Sine Sepulchro cultural complex of Transoxiana (between 1500 and the middle of the 1st Millennium BCE). Funerary Practices of the Iron Age in Southern Central Asia: Recent Work, old Data, and new Hypotheses

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The concept of burial in Protohistoric Central Asia irresistibly evokes the rich Bronze Age graves discovered in recent years at sites such as Gonur-depe in Turkmenistan or Dzharkutan in Uzbekistan,[1] It is during this period that the Oxus civilization or Bactro-Margian Archaeological Complex[2] appears throughout southern Central Asia, and its emergence and development are associated with a strong social hierarchy that controlled irrigation.[3] The socio-economic system of the Oxus civilization, a proto-state society with urban characteristics, was based on transcontinental trade of raw materials and prestige goods that developed at the borders of the great imperial centers of the Middle East, the Indus, and China.

At the end of the Bronze Age (ca. 1700–1500 BCE), for still unknown reasons, this civilization disappeared, in parallel to a deterioration of long-distance trade, the collapse and subsequent abandonment of major cities, and presupposed technology loss that transformed local material culture. After this profound transformation, the Early Iron Age (Yaz I period) emerged, around 1500–1300 BCE, with the development of rural settlements dispersed in oases, sometimes with a small, fortified building that housed a minor elite who managed the wealth generated by the exploitation of land and the control of irrigation systems.[4] The most important distinction from the previous period, and the easiest to observe is the presence of a very specific ceramic type: handmade pottery decorated with painted red-brown geometric patterns on a light background.[5] The transition from wheel-made to handmade ceramics and the disappearance of all handicrafts and iconography are characteristics of this post-urban phase.

These socio-economic transformations – often wrongly interpreted as evidence of a ''decline''. They reflect deep social, economic and religious upheavals and funerary practices are good indicators of these processes.

In the Iron Age graves disappear almost completely among the sedentary populations of southern Central Asia, while simultaneously in the north, thousands of burials in kurgans dot the Eurasian steppes.[6] How might this radical change during the Iron Age in the southern part of Central Asia be explained? Can we interpret this as evidence of the emergence of a new religion, as it is often suggested?[7] Indeed, one oft-used explanation is the formation of Zoroastrianism,[8] but current research has not yet offered convincing proof and the discussion remains open.

These handmade painted pottery cultures disappear around 1000 BCE with the beginning of the Middle Iron Age, or Yaz II, a period characterized by new changes in the material culture, including the appearance of a new, wheel-made pottery type, the development of iron metallurgy, and the emergence of large fortified sites, as well as the occupation of previous sites and the continuation of the same funerary practices.

In the Late Iron Age (ca. 540–329 BCE, Yaz III period) Central Asia becomes part of the Achaemenid Empire,[9] but the same sites are still occupied

[1] Bendezu-Sarmiento/Grizeaud 2011; Sarianidi 2001; Сарианиди 2006; Sarianidi 2007; Sarianidi 2010.
[2] Francfort 2009; Sarianidi 1981.
[3] Francfort/Lecomte 2002.
[4] Bendezu-Sarmiento *et al.* 2013.
[5] Массон 1959; Lhuillier 2013a; Lhuillier 2013b.
[6] Bendezu-Sarmiento 2007; Čugunov *et al.* 2010
[7] For a recent and complete overview on the question, see Teufer 2013.
[8] Avanesova 1995; Boyce 1975; Sarianidi 1994; Sarianidi 1998; Sarianidi 2001; Sarianidi 2010.
[9] Francfort 2005a; Rapin, in print.

Fig. 1
Map showing the different geographical zones and Iron Age sites mentioned in this study

and the material culture, including pottery, shows great continuity. Graves are still absent.

It is clear that across the whole temporal extent of the Iron Age in southern Central Asia, indications of burials are rare, with the exception of the discovery of some isolated primary graves and secondary burials. The probability of discovering cemeteries of this period is currently very small: numerous Soviet and post-Soviet excavations and surveys have revealed an absence of findings that is quite meaningful. In our view, this lack of graves is the main characteristic of these Early Iron Age cultures, rather than the handmade painted ceramics that gave them their name.[10]

Radical transformations of the material appear to have concealed changes in funerary practices, which become diversified during the Bronze Age. As we will see further, the number of individuals identified by anthropological studies does not reach 200 over one millennium. However, the absence of burials is the only phenomenon common to all Iron Age cultures. This change is not only physical, but more importantly, reflects a profound change in mentality that affected the whole population on both banks of the Amu-Darja and Syr-Darja rivers **(Fig. 1)**. For this reason, it seems reasonable to group not only the handmade painted pottery cultures, but also those dated to the Middle-Late Iron Age, into the *Sine Sepulchro* Cultural Complex of Transoxiana, a term that takes into consideration the socio-cultural and geographic aspects of these populations.

