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Human remains from Estark, Iran, 2017

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During second season of excavations at Estark $(34^{\circ}01'24''N, 51^{\circ}13'51''E)$ in September and October, 2017, three parts of the cemetery were investigated: an extension of the 2016 operation (cf. Sołtysiak et al. 2016; Hosseinzadeh et al. 2017), labelled as trench B (**Figure 1**), a new operation in the eastern part of the cemetery (trench C, **Figure 1**), and a few small test trenches in the south with no evidence of burials. All burials were dated based on pottery comparison to the Iron Age II and perhaps to the very beginning of the Iron Age III. In addition to excavation, a survey in the Rahaq valley was carried out, revealing more Iron Age cemeteries around the village of Estark and Joshaqan.



Figure 1. Locations of graves excavated in 2017, Trench B.



Figure 2. Locations of graves excavated in 2017, Trench C.

In total, five new burials were found (two in trench B and three in trench C). While no evidence of cremation was discovered, there were some interesting new observations concerning grave shape. Graves in trench C were composed of a vertical shaft $(180 \times 60 \times 30 \text{ cm})$, parallel with the main axis (northwest–southeast direction) of the grave, and a niche or main chamber for burial which had been dug in the northern wall of the shaft. Although such grave shape has not been recorded at nearby Iron Age cemeteries like Tepe Sialk, nor at other Iron Age cemeteries in Iran, it has been observed in the Late Bronze Age and early Iron Age cultures of Central Asia like Sapalli (Masson 1992) and Vakhsh (Litvinsky & P'yankova 1992).

Skeletal remains in trench B were strongly eroded and in many cases identification of individual elements was possible only using their position. Conversely, the degree of bone degradation in trench C was much lower. Apart from evidence of trampling (**Figure 3**), especially in trench B, some traces of insect activity were observed, with some irregular holes that may have been the result of termite activity (**Figure 4**) (cf. Backwell et al. 2012).

The minimum number of individuals is 10 (Table 1); additionally, a few elements were found on the surface of trench C that likely originated from one of the many graves in the area that had been recently looted. One burial was found in trench B (G-2) between an oval grave excavated in 2016 and a small stone structure that was located in the eastern section of trench A. Within the burial an articulated single skeleton in a flexed position was found facing south-west, equipped with nine vessels including



Figure 3. Evidence of trampling in trench B, G-2.



Figure 4. Evidence of insect damage in the skull from trench C, G-2b. Scale bar 1cm.

small cups, bowls, a middle size jar, as well as some bronze ornaments. Another burial (G-3) had more complicated stratigraphy. Close to the surface a probable female skeleton was found, originally in a squatting position (**Figure 5**), with a pottery scatter in front of the head and a few stones and a jar below. At the bottom of the pit a probable male skeleton was found on its left side with flexed legs and arms. The



Figure 5. Burial G-3a from trench B.

individual was found with some pot sherds and ornaments including a necklace with different kinds of beads and a ring on the left second finger.

The first grave in trench C (G-1) contained the disturbed remains of two individuals and the articulated foot and hand bones of two other bodies together with at

Trench	Grave	Sex	Age-at-death	Completeness	Remarks
В	G-2	?	adolescent	fairly complete	extremely eroded
В	G-3a	F??	adult	fairly complete	extremely eroded
В	G-3b	M??	adult	fairly complete	extremely eroded
С	G-1a	М	30-45	mainly lower part	dental caries
С	G-1b	?	adolescent	incomplete	partially disarticulated
С	G-1c	?	adult	feet only	
С	G-1d	?	?	feet only	
С	G-2a	F	30-45	complete	dental caries
С	G-2b	?	young adult	incomplete	disarticulated
С	G-3	F?	adolescent	fairly complete	
С	context 2	?	adult	a few fragments	from surface scatter

Table 1. General characteristic of human remains from Estark, season 2017.



Figure 6. Burial G-2 from trench C.

least four complete vessels. This grave was likely re-opened on several occasions and the bones of previously buried individuals were partially removed to make space for a new body. The final disturbance of an almost complete skeleton on the top may have been the result of looting. In G-2 at least two skeletons were buried; the lower one was partially articulated and covered by a heap of disarticulated bone. The grave goods included nine vessels—a big jar, a plate and small bowls—several bronze ornaments and beads as well as cranial fragments of a young ovicaprid (**Figure 6**). Finally, G-3 was a single grave with one articulated skeleton and four complete vessels. Articulated individuals were buried in a flexed position, on their left side and facing southwest.

The discovery of the oval grave that included cremains during the previous excavation season was surprising, but the current evidence is also puzzling. Among all discovered contexts there were two burials of adolescent individuals, one double grave that contained an articulated probable female skeleton found above an articulated probable male skeleton, one double grave with an articulated female skeleton and the disarticulated bones of another one, and finally one multiple grave with an articulated male skeleton, the partially articulated skeleton of an adolescent, and a few articulated remains of two other individuals. There was also variability in body position, grave construction, and grave goods and after two seasons of excavations it became clear that burial customs at the cemetery were relatively flexible and perhaps there were also some differences between the eastern (trench C) and western (trenches A and B) parts of the cemetery. Some temporal trends are possible, as pottery in the eastern part of the cemetery suggests a slightly later date than the pottery from the western part. Acknowledgements. We thank the students taking part in the first bioarchaeology summer field school at Estark, students and staff of the Univeresity of Kashan, as well as Majjid Montazerzohouri, Ali Molody, Simin Asgari and Faeze Dadafar for their help during the excavations. Research on human remains from Estark was financially supported by the Polish National Science Centre (grant No. 2016/22/M/HS3/00353).

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