. Karum of Kanesh existed for 250 years at the most. It was established much later than the mound site, and was abandoned much earlier. The dimensions of the mound and the Karum make Kültepe one of the most extensive sites in Anatolia.

The city-mound has a long history and is made up of a series of habitation levels. Excavations on the mound have extended down to the final phase of the Early Bronze Age I; a total of 18 building levels have been distinguished. The final phases of the mound consist of two

Roman and one Hellenistic building levels. At that time Kültepe was a small town overshadowed by Kayseri/Caesarea.

The first studies on the human remains from Kültepe/Kanesh were carried out by Şenyürek in the 1950s (Şenyürek 1952, 1958). Between then and 2007 no bioarchaeological studies, including human osteology were undertaken at Kültepe. Beginning in 2007, archaeological activities have been supported by a bioarchaeological project which includes Levent Atici (University of Las Vegas, US), zooarchaeologist and coordinator, and Handan Üstündağ, human osteologist (Anadolu University, Turkey).



Figure 1. The Hellenistic-Roman cemetery at Kültepe/Karum.

During the 2007 and 2008 field seasons at the cemetery (located in the upper level of Karum), a number of graves were excavated (see Figure 1). A variety of burials were discovered including stone box graves covered with a series of stone slabs, simple inhumations, and terracotta sarcophagi which seem to have been used for a relatively long period during Hellenistic and Roman times. The earliest coin found at the cemetery area was dated to 3rd century BCE and the latest to the 5-6th century CE (Çizmeli Öğün 2008).

Recent studies on the human remains from Karum began during the 2007 field season. There were four burials (07/79, 07/84, 07/85, 07/86) dated to the Old Assyrian period, found in domestic contexts. These skeletons have yet to be studied. A total of 90 burials containing 134 skeletons were excavated in the Hellenistic-Roman cemetery located in the upper level of Karum. These skeletons were later cleaned, sorted, and examined during 2008 and 2009 field seasons. All skeletons were studied and later stored in the field laboratory located in the excavation camp area near the site.

There were 60 single and 22 double burials. In 6 graves three individuals were buried together. There were 5 individuals found in one grave and 7 in another grave. 75% of the skeletons were *in situ* and the rest were disturbed and replaced. Many skeletons were found close to an empty grave as gathered bone fragments. The reason for this damage seems to be grave robbery. The lack of grave goods at the site, except few coins, also points to looting.

The skeletons were mostly oriented west-east (atlas-sacrum direction) and faced east, north-east or south-east. All skeletons, which were placed *in situ*, lay in dorsal position with

extended legs. The arms were extended (52%) or flexed (48%) with the hands lying on the thorax or on the pelvis.

The preservation and completeness of the skeletons are presented in **Table 1** and **Table 2**. Preservation of the skeletons is mostly good to average. However, most of the skeletons found in disturbed graves were incomplete.

Table 1. Preservation of the skeletons

Preservation	N	%
Very good	18	13.4
Good	38	28.4
Average	42	31.3
Poor	36	26.9

Table 2. Completeness of the skeletons

Completeness	N	%
Fairly complete	37	27.6
Average	37	27.6
Incomplete	60	44.8

Age assessments and sex determinations were made following the standard osteological techniques recommended by the Workshop of European Anthropologists (1980) and Buikstra & Ubelaker (1994). Pathological bone changes were recorded following the criteria described by Buikstra & Ubelaker (1994). Sex and age distributions are presented in **Figure 2**. There are 88 adults (66% of all individuals) and 46 subadults (34% of all individuals). The percentage of fetal and infant categories is relatively low (only 14%). Some fetal or infant skeletons were probably lost during looting of the site. The young adults are represented by more females than males, perhaps due to the high risk of pregnancy-related deaths. There are more males than females in the middle adult age category, whereas there are more females among the old adults, although it is not statistically significant ($\chi^2=1.397$, $p=0.497$). It is likely that females outlived males once they passed through the risky younger age periods.

