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## Human remains from Haft Tepe, Iran, 2012-2013

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Elam was an ancient civilization, located in the Zagros region east of Mesopotamia, with two major administrative centers: Susa and Anshan. The city of Kabnak (modern Haft Tepe, Khuzestan province Iran, 32°04′44″N, 48°19′35″E) was an important administrative center in the neighbourhood of Susa and a temporary capital city of Elam under Inšušināk-sunkirnāppipir and Tepti-ahār during the Kidinuid dynasty of the 15<sup>th</sup> century BCE (Negahban 1991). The archaeological site of Haft Tepe covers 1.5 km<sup>2</sup>, including remains of the Middle Elamite city (c. 1500-1100 BCE) and several graveyards (Potts 2013). The first survey of this site was undertaken by Jacques de Morgan in 1908; regular excavations were undertaken at the site by E.O Negahban of Tehran University between 1965 and 1979 (Negahban 1991). A new archaeological project was initiated in 2003 by a German-Iranian team from the universities of Mainz and Kiel in conjunction with the Iranian Cultural Heritage Organization. Between 2008-2013 excavations were directed by Behzad Mofidi (Mofidi 2014).

Among the funerary complexes identified at Haft Tepe the most important is the royal tomb of Tepti-ahār. During excavations at the site in 2012 the remains of more than 100 individuals were found in individual pit and pot graves as well as one mass burial, being located along the outer wall on the NE side of Complex C and dating to Phase 4 (c. 1400 BCE) when the city was abandoned (**Figure 1**). The human remains recovered from Haft Tepe are curated in a storage room at the Haft Tepe site museum.

The mass grave in Complex C contained disarticulated elements of at least 228 male and female individuals of varying ages-at-death. The grave slopes down from west to east and contains a mixture of soil, ashes and pottery sherds (**Figures 2** and **3**). At the eastern end the bone scatter was denser and the elements better preserved. Al-though ashes were abundant here and in other contexts from Phase 4, Layers 5 and 8, suggesting that the city was burned twice before abandonment, there was no evidence of cremation. Fourteen objects of precious materials, including bronze buttons, a ring and decorative beads, were found together with the human bones.

Most of the human elements were heavily eroded and affected by taphonomic factors such as root etching, surface mineralization, insect tunneling, trampling and

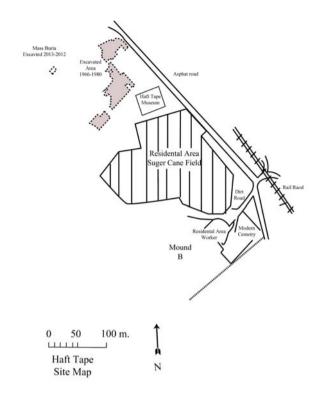


Figure 1. Excavation area at Haft Tape with the position of the mass grave indicated.

irregular orange/brown staining. The last effect may partially be the result of vivianite deposited in close proximity to iron items (McGowan & Prangnell 2006).

Human remains were recorded using standard methods (Buikstra & Ubelaker 1994). As most skeletons were extremely eroded, only a few bioarchaeological methods could be applied to this sample of human remains. Age-at-death was estimated using epiphyseal union (Coqueugniot et al. 2010) and auricular surface (Igarashi et al. 2005), while sex assessment was based on pelvis morphology (Bruzek 2002; Murail et al. 2005). The overall poor state of preservation, especially in the upper strata of the human remains, compromised the number of recordable characteristics. Assuming that disarticulation was mainly the result of the sloping depositional environment, the minimum number of individuals was assessed using the number of crania and then post-cranial elements were matched, if possible, using criteria based on morphological similarity (in paired elements), size, general sex and age-at-death assessment, and bone colour. Although 100 samples were screened for collagen presence, none produced positive results and therefore radiocarbon dating of this assemblage was not possible.

