

## **The Western Cemetery of Qareh Tepe, Segzabad: New Iron Age Evidence from Iran's Central Plateau**

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### **Abstract:**

In 2018, the excavation of Trench 13 at the western cemetery of Qareh Tepe in Segzabad led to the discovery of 10 Iron Age graves located in the southwestern section of Tepe Ghabrestan. These graves featured mudbrick structures, oriented east-west, and contained burials placed on their sides. The grave goods found within included pottery vessels, metal objects, animal bone remains, and ornaments made of various materials. The burial practices and grave goods suggest that these graves were created within a relatively short time frame. To establish a chronological context for these findings, the artefacts from Trench 13 were compared to those from Trench 12, located at the eastern cemetery of Qareh Tepe. With five absolute dating samples from Trench 12 graves, a reliable chronological framework was available, enabling a more precise dating of the Trench 13 graves. The comparison indicates that the graves in Trench 13, which had the highest number and most incredible variety of similar artefacts, corresponded closely to those in Trench 12, dating from 1000–900 BCE.

Keywords: Iron Age, First Millennium BCE, Qazvin Plain, Segzabad, Qareh Tepe

Article Type: Research Article

### **Introduction**

Tepe Ghabrestan is one of the three sites in the Qazvin Plain, selected in 1970 by the archaeological team of the University of Tehran for educational and research excavations (Negahban 1977). Tepe Ghabrestan is a settlement site dating back to the Chalcolithic period (Majidzadeh 2008; Pollard et al. 2013: Table 9), and was abandoned around the mid-fourth millennium BCE (Matthews and Fazeli Nashli 2022:129). After its abandonment, it became a cemetery for the communities residing in the region during the Iron Age (Negahban 1977: 34). Tepe Ghabrestan is located approximately 300 metres west of Qareh Tepe, which encompasses settlement layers from the Bronze Age, Iron Age, and Achaemenid period. Due to the proximity of these two sites and the similarities between the Iron Age grave finds at Tepe Ghabrestan and the Iron Age settlement layers at Qareh Tepe, the area of Tepe Ghabrestan likely served as a burial site for the inhabitants of Qareh Tepe in Segzabad during the Iron Age (Fazeli Nashli and Naghshineh 2006: 129). A

project in 2016, aimed at defining the archaeological boundaries of Tepe Ghabrestan, revealed that the cemetery extended beyond the site's surface, covering the southern and western surrounding areas as well (Heydari 2019). By comparing the findings from Trench 13 with those from other Iron Age sites across various regions of Iran with relative chronologies, a date corresponding to Iron Age II and III was proposed for the graves in this trench (Dehpahlavan et al. 2019). Iron Age II and III in Iran span several centuries, from the late second millennium to the first half of the first millennium BCE (Talai 2010). However, evidence from the ten excavated graves in Trench 13 suggests they belong to a shorter time frame, indicating that the proposed chronology lacks necessary precision. During the 2016 project to define the archaeological boundaries and conduct an archaeogeophysical survey, evidence of a newly discovered Iron Age cemetery was identified on the eastern side of Qareh Tepe in Segzabad. This discovery revealed that, in addition to the surface and surrounding lands of Tepe Ghabrestan, parts of the eastern lands of Qareh Tepe were also used as a cemetery for the inhabitants of that site during the Iron Age (Dehpahlavan 2019a). The eastern cemetery of Qareh Tepe was excavated over four seasons in a trench named Trench 12 (Dehpahlavan 2017, 2018, 2019b, 2021). The presence of five absolute dating samples from the graves excavated in Trench 12 has provided valuable chronological information about these burials. In the following, we attempt to refine the chronology of the graves excavated in Trench 13 of the western cemetery of Qareh Tepe by comparing their findings with those obtained from the graves in Trench 12 of the eastern cemetery of Qareh Tepe ( Fig.1).<sup>1</sup>



Figure 1: The sites of Qareh Tepe and Tepe Ghabrestan, and the locations of Trenches 12 and 13 in relation to these two sites. (After: Google Earth 11/09/2018 and modified by the Authors)

### **Previous Studies on the Iron Age Graves of Tepe Ghabrestan:**

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<sup>1</sup>Based on the available evidence, these ten graves belong to a relatively short chronological span. Therefore, this study avoids applying the conventional internal chronology of Iron Age I–III in Iran (see Talai, 2010; Danti, 2013; Dyson, 1965; Young, 1965), as each phase covers several centuries.

The 1972 excavations at Tepe Ghabrestan, specifically in Trench E on the eastern side, uncovered two Iron Age graves. These graves were of the pit type, with the bodies buried on their left sides, legs flexed, heads positioned toward the east, and faces oriented southward. The grave goods included pottery vessels, bronze objects, decorative beads, and remains of animal skeletons (Malekzadeh 1977) (Figs. 2 and 3). The excavator suggested that these graves dated to the late second and early first millennium BCE (Malekzadeh 1977: 79).

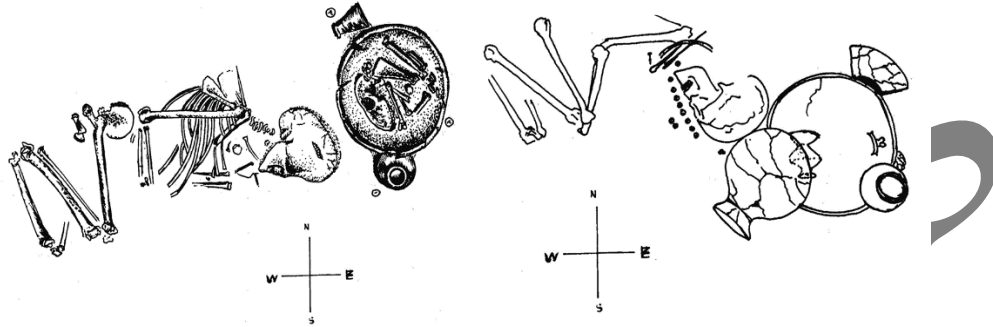


Figure 2: Grave No. 1, Trench E (Malekzadeh 1977: Fig. 99). Figure 3: Grave No. 3, Trench E (Malekzadeh 1977: Fig. 102).

In the 2002 excavations, two graves (Graves 3 and 4) were uncovered in Trench D3 on the western edge of Tepe Ghabrestan, while two additional graves (Graves 5 and 6) were excavated in Trench Q22 to the north of the site. Additionally, in Trench K30, near the centre of the mound, Iron Age pottery and artefacts were recovered, which appeared to be associated with looted graves (Fazeli Nashli and Naghshineh 2006).

Grave 3 was a simple pit burial. The body was flexed on its right side and oriented east-west, with the head facing east and the face turned north. Alongside the burial, pottery vessels, bronze artefacts, and ornaments, and decorative beads were discovered (Fig. 4).

Grave 4 was also a pit burial, with its skeletal remains and artefacts completely disturbed and scattered. Broken pottery shards, bronze artefacts, decorative beads, and small iron fragments were found in this grave (Fig. 5).

Grave 5 was a pit burial filled with sand, containing the skeletal remains of three individuals. The disturbed and incomplete nature of the bones, along with their disordered arrangement, suggests evidence of secondary burial or reuse of the grave. Artefacts recovered from this burial included pottery vessels, bronze ornaments and objects, an iron fragment, and decorative beads of various materials (Fig. 6).

Grave 6 was another pit burial filled with sand. It contained the remains of a child placed in a flexed position on their right side (Fig. 7). The burial was oriented east-west, with the head positioned to the west and the face directed southward. Artefacts from Grave 6 included pottery vessels, bronze objects, and decorative beads. Except for Grave 6, all other graves excavated in 2002 contained animal bone remains (Fazeli Nashli and Naghshineh 2006).



Figure 4: Grave 3, Trench D34 (Fazeli Nashli and Naghshineh 2006: 137, Fig. 4-5) Figure 5: Grave 4, Trench D34 (Fazeli Nashli and Naghshineh 2006: 137, Fig. 4-6)

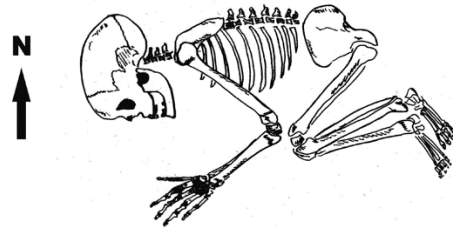
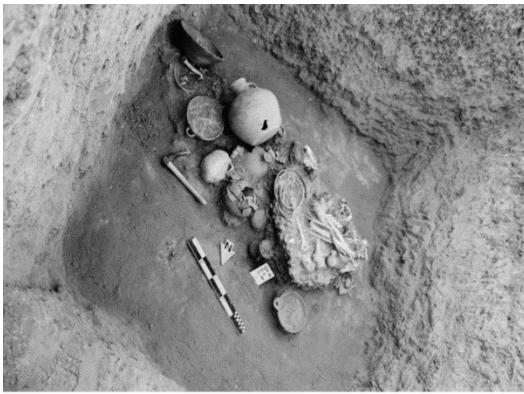


Figure 6: Grave 5, Trench Q22 (Fazeli Nashli and Naghshineh 2006: 137, Fig. 4-3) Figure 7: Grave 6, Trench Q22 (Fazeli Nashli and Naghshineh 2006: 136, Fig. 4-4)