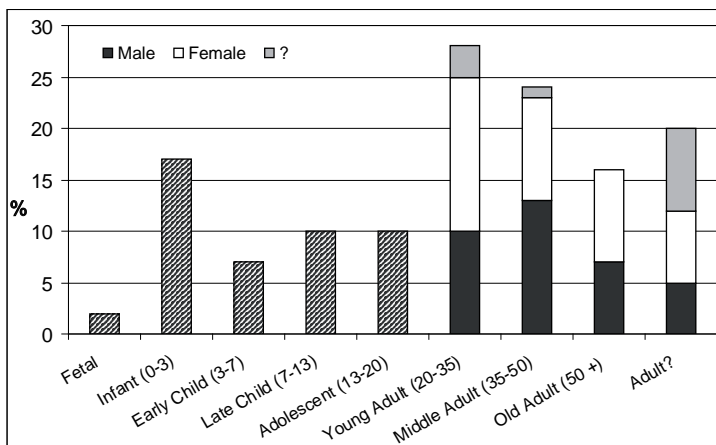


Figure 2. Sex and age distribution in the Kültepe sample.

The frequency of some stress-related pathological changes is presented in **Table 3**. *Cribra orbitalia* (see **Figure 3**) and porotic hyperostosis (see **Figure 4**) were common. In all cases at least one orbit and 1/3 of the cranial vault was available for examination. 60.5% of the

individuals had cribra orbitalia, where males were more affected than females. Porotic hyperostosis was equally observed in both sexes (37%). Both conditions were also very common in subadults. Periosteal activity on the tibiae was also very common (58%) in individuals where at least one tibia was available for examination. The high occurrence of cribra orbitalia, porotic hyperostosis, and periosteal activity on the tibiae show that stress levels were very high in the sample group. More than 40% of adults were affected by vertebral osteoarthritis (at least 10 vertebrae present) and appendicular osteoarthritis (at least 1/3 of the joints present).

Table 3. The frequency of cribra orbitalia, porotic hyperostosis, and periosteal activity on the tibiae, as well as vertebral and appendicular osteoarthritis (affected/observed individuals).

	Sub-adult	Male	Female	Adult Sex?	Total
Cribra orbitalia (%)	75 12/16	76.5 13/17	50 10/20	0 0/1	60.5 23/38
Porotic hyperostosis (%)	34.8 8/23	37.5 9/24	37 10/27	33.3 1/3	37 20/54
Periosteal activity on tibiae (%)		60.7 17/28	56.7 17/30	50 3/6	57.8 37/64
Vertebral osteoarthritis (%)		50 9/18	35 7/20	0 0/0	42.1 16/38
Appendicular osteoarthritis (%)		33.3 9/27	52 13/25	0 0/1	41.5 22/53



Figure 3. Severe cribra orbitalia in 2007/k/1/4/14/M.51.1

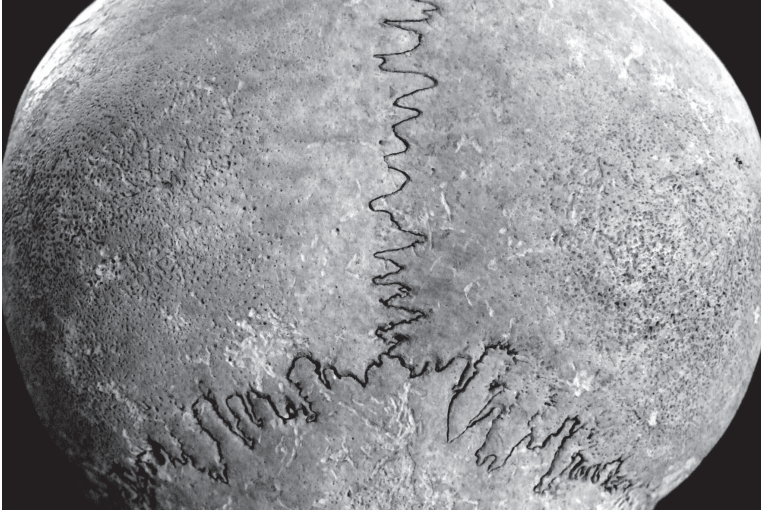


Figure 4. Porotic hyperostosis in 2007/k/1/4/14/M.52

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