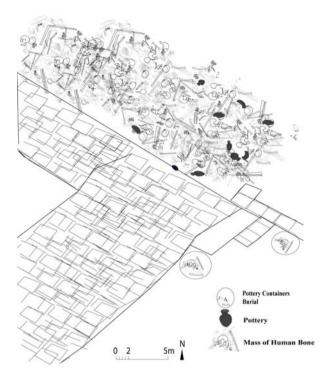


Figure 2. Plan of the mass burial, Trench 298 at Haft Tape.



Figure 3. Photograph of the upper layer of the mass burial.

Out of 228 individuals excavated from the mass burial, age-at-death estimation has been possible for only 23 adults and 24 subadults, while sex estimation was possible for only 29 individuals. Among the assemblage recovered, there are three males,

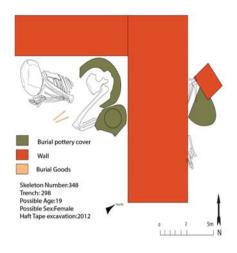


Figure 4. Single pit burial of a female covered by pottery sherds (Trench 298, grave 348).

12 adult females, 6 adolescent females and 8 probable females, making clear the disproportionate representation of females in this sample.

The most plausible interpretation of this mass burial appears to be that these individuals were victims of war, most likely during the era of gradual abandonment of the city (Mofidi 2014). In this phase, the southern part of the city had no residential area, and the entire city had become smaller than previously. Based on this interpretation, as only a few inhabitants remained after the war, it is argued that an active attempt was made to collect the killed individuals and to place their bodies into the identified mass grave beneath the northeastern wall. The excavators of this mass burial have compared it to the battlefield burial mentioned in the Stele of Eanatum (Mofidi 2014). However, this interpretation is weakened by the lack of observable perimortem trauma on the skeletal remains and the absence of weapons associated with the mass burial. An alternative explanation may be an episode of increased mortality due to infectious disease, although such a potentiality cannot be readily supported or rejected on the basis of bioarchaeological evidence only.

Another multiple burial found at Haft Tepe was likely a part of the royal tomb of Tepti-ahār (Square A and B XX). Bones were strongly eroded and disappeared during excavation or decayed completely in the storage room. Several skeletons in the southern part of the tomb were disarticulated. Two individuals with well preserved articulations and buried on the platform could be the king and his wife and the other skeletons may have belonged to their servants (Negahban 1991). In Square B XIX, next to the tomb of Tepti-ahār, a similar multiple burial was discovered, with skeletons of 23 individuals: 14 arranged side by side and 9 piled over them. No artifacts were

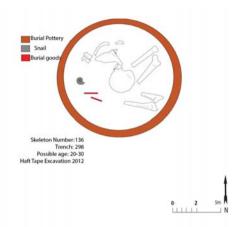


Figure 5. A pot burial of a 24-years old individual (Trench 298, grave 317).

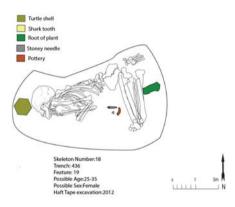


Figure 6. Simple pit burial of a 28-35-years old probably female (Trench 436, grave 9).

present there, except a conical pottery bowl and a simple metal ring (Negahban 1991). Unfortunately, the skeletons were lost after excavation.

Apart from mass and multiple burials, single inhumations were also common at Haft Tepe. For example, west of the mass burial, in Trench 298, a skeleton covered by pottery sherds was found. It belonged to c. 19-years old female, as assessed using epiphyseal union status. She was buried in a bending position with two hairpins (Figure 4).

Single burials were discovered in all layers at Haft Tepe. Most of them were jar burials, usually containing the remains of children, but in Phase 4 adults were also buried in ceramic containers (Figure 5). However, the most common way of burying

adults was to place a body in a pit and cover it with pottery (Figure 6). Based on the presence of the third molar in both arcades, 26 adult and 25 subadult skeletons are represented by the individual burials.

Most spectacular discovery at Haft Tepe is the first mass burial in a plain soil ever found in an Elamite city. Unfortunately, the skeletons from the royal burial of Haft Tape and associated deposits of human remains are no longer available for research. However, bioarchaeological study of the remains of common people may provide also an important insight into living conditions during the Middle Elamite Kingdom.

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