### Trench 13

The 2016 project aimed at defining the archaeological boundaries of Tepe Ghabrestan led to the discovery of evidence for Iron Age graves in the southwestern agricultural lands of this site (Heydari 2019). Based on these findings, parts of the southwestern area were subjected to an archaeological geophysical survey. In 2017, following the survey results, Trench 13 was excavated, measuring 11 by 10 metres in a northeast-southwest direction (Dehpahlavan 2018). During the excavations, ten graves were uncovered, all featuring mudbrick structures. The spaces between and over the graves were covered with mudbricks. The sizes of the mudbricks used in the grave structures were consistent, with two sizes identified: 35 by 40 cm and 17 by 40 cm. The only exception was Grave 4, which had mudbricks measuring 35 by 35 cm. The evidence, including the uniform orientation of the graves, the similarity in burial goods, the consistent sizes of the mudbricks, and their placement on a single mudbrick surface, suggests potential platform construction. This leads to the conclusion that the graves were created within a short period

(Dehpahlavan 2018) (Figs. 8 and 9). Due to the decision to prepare the ten graves excavated in Trench 13 as a site for museum public visitation, the excavation was not fully completed. Other than several decorative beads found when parts of the soil from the graves were removed from the surface, no additional grave goods were collected. In certain cases, where the conditions were suitable, some objects were carefully removed, conserved, stabilised, photographed, and then reburied. Some objects remained in the graves and were stabilised in situ, which is why no independent photographs or designs exist for them.



Figure 8: Graves in Trench 13

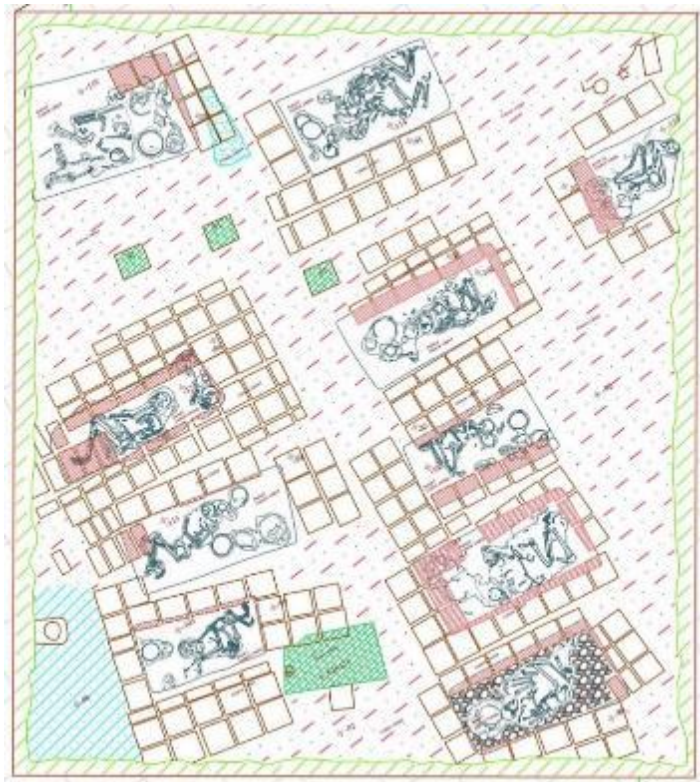


Figure 9: Plan of the graves in Trench 13

### **Grave 1**

The grave contained the burial of an adult male. Its first evidence was found at a depth of 87 cm, where the skull and the surrounding mudbrick structure appeared. The soil inside the grave was clayey sand and firm, although it became softer around the vessels due to increased sand content. The burial had an east-west orientation, with the head positioned to the east and the face directed north. The shoulders rested on the ground, the right hand was extended downward along the body, while the left arm was bent at the elbow and brought towards the right hand. The legs were flexed, and the sole of the right foot was in contact with the ground. Animal bones were found above the head of the burial and around and inside a ceramic bowl. The findings from this grave include pottery vessels, bronze beads, fragments of an iron bracelet, and a bronze dagger/spearhead (Figs. 10, 11, 12).

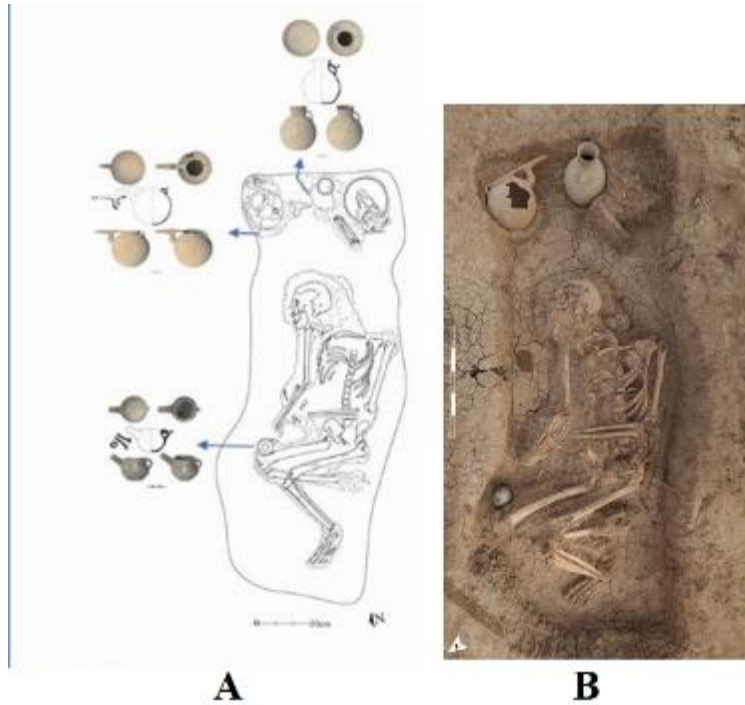


Figure 10: A: Plan of the burial and pottery vessels from Grave 1; B: Photograph of Grave 1



Figure 11: Bronze beads from Grave 1 Figure 12: Bronze dagger/spearhead from Grave 1

## Grave 2

The grave contained the burial of an adult woman. The first evidence appeared at a depth of 87 cm, including fragments of a pottery vessel and the surrounding mudbricks. The soil inside the grave was clayey-sandy and highly compact, though its firmness was reduced in some areas. The burial was oriented east-west, with the head positioned to the west and facing north, lying on her left side. The legs were flexed, with the right knee positioned closer to the abdomen, and the sole of the right foot in contact with the ground. The left arm was extended, with the fingertips reaching the left knee, while the right arm was bent at the elbow, with the fingertips near the left forearm. The grave contained pottery vessels and animal bone remains (Fig. 13).

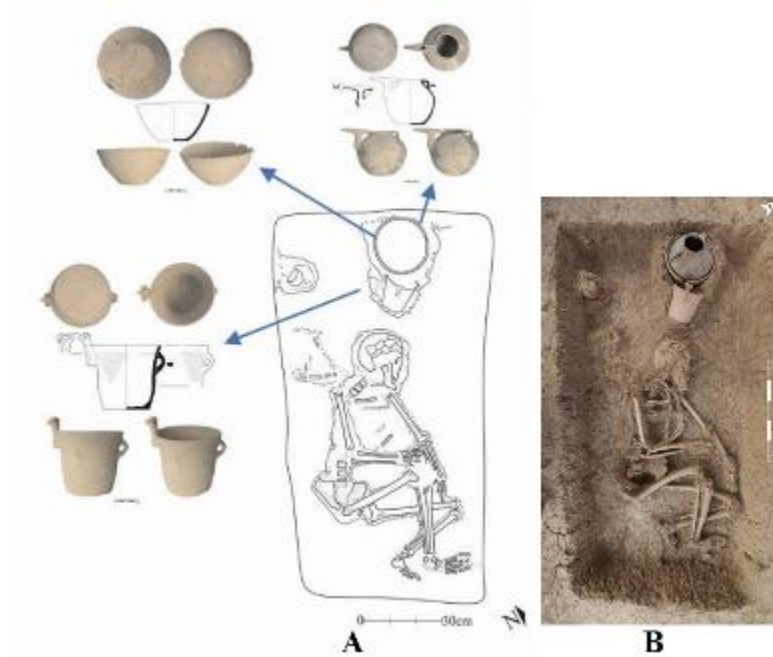


Figure 13: A: Plan of the burial and pottery vessels from Grave 2; B: Photograph of Grave 2

### Grave 3

The grave contained two adult burials of undetermined sex. The first evidence appeared at a depth of 92 cm, revealing the surrounding mudbrick structure and fragments of a ceramic vessel. The soil inside the grave was composed of compact sandy clay, though the increased sand content around the ceramic vessels reduced the soil's firmness. The grave was oriented east-west. The upper bodies of the burials had suffered significant damage, making it difficult to ascertain the exact position of their hands. The burials were placed on their right sides, with the skull of the northern burial severely damaged. The heads were positioned toward the west, and the faces were likely oriented southward, with flexed legs. The findings from this grave included pottery vessels, disk-shaped beads, and a bronze wire-like object (Figs. 14, 15).

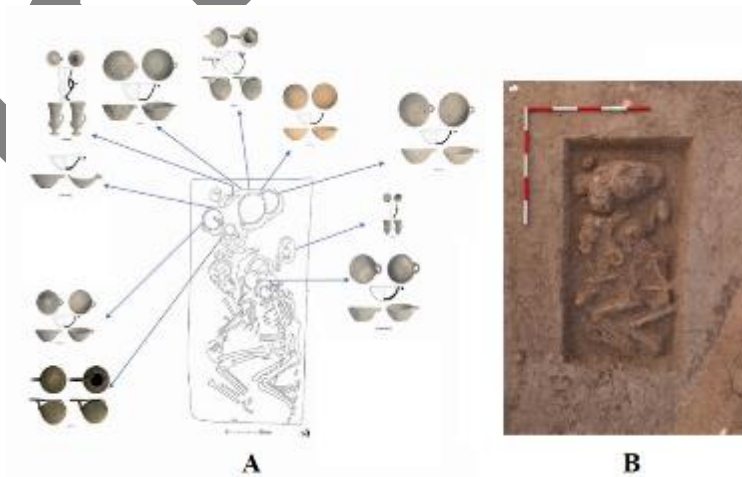


Figure 14: A: Plan of the burial and pottery vessels from Grave 3; B: Photograph of Grave 3

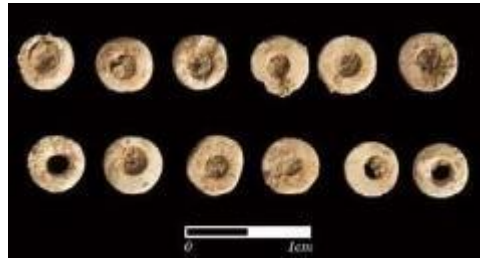


Figure 15: Disk-shaped beads from Grave 3

#### **Grave 4**

The grave contained the burial of an adult woman. Evidence of the grave was first observed at a depth of 84 cm with the emergence of the surrounding mudbricks and fragments of a pottery vessel. The soil inside the grave was compact sandy clay, but the increased sand content surrounding the pottery vessels reduced their firmness. The burial was oriented east-west, with the head positioned to the west and facing north. The shoulders rested on the ground, and the arms were bent at the elbows, placed over the abdomen. The legs were flexed, with the right knee closer to the upper body. Animal bones were found above the head of the burial, around the pottery vessels, and inside a ceramic bowl. The grave's finds included pottery vessels, disk-shaped beads, carnelian, bronze, and dentalium shell beads, a bronze torque, an iron bracelet, an iron pin, and bronze plaques (Figs. 16, 17, 18, 19).

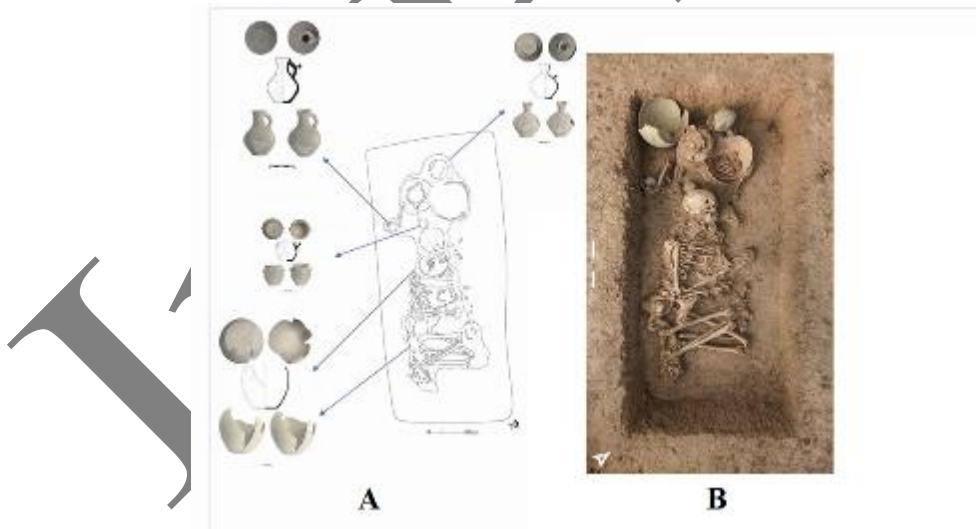


Figure 16: A: Plan of the burial and pottery vessels from Grave 4; B: Photograph of Grave 4



Figure 17: Bronze Torque, Iron Pins, and Bronze Plaques from Grave 4



Figure 18: Bronze Beads from Grave 4 Figure 19: Carnelian Bead from Grave 4

### **Grave 5**

The grave contained the burial of an adult woman. Evidence of the grave was first identified at a depth of 87 cm, marked by the surrounding mudbricks. The soil inside the grave was compact sandy clay, and like Grave 4, the increased sand content around the pottery vessels resulted in reduced firmness. The burial was oriented east-west, with the head positioned to the east and the face directed south. The left hand extended alongside the body, while the right hand was bent at the elbow, with the palm resting on the left elbow. The legs were flexed. Animal bone remains were recovered from the southern section of the grave, in front of and above the head of the burial, as well as around the pottery vessels. The findings from this grave included pottery vessels, disk-shaped beads, dentalium shell beads, bronze buttons, bimetallic pins, an iron ring, and bracelets made of bronze and iron sheets. Additionally, a stone fragment was found above the burial (Figs. 20, 21, 22, 23).

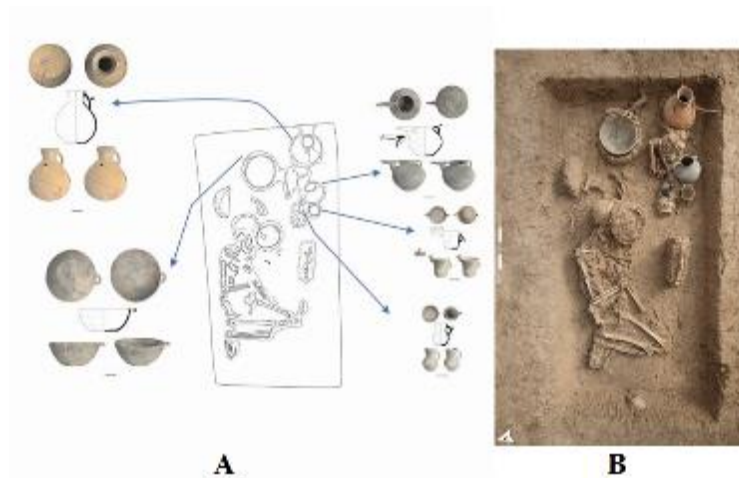


Figure. 20: A: Plan of the burial and pottery vessels from Grave 5; B: Photograph of Grave 5



Figure 21: Dentalium Shell Beads from Grave 5      Figure 22: Disk-shaped beads from Grave 5



Figure 23: Bronze and Iron Bracelets and Bimetallic Pins from Grave 5

### **Grave 6**

The grave contained the burial of an adult male. The first evidence of this grave appeared at a depth of 80 cm with the identification of the mudbrick structure surrounding it. The soil inside the

grave was firm sandy-clay, although its firmness was reduced in some areas. The burial was oriented east-west, with the shoulders resting on the ground and the head positioned at the western end of the grave. The upper part of the skull had shifted from its original position and was resting on the upper row of teeth, while the jaw remained in place, suggesting that the original orientation of the face was toward the south. The hands were interlocked on the right side of the body. The legs were flexed, with the sole of the left foot resting on the ground and the left knee positioned closer to the upper body. Animal bone remains were scattered throughout the grave, particularly above the head of the burial and around the pottery vessels. Additionally, near the head of the burial, the skull of a small ruminant was also recovered. The findings from this grave included pottery vessels, a bronze spearhead, a bronze ring, and an object made of animal horn (Figs. 24, 25).

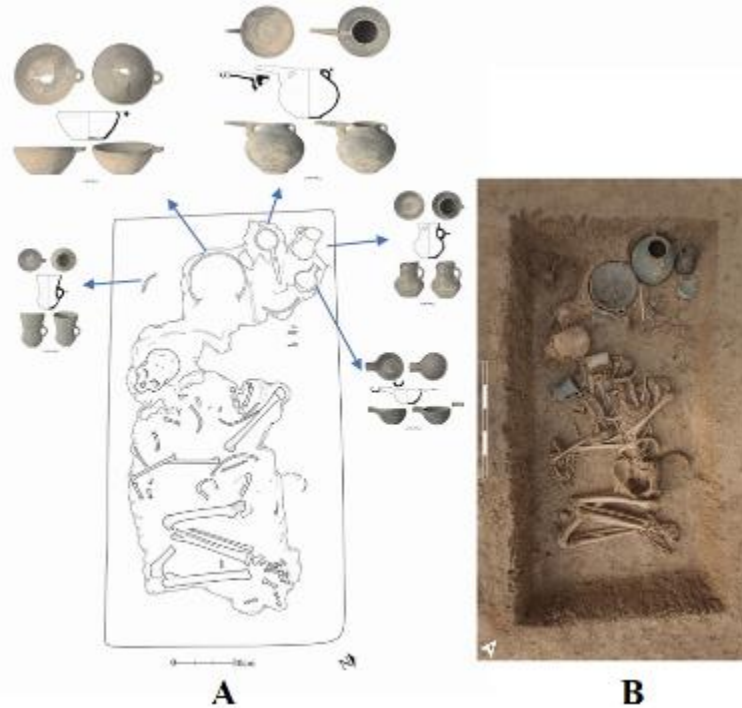


Figure 24: A: Plan of the burial and pottery vessels from Grave 6; B: Photograph of Grave 6



Figure 25: Bone Object and Bronze Spearhead from Grave 6

### **Grave 7**

This grave contains the burial of an adult woman and was identified at a depth of 80.5 cm with the discovery of mudbricks surrounding it. The soil inside the grave was compact sand-clay. The burial was oriented east-west and was highly contracted. The head was positioned to the west and faced north. The individual rested on her shoulders. The right arm was bent at the elbow and placed on the abdomen, while the left arm was fully flexed, with the palm near the shoulder. The legs were flexed, with the knees drawn toward the abdomen, resulting in a tightly contracted (fetal) position. Animal bone remains were recovered from various parts of the grave. The grave goods included pottery vessels, disk-shaped beads, an iron pin, a bimetallic pin, and an iron ring (Figs 26, 27, 59).

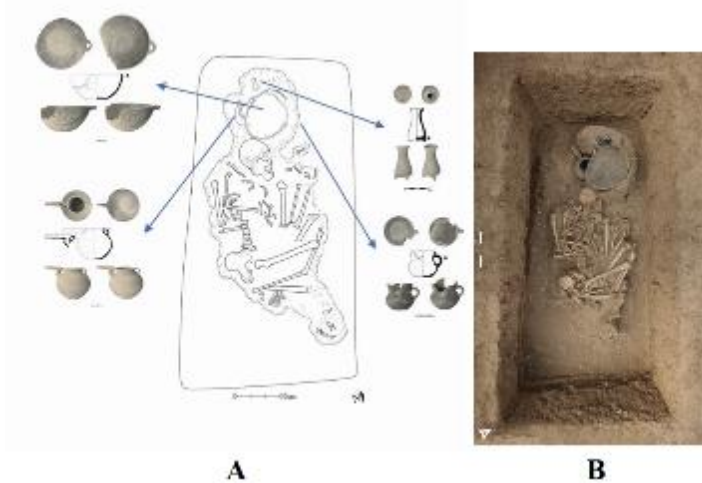


Figure 26: A: Plan of the burial and pottery vessels from Grave 7; B: Photograph of Grave 7



Figure 27: Bimetallic pins recovered from Grave 7

### **Grave 8**

The grave contained two burials of undetermined sex. Excavation began at a depth of 99 cm, where the surrounding mudbricks were identified. The grave was oriented east-west. Due to the

disturbance of the bones within the grave, it is impossible to interpret the burial position precisely. In contrast to the disturbed burial remains, the pottery vessels found within the grave remained entirely in situ. The findings from this grave included pottery vessels, a bronze earring, and a rectangular stone object measuring  $18 \times 12.5$  cm with a thickness of 2.8 cm. This object featured 36 holes arranged in four columns and nine rows. Given its characteristics, it can likely be interpreted as a type of game board (Dehpahlavan and Jahed 2021) (Figs. 28, 29, 30).

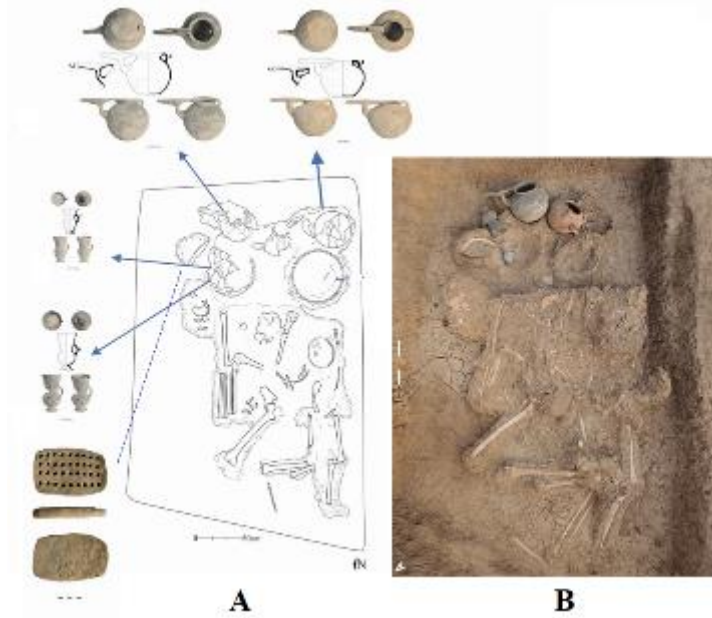


Figure 28: A: Plan of the burial and pottery vessels from Grave 8; B: Photograph of Grave 8



Figure 29: Bronze earring recovered from Grave 8

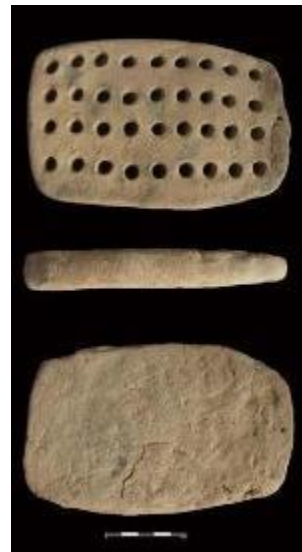


Figure 30: Perforated stone object recovered from Grave 8

### **Grave 9**

The grave belonged to an adult male. Excavation began at a depth of 86 cm, where parts of a pottery vessel and surrounding mudbricks were identified. The soil inside the grave was compact sandy clay. The grave was oriented east-west, with the head positioned to the east. Although the

skull was displaced from its original position, it appears that the burial's face was initially directed north. The right arm was bent at the elbow, with the palm resting under the skull, while the left arm was also bent at the elbow and rested on the body. The legs were flexed, with the left knee drawn toward the upper body and the sole resting on the ground. Animal bone remains were recovered from the grave, including the skull of a small ruminant species, located behind the individual's shoulder. The grave goods included pottery vessels, disk-shaped beads, a carnelian bead, blue beads, Dentalium beads, shell beads, an iron torque, an iron cuff bracelet, an Ankle Torque, and bimetallic pins (Figs. 31, 32, 33, 34, 35).

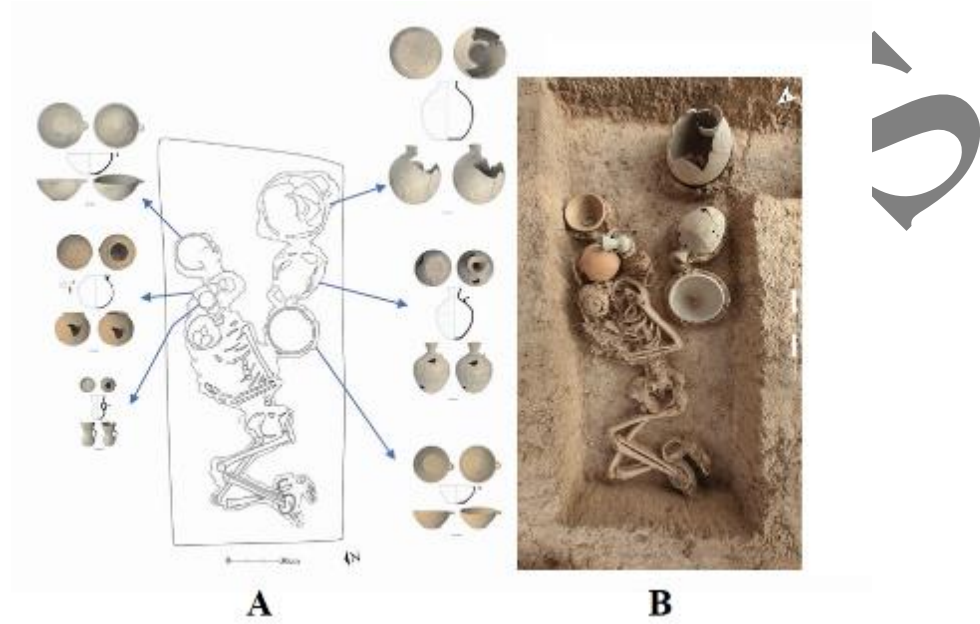


Figure 31: A: Plan of the burial and pottery vessels from Grave 9; B: Photograph of Grave 9



Figure 32: Disk-shaped beads and Dentalium beads from Grave 9



Figure 33: Blue beads from Grave 9



Figure 34: Bronze Ankle Torques from Grave 9



Figure 35: Iron torque, animal skull, and other artefacts recovered from Grave 9

### **Grave 10**

The grave belonged to an adult individual whose sex remains unidentified. Excavation began with the exposure of skull remains at a depth of 96 cm. The soil composition was a highly compacted

sandy clay. The burial was oriented east-west and positioned on the left side. The skull was not in its original place, found near the knees. The left arm was nearly straight and placed in front of the body, while the right arm was bent at the elbow, with the palm positioned beneath the forearm of the left arm. The legs were flexed; however, the lower sections extended beyond the limits of the trench, preventing any information about their exact positioning. Animal bone remains were also recovered from this grave. The findings from this grave included pottery vessels, disk-shaped beads, and the blade of a bronze dagger (Figs. 36, 37, and 38).

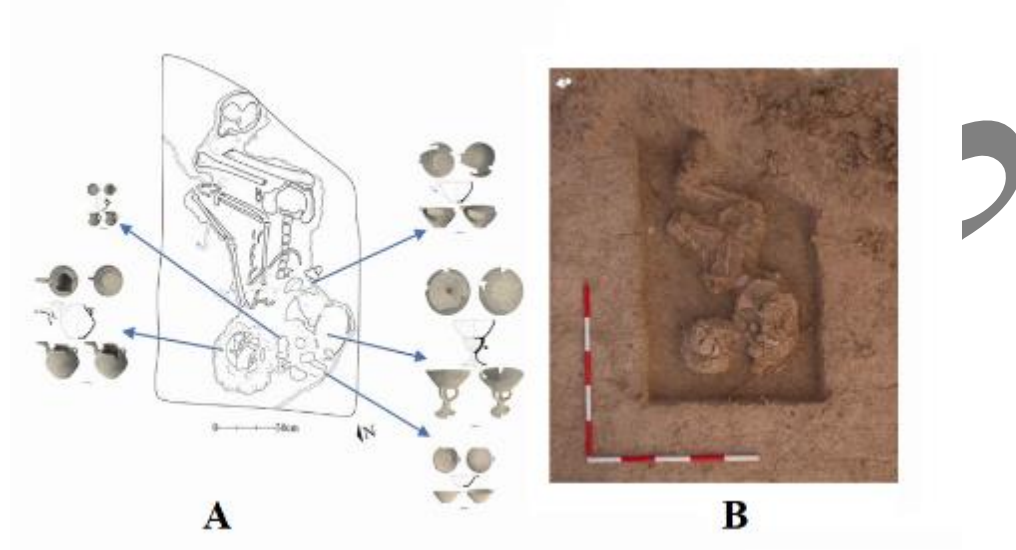


Figure 36: A: Plan of the burial and pottery vessels from Grave 10; B: Photograph of Grave 10



Figure 37: Disk-shaped beads from Grave 10

Figure 38: Bronze dagger from Grave 10

### **Burial Pattern of the Graves in Trench 13**

As previously mentioned, the ten excavated graves in Trench 13 are of the mudbrick cist type. Initially, it was assumed that the interior spaces of the graves were filled with clay before sealing their surface. Although the exact arrangement of the brick courses remains unclear, excavation observations suggest that the interior spaces remained empty and were not filled with soil. This issue will be further elaborated in the following discussion.

Before revealing the graves in Trench 13, an entirely mudbrick-covered layer was discovered covering the trench area. These mudbricks were interwoven and heavily eroded. Although the exact cause of this erosion is unclear, it may have resulted from natural factors and agricultural activities. After removing approximately 5 cm of this layer, the mudbricks surrounding the graves and those between the different graves were exposed. As the excavation progressed and portions

of the soil within the mudbrick boundaries were removed, it became evident that some artefacts were located beneath the bricks. Consequently, the bricks were removed, and the grave space was expanded. If the interior of the grave had first been filled with soil and then covered with mudbricks, the burial space created by the mudbricks would have been fully exposed after removing the surface mudbricks.

However, upon uncovering the initial burial space, the removal of surrounding mudbricks in all excavated graves led to a further expansion of the grave area. Such a method of covering the grave surface may indicate an attempt to create a hollow, chest-like space using mudbricks for the burial. In this approach, after constructing the mudbrick walls of the grave and placing the burial inside, the subsequent rows of bricks were not entirely laid on top of the wall bricks. Instead, part of each brick was positioned to prevent it from falling into the grave while still resting partially on the wall bricks. This technique was repeated in successive rows until the grave was completely covered. The primary reason for placing mudbricks over some burial objects is related to the covering method. Even half-mudbricks can be attributed to this specific arrangement. Unfortunately, due to rainfall, flooding, and the movement of heavy agricultural machinery over these graves, it is unclear how many rows of mudbrick were placed before the grave space was sealed.

Nevertheless, a conceptual reconstruction of the arrangement of the mudbricks in the graves of Trench 13 has been proposed (Fig. 39). Excavations in the region's cemeteries have revealed another interesting method for covering grave ceilings. For instance, in some graves of the Sarm cemetery in Qom province, the grave surfaces were covered with mudbrick arches (Kavoosi and Sarlak 2019: 366).

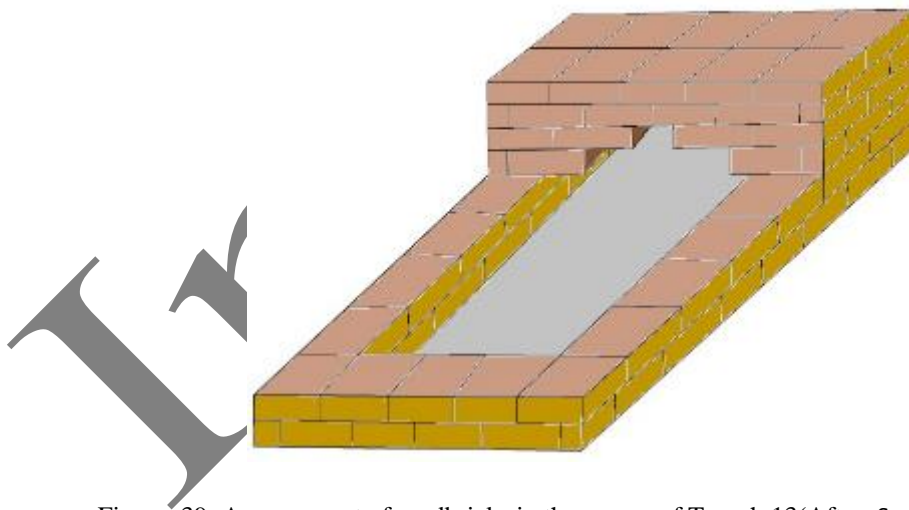


Figure. 39: Arrangement of mudbricks in the graves of Trench 13(After: Saman Babazadeh)

Animal bone remains were found in all graves, except for Graves 3 and 8. Both of these graves contained two burials. However, it should be noted that the skeletal remains in these graves were disturbed, and it is possible that animal and human bones were mixed. It is not unlikely for parts of an animal's body that lack bones to be placed in the grave. A definitive conclusion requires the recovery and examination of the bones from the graves by experts in anthropology and zoology. Except for Grave 1, where a small pottery vessel was placed near the knee of the burial, pottery vessels and other grave goods were positioned around the head of the deceased.

In some cases, vessels were placed beneath (Graves 3 and 4) or on top of (Grave 5) the skulls of the burials. Although a complete excavation of all the graves is required, evidence suggests the possible creation of small raised areas for placing specific objects and even animal bone remains (Figs. 40 and 41). Drawing a definitive conclusion on this matter necessitates a full excavation of the graves, which was not feasible due to the decision to convert the trench graves into an on-site museum.



Figure 40: Creation of a small ledge in Grave 7 for placing pottery vessels.



Figure 41: Creation of a small ledge in Grave 5 for placing pottery vessels and animal remains.

It appears that all burials were originally placed on their sides, and the positioning of some individuals on their backs may have resulted from post-burial shifts. The hands were generally positioned toward each other. In three cases (Graves 1, 2, and 5), one hand was extended alongside the body while the palm of the other hand rested on the forearm or elbow of the opposite arm. Based on the available evidence, individuals were buried with their jewellery and clothing. Weapons were recovered from Graves 1, 6, and 10, all of which belonged to male individuals.

Of the 10 graves in Trench 13, a total of 12 burials were recovered. All individuals were young or middle-aged adults, with none exceeding the age of 50. All burials were oriented east-west; some

individuals had their heads positioned to the east, while others faced west. Although the sample size is too small to establish a definitive burial pattern based on sex, all female burials were positioned on their left side, whereas all male burials were placed on their right side (Farnam and Khodadadi 2018).

### **The Eastern Cemetery and Chronological Considerations:**

During the 2016 project aimed at defining the archaeological boundaries, evidence of a new cemetery was discovered in the agricultural fields east of Qareh Tepe (Dehpahlavan 2019a: 437). Based on findings from the archaeological geophysical surveys, Trench 12 was excavated in 2017 at an initial dimension of 10 by 20 metres, located 180 metres east of Qareh Tepe (Dehpahlavan 2017: 24). Excavations in Trench 12 continued in 2018, 2019, and 2021 (Dehpahlavan 2019a, 2019b, 2021) (Fig. 42).



Figure 42: Location of Trench 12 excavation east of Qareh Tepe, Segzabad (After: Aerial photo by Shahrzad Najafi) Over four excavation seasons, a total of 66 graves were identified in Trench 12 (Dehpahlavan and Alinezhad in press). The graves of the eastern cemetery of Qareh Tepe were uncovered at varying depths within Trench 12. The uppermost grave was recorded at a depth of 128 cm, while the deepest grave was found at 440 cm. The excavated graves in this cemetery included mudbrick cist graves (Fig. 43) and pit graves (Fig. 44). Additionally, burials of infants and

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∇All depths were measured relative to the fixed reference point at the trench's northwest corner.

fetuses placed in pottery vessels were also identified in this cemetery (Dehpahlavan and Alinezhad in press). The excavated graves in this cemetery included both individual and collective burials, with some graves showing evidence of secondary burials and the reuse of graves.<sup>7</sup>



Figure 43: Grave 39 (Context 12090) with mudbrick structure (Dehpahlavan 2019B)



Figure 44: Grave 62 (Context 12133), pit-type burial (Dehpahlavan 2021)

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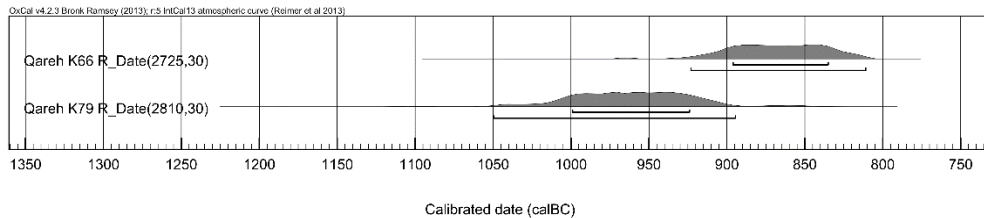
<sup>7</sup>In addition to the graves, numerous human bone remains were also recovered from areas outside the grave structures in this cemetery. Given the depositional processes and taphonomic factors, the in situ nature of these remains is doubtful, and their displacement is likely due to natural, animal, or human activities. Nevertheless, these remains were not assigned separate grave No.; instead, they were recorded under the context number from which they were retrieved.

In the conducted research, the excavated graves in Trench 12 have been classified into five burial levels based on the depth at which human burial bones were identified (Dehpahlavan and Alinezhad in press)<sup>4</sup>(Fig. 45).



Figure 45: Different burial levels recovered from the eastern cemetery (Dehpahlavan 2018)

Five absolute dating samples and the typology of grave findings generally support the chronological sequence of the Eastern Cemetery graves based on their depth. (Table. 1 and Figs. 46, 47, 48, 49) However, it should be noted that factors such as terrain irregularities, ground slope, and specific ritual or social differences among individuals may have led to variations in burial practices,<sup>5</sup> introducing chronological errors based solely on the depth at which the graves were discovered.



<sup>4</sup>Since there is no stratigraphic layering based on deposition in the cemetery excavation, the term "level" has been used to understand the elevation differences among the graves.

<sup>5</sup>Such as differences in the depth of burial pits and the construction of burial platforms.

Figure 46: Absolute dating sample from Graves 12 (Context 12035) and 18 (Context 12047) ( Poznańskim Laboratorium Radiowęglowym, Poznan, Poland )

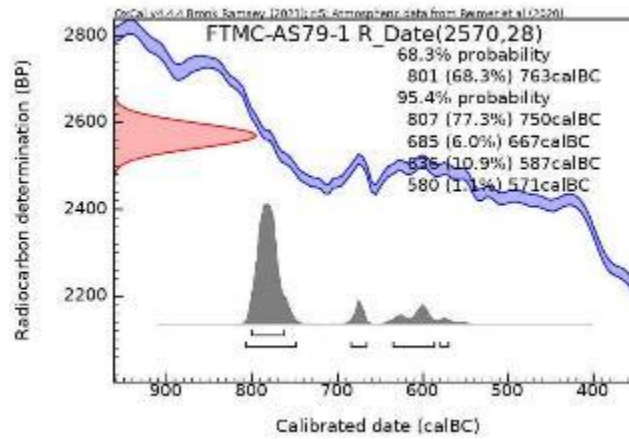


Figure 47: Absolute dating sample from Grave 1 (12016) (Mass Spectrometry Laboratory, Vilnius, Lithuania)

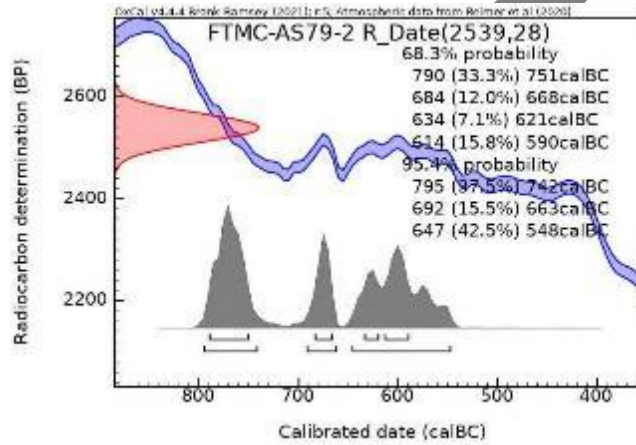


Figure 48: Absolute dating sample from Grave 55 (12115) ( Mass Spectrometry Laboratory, Vilnius, Lithuania)

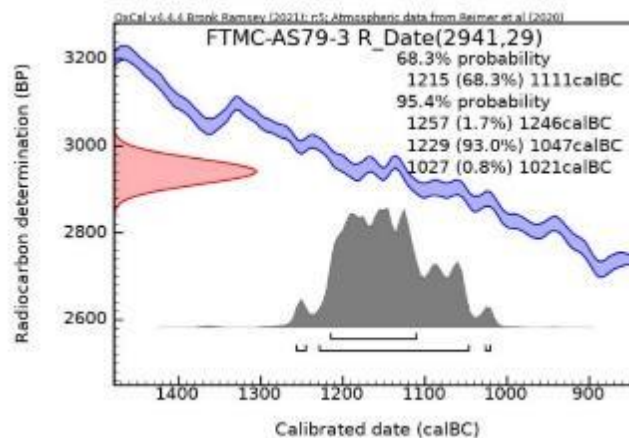


Figure 49: Absolute dating sample from Grave 62 (12133) ( Mass Spectrometry Laboratory, Vilnius, Lithuania)

Table. 1: Specifications of Graves with Absolute Dating Excavated in Trench 12 of the Eastern Cemetery of Qareh Tepe, Segzabad

Grave No.	Con	Depth of the first evidence of graves	Part	Radiocarbon date	Calibrated date	Probability
1	1201 6	128	Part B	e.g. 2570±28 BP	807-571 BCE	95.4%
					801-763 BCE	68.3%
12	1203 5	173	Part B	e.g. 2725±30 BP	924-812 BCE	95.4%
					897-836 BCE	68.2%
18	1204 7	272	Part C	e.g. 2810±30 BP	1050-895 BCE	95.4%
					1000-925 BCE	68.2%
55	1211 5	302	Part A	e.g. 2539±28 BP	795-548 BCE	95.4%
					790-590 BCE	68.3%
62	1213 3	435	Part A	e.g. 2941±29 BP	1257-1021 BCE	95.4%
					1215-111 BCE	68.3%

As mentioned above, there are exceptions in the chronological sequence of graves based on their depth. Grave 55 is one such case. Although it was found at a greater depth than Graves 12 and 18, its absolute dating indicates a more recent date than these two graves. Even without absolute dating, a Neo-Assyrian-style cylinder seal (Dehpahlavan and Alinezhad 2022: 12) (Fig. 50) confirms a later date relative to its discovery depth. Overall, the excavated graves in Trench 12 of the Eastern Cemetery indicate a chronology ranging from the 12th century BCE to approximately the late 7th century BCE.



Figure 50: The cylinder seal discovered from Grave 55, Trench 12

### Chronology of the Graves in Trench 13

To determine the chronology of the graves in Trench 13, the findings from this trench will be compared with those from the excavated graves in Trench 12. To accomplish this, the artefacts from the graves in Trench 13 have been categorised in Tables 2 and 3. (Tables 2 and 3) As mentioned earlier, since it was initially planned to convert the graves in Trench 13 into an on-site museum, not all grave artefacts were photographed or designed. Among these artefacts, a pottery bowl was located in the southeastern corner of Grave 1. However, due to its incomplete excavation, no comprehensive information regarding its full characteristics is available. As a result, it was not included in the comparison with the artefacts from the Eastern Cemetery. Additionally, a broken red vessel was discovered in the southwestern corner of Grave 2, but due to the lack of conservation, its form could not be determined. Grave 4, besides containing designed pottery vessels, had five other vessels: two red bowls, a red open-spouted pottery vessel, a grey cup, and a grey bowl with a horizontal handle. One of the bowls was not fully visible due to its position beneath another and was therefore excluded from comparisons. The red open-spouted vessel was assigned the code T18, the bowl with a small handle below the rim was labelled T19, and the cup placed under the head of the burial was designated T20 (Figs. 51, 52).



Figure 51: Grey cup from Grave 4



Figure 52: Bowls and open-spouted vessel from Grave 4

Grave 5 also contained two additional ceramic vessels, including a bowl above the burial's head and another ceramic vessel alongside the other artefacts. Due to the bowl's incomplete excavation, it was excluded from comparisons, while the other vessel was assigned the code T21 (Figs. 53).



Figure 53: Undesigned pottery vessels from Grave 5

Another grey-coloured bowl was also recovered from Grave 6, which is in poor condition; due to its incomplete exposure, it is not possible to provide an accurate assessment of its characteristics. Grave 8 also yielded three additional bowls beyond the designed vessels, two of which are in poor condition, and the other is of the horizontally-handled type. In addition to the aforementioned items, conservation work carried out on the graves of Trench 13 recovered several antimony beads from Grave 5, which were assigned the code T38 (Figs. 54, 55, 56, 57, 58, 59, and 60).



Figure 54: Antimony bead recovered from Grave 5



Figure 55: Comparable example of type T18 from the Eastern Cemetery



Figure 56: Comparable example of type T19 from the Eastern Cemetery



Figure 57: Comparable example of type T20 from the Eastern Cemetery



Figure 58: Comparable example of type T21 from the Eastern Cemetery      Figure 59: Comparable example of type T17 from the Eastern Cemetery



Figure 60: Comparable example of type T16 from the Eastern Cemetery

Table 2: Typology of Pottery Vessels Recovered from the Graves in Trench 13

Grave No.	G. 1	G. 2	G. 3	G. 4	G. 5	G. 6	G. 7	G. 8	G. 9	G. 10
<b>Types</b>										
<b>Type 1</b>										
<b>Type 2-G</b>										
<b>Type 2-R</b>										
<b>Type 3</b>										
<b>Type 4</b>										
<b>Type 5</b>										
<b>Type 6</b>										
<b>Type 7</b>										
<b>Type 8-G</b>										
<b>Type 8-R</b>										
<b>Type 9</b>										
<b>Type 10</b>										
<b>Type 11</b>										
<b>Type 12</b>										



















Type13-G											
Type13-R											
Type 14-G											
Type 14-R											
Type 15											
Type 16											
Type 17											
Type 18											
Type 19											
Type 20											
Type 21											

Table 3: Decorative Beads and Metal Objects Recovered from the Graves in Trench 13

Types	Object Name	G. 1	G. 2	G. 3	G. 4	G. 5	G. 6	G. 7	G. 8	G. 9	G. 10
Type 22-B	Torque					*					
Type 22-I										*	
Type 23	S-Shape earring								*		
Type 24- I	Pin				*						
Type 24- BM						*		*		*	
Type 25	Wire Bracelet	*			*						
Type 26-B	cuff bracelet									*	
Type 26-I						*				*	
Type 27	Ankle Torque									*	
Type 28	Ring						*				
Type29	Bronze Bead	*			*						
Type 30	Bronze button					*					
Type 31	Bronze plaque				*						
Type 32	Spearhead						*				
Type 33	Dagger	*									*
Type 34	Cyprae				*						
Type 35	Dentalium				*	*				*	
Type 36	carnelian				*					*	
Type 37	Egyptian Blue /Lapis lazuli									*	
Type 38	Antimony Bead					*					

In Table 4, an effort has been made to indicate which graves in Trench 12 contain artefacts similar to those recovered from the graves in Trench 13. The first column lists the artefact codes from Trench 13, based on Tables 2 and 3. The first three rows provide, respectively, the depth, context

No., and grave No. from Trench 12 that contains at least one artefact similar to those found in Trench 13.<sup>‡</sup>(Table. 4)

The depth recorded for the graves in Trench 12 in Table 4 is based on the first evidence of their appearance during excavation. Except for Graves 62 and 63, some artefacts and bones became visible alongside the exposure of the burial pit in most cases. This means that the recorded depth for each grave may not accurately reflect the actual depth at which the burial pit was created. Grave 19, which is 130 cm deep, was the shallowest grave containing artefacts similar to those from Trench 13, while Graves 62 and 63 were the deepest at 435 cm. As noted in Table 4, certain types of artefacts were used as grave goods over extended periods by the region's communities. Excavations of the occupational layers at Qareh Tepe in Segzabad reveal a similar pattern, indicating that all ceramic traditions persisted throughout the site's occupation (Fazeli Nashli et al. 2011: 151, 152).

Two Figures were created based on the results from Table 4 to illustrate the chronology of the burials in Trench 13.

In Figure 61, the horizontal axis represents the number of graves, while the vertical axis indicates the number of artefacts from Trench 12 that share similarities with the grave goods from Trench 13. The bars in the Figure are displayed in five different colours, each representing a specific depth range at which the graves were identified, determined conventionally.<sup>¶</sup>

According to this Figure, 13 graves from Trench 12 contain more than four artefacts similar to the grave goods found in Trench 13. Two graves fall within the depth range of 130–200 cm, five graves correspond to the depth range of 201–250 cm, four graves belong to the depth range of 251–300 cm, and two graves are from the depth range of 301–350 cm. The highest concentration of graves (nine graves) with more than four objects similar to those from Trench 13 is found in the depth range of 200–300 cm. However, there are specific considerations regarding the other four graves, which will be discussed further (Fig. 61).

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<sup>‡</sup> For example, Grave 2 in Trench 12, with context No. 12021, contains artefacts similar to types T1 and T12 from the graves in Trench 13. However, not all artefact types found in Trench 13 have corresponding examples from Trench 12.

<sup>¶</sup>For example, two graves at a depth of 251–300 cm in Trench 12 contain nine artefacts similar to those found in the graves in Trench 13.

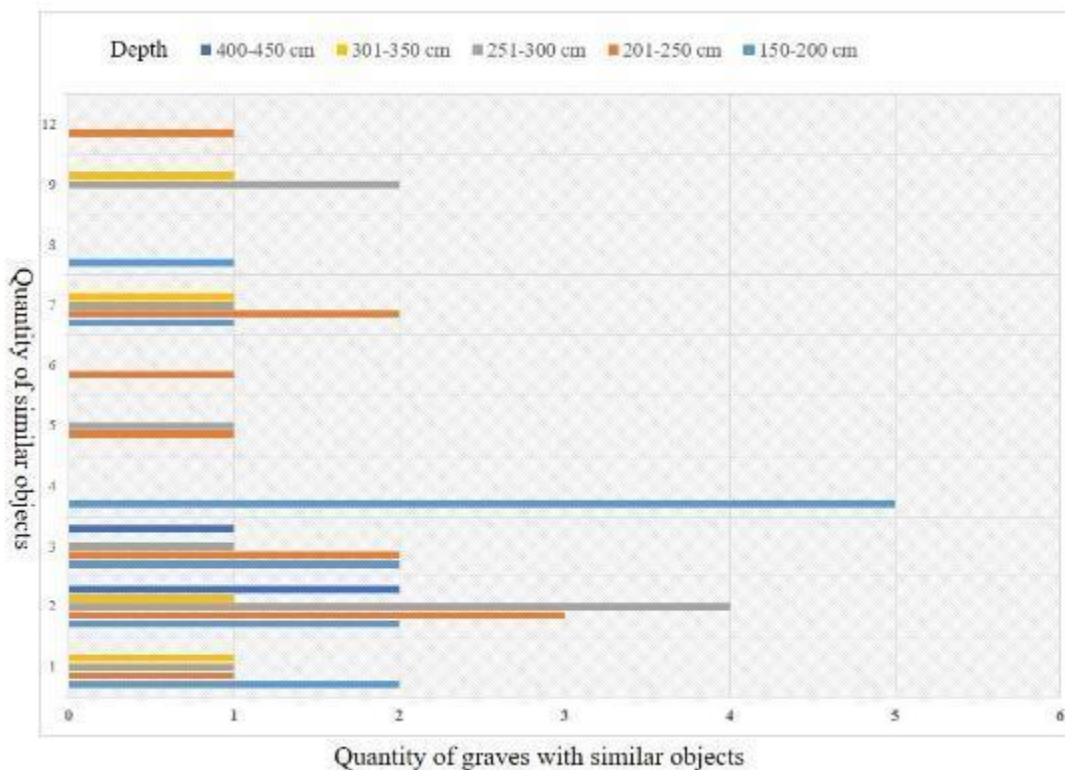


Figure 61: Distribution of Trench 12 Graves at Different Depths and the Number of Objects They Share with Trench 13 Graves

Graves 11 and 16 belong to the 150–200 cm depth range. Grave 16 contained seven objects similar to the findings from Trench 13. The first evidence of this grave in Trench 12 was recorded at a depth of 188 cm, revealing parts of a human skull, an animal horn, and a kitchen vessel. The last objects from this grave were recovered at a depth of 297 cm, which included a set of human and animal bones and a significant number of decorative beads. All objects with parallels in Trench 13 were found at depths of 260–297 cm within this grave (Dehpahlavan 2019b: 139-142). This grave held two burials: one belonging to a young adult female and the other to an infant. Notably, both burials had incomplete skeletal remains (Dehpahlavan 2019b: 139-142). The grave was highly disturbed, with numerous objects recovered. Overall evidence suggests that the initial burial in this grave was contemporaneous with those at a depth of 251–300 cm. Later, the grave was reopened for a secondary burial, which was subsequently recovered.

Next, Grave 11 contains eight objects similar to those in Trench 13. The excavation of this grave began at a depth of 173 cm and concluded at 211 cm (Dehpahlavan 2018: 55, 56). This grave was also highly rich and disturbed. The skeletal remains recovered from this grave include two adult females, two adults of undetermined sex, and an infant (Trębicka et al. 2019: 128, Table 1). None of the burials had complete skeletal remains. Based on the available evidence, this grave was likely used for secondary burials and multiple interments. It was discovered within a mudbrick surface designated as Context 12027. Although this context was not fully excavated, the evidence suggests it likely represents a mudbrick platform (Dehpahlavan 2017: 79; Dehpahlavan 2018: 39). This feature may have caused the grave to be constructed at a level higher than the original ground surface of the cemetery. Graves 61 and 66, which contain 9 and 7 objects similar to those found in Trench 13, respectively, are located in the 300–350 cm depth range. Grave 66 is notably large and

includes the burials of two horses, eleven children and infants, and possibly a young adult. Grave 61 contains the burial of a single horse alongside an immature individual (Figs. 62 and 63).



Figure 62: Grave 66, Trench 12

Figure 63: Grave 61, Trench 12

Iron Age graves containing complete horse burials have been discovered in the western Sefidrud region of Gilan Province (Hakemi 2017; Khalatbari 1997) as well as in northwestern Iran (Navidgabaloou et al., 2021). Chronologically and in terms of burial traditions, the horse burials of the eastern cemetery at Qareh Tepe in Segzabad are comparable to those from the Sefidrud region in Gilan. Khalatbari, in his excavations at Kaluraz, provided information on the depth of these graves. The grave containing a horse burial was 180 cm deep, making it the deepest excavated grave in that cemetery (Khalatbari 1997: 94, Table 1). Logically, Graves 61 and 66 possessed deeper burial pits compared to their contemporaneous graves. Consequently, although the recorded depth of their earliest evidence (horse bones) places them among the graves at a depth of 300–350 cm, the burial pits of Graves 61 and 66 were undoubtedly dug at a shallower level than those without horse burials, which have remained recorded at the same depth as these two graves.

Consequently, these two graves are contemporaneous with the more recent graves and are chronologically closer to those that lie at depths between 200 and 300 cm. Despite all these considerations, the results presented in Figure 61 suggest that the graves in Trench 13 are contemporaneous with those located between 200 and 300 cm in Trench 12.

While Figure 61 has provided valuable insights, it has limitations regarding its capabilities due to certain factors—such as discrepancies in the correlation between depth and chronology of the graves in Trench 12, the varying number of excavated graves at each depth, and the prolonged use of certain artefact types. In Figure 64, we have attempted to address some of these shortcomings. In this Figure, we assume that if a specific artefact type from Trench 13 has been recovered at two different depths, all graves between these depths—regardless of whether they contain the same

artefact type—fall within the timeframe of that artefact’s usage. The absence of such artefacts in specific graves may be attributed to ideological factors in burial practices, differences in social status and social prestige, or even the personal preferences of the deceased’s relatives in selecting grave goods. For example, the shallowest grave from which artefact type T1 has been recovered is Grave 2 at a depth of 156 cm, while the deepest grave containing this artefact type is Grave 49 at a depth of 296 cm. In this case, the graves in Trench 13 can be placed within the chronological range between these two graves, making them contemporaneous with any of the graves between them, even if they do not contain similar artefacts. In Figure 64, each bar represents a specific artefact type from the graves in Trench 13, with its two endpoints indicating the deepest and shallowest graves in Trench 12 that contained similar artefact types (Fig. 64).

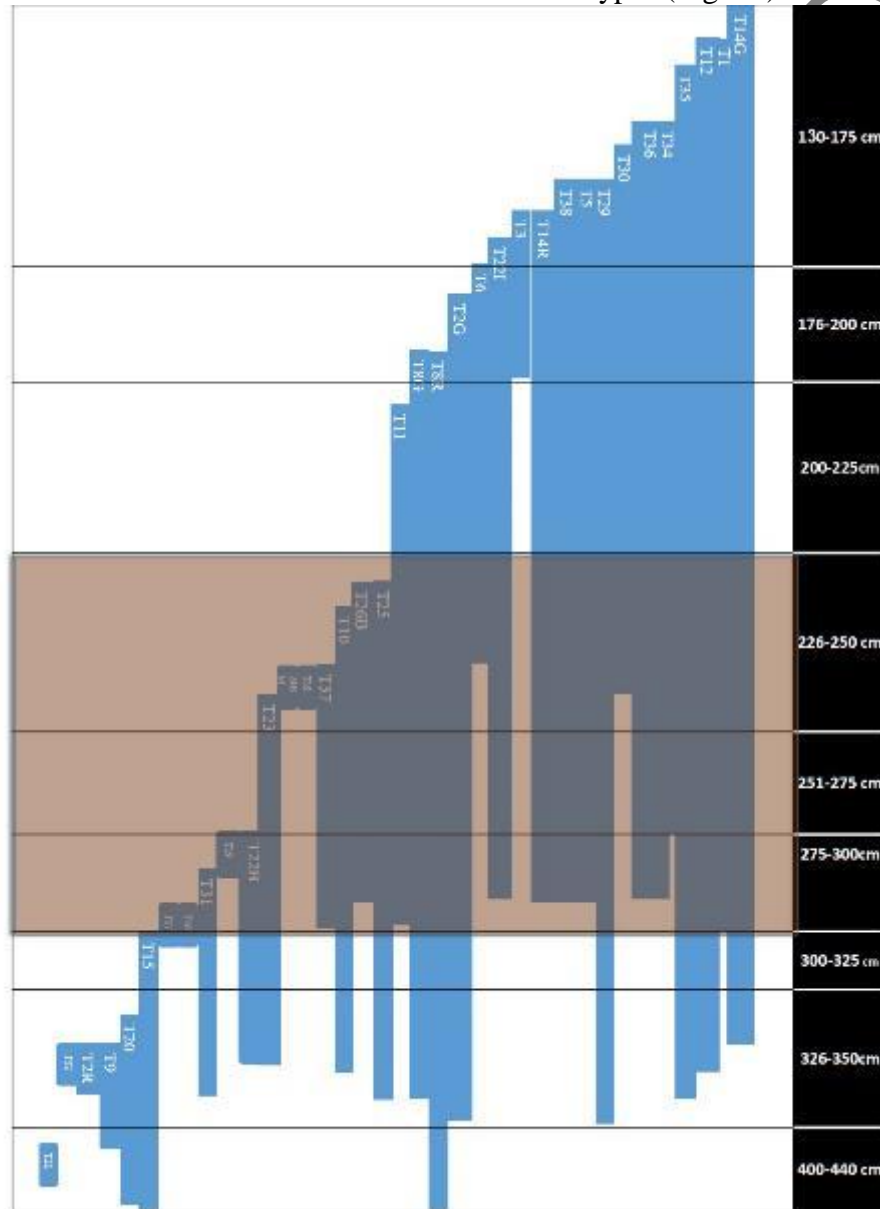


Figure 64: Distribution of Artefact Types Similar to Trench 13 Graves across Different Depths in Trench 12 Graves

According to the results presented in this Figure, the graves located at depths of 225–300 cm encompass the highest number of artefact types, with only seven types falling outside this range. These seven types include T2R, T3, T9, T15, T20, T21, and T32. Notably, artefact types T2R, T9, T15, T20, and T32 are present in one or both of Graves 61 and 66. Given the characteristics of these two graves, as previously described, they can most likely be classified within the 250–300 cm depth range. Consequently, these artefact types also overlap with the other types, leaving only T21 and T3 without corresponding examples from graves within the 225–300 cm depth range in Trench 12. However, considering the previously mentioned reasons, this discrepancy can be disregarded. Based on the discussed points, Figure 64 aligns with the results of Figure 61 while providing a more refined chronological framework. Two absolute dating samples are available from graves within this depth range (Table 1). However, due to the chronological complexities associated with the graves in Trench 12, Grave 55 is not a valid reference for determining the chronology of other graves at the same depth. Only the absolute dating of Grave 18 can be relied upon. With a 95.4% confidence level, the dating results indicate a timeframe of 1050–895 BCE, while at a 68.2% confidence level, the range narrows to 1000–925 BCE. Given the presence of several carnelian beads in the graves of Trench 13 and the occurrence of iron artefacts—findings that became more prevalent in the region at the beginning of the first millennium BCE (Babazadeh and Dehpahlavan 2022)—along with the absence of Neo-Assyrian-style cylinder seals (which appear in this cemetery only after the 9th century BCE), it is highly probable that the graves in Trench 13 date to approximately 1000–900 BCE.

### **Conclusion**

The excavations in Trench 13 have revealed that the extent of the western cemetery at Qareh Tepe in Segzabad is larger than previously assumed. The excavation of graves in this trench has led to the identification of findings that can contribute to a clearer understanding of various aspects of Iron Age communities in the region. A comparative analysis of the grave goods from Trench 13 with those from Trench 12 indicates that the graves in Trench 13 are chronologically contemporaneous with those found at depths of approximately 300–225 cm in Trench 12. Based on a single absolute dating sample from graves at this depth, along with the discovery of carnelian beads and iron ornaments, and the absence of Neo-Assyrian-style cylinder seals—despite the wealth of specific graves in Trench 13—it is possible to date these graves to approximately 1000–900 BCE. During this period, a burial tradition prevailed where graves were oriented east-west, and individuals were interred on their sides. The graves featured mudbrick structures, and, based on the available evidence, they were covered with mudbricks without filling the burial pit with soil. Individuals were interred with clothing and ornaments, while grave goods were placed above their heads. Including animal body parts in burials appears to have been a widespread tradition. Although the number of graves is limited, it seems that women were placed on their left side and men on their right side.

### **Acknowledgement**

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