Recent discoveries on the site of Dzharkutan[11] by the French Archaeological Mission in Uzbekistan – Protohistory (MAFOuz-Protohistoire, dir. J. Bendezu-Sarmiento and S. Mustafakulov) and on the site of Ulug-depe[12] by the Franco-Turkmen Archaeological Mission (MAFTur, dir. O. Lecomte and M. Mamedow) shed new light on the diverse funerary practices of

[10] Among known sites, the proportion of these ceramics rarely exceeds 20% of the assemblage, signifying a heterogeneity of the ceramic complexes that implies regional variation (Lhuillier 2013b).

[11] The site of Dzharkustan is situated on the left bank of the Bustansaj, in the Sherabad oasis in the Surkhan-Darja province in Uzbekistan (Бендезу-Сармиенто/Мустафакулов 2008; Мустафокулов/Бендезу-Сармиенто 2009; Мустафокулов *et al.* 2012). It is made up of a series of natural hills separated by small valleys. At the site, two parts can be distinguished: the settlement and the necropolis. The settlement was occupied until the Early Iron Age, in particular in the zone referred to as the Citadel.

[12] The site of Ulug-depe, located near the village of Dushak in the Kaakhka region of Turkmenistan, was occupied continuously from the Chalcolithic to the Yaz II–III period (Lecomte 2011).

the Iron Age **(Fig. 1)**. These findings demonstrate that practices vary more from the generally accepted absence of bodies and artefacts – supposed to indicate a single funerary treatment: excarnation. Indeed, graves – primary, secondary and multiple – do exist. In this article we intend to find a more precise definition of these practices, which necessitate a comprehensive review of older literature (in the second part of the article) of this rather unknown period in the history of Central Asia.

Recent discoveries at Dzharkutan and Ulug-depe

Child primary burials

Grave No. 1026, Dzharkutan **(Fig. 2)**

This grave was discovered in the area known as the Citadel (trench 4), within a shallow oval pit (0.53 × 0.35 m), with an opening about twenty centimeters from the current ground level. This pit, oriented east-west, was dug against and on the ancient wall of an abandoned Bronze Age building. The individual,[13] an infant, died in the perinatal period, between 0–1 years of age, and was buried lying on his left side (lateral decubitus position) in a crouched position, with the head to the east. The feet were not preserved (both tibias are in very poor state of preservation) and the doubt remains as to whether the feet were originally physically present in the burial. The upper limbs were extended in front of the body, the left arm in an anterior position and the right arm in a lateral position, both oriented north-south **(Fig. 2)**. Of the right hand, only a metacarpus remained, but the left hand was articulated (palmar presentation). Two bronze bracelets were found, one associated with each forearm. The craniofacial region was entirely fragmentary, but still articulated with the mandible. In addition, only part of the vertebrae (lumbar) was articulated.

Grave No. 1027, Dzharkutan **(Fig. 3)**

This burial was discovered near grave No. 1026, in an oval pit just large enough to encompass the body (0.64 × 0.35 m), with a depth of 20 cm from the present ground level. The individual, an infant between 1.5 and 4 years old, was buried on his left side, with the head facing east. The bent legs were superimposed one on the other. The right upper limb was also bent, with the hand placed near the mandible. The left upper limb was in an extended position, lying under the right arm with the hand under the legs at knee-level.

Fig. 2
Primary Child Grave No. 1026 at Dzharkutan (photo MAFOuz-Protohistoire)

Fig. 3
Primary Child Grave No. 1027 at Dzharkutan (photo MAFOuz-Protohistoire)

The body does not seem to have been disturbed, because the bones were all articulated, allowing us to conclude that decomposition happened in an empty space or void, likely inside a wrapping of ephemeral material, such as a shroud.

Grave No. 1050, Dzharkutan **(Fig. 4)**

This neonate infant burial was discovered in trench 7 of the Citadel. The skeleton was laid against a wall of the Early Iron Age, near current ground level. Only the craniofacial region, including the mandible, and the phalanges of the hand have been preserved. The skull with the mandible have fallen flat. The partial articulation of these elements shows that the infant must have originally been interred on his left side. Finally, the movement of the calvaria was mostly likely due to the decomposition in a void, perhaps created by a shroud or bag made of a rigid resistant material. Such a wrapping would

[13] Bioanthropological study and the methods used will be presented in an upcoming publication of the results of the first six seasons of excavation at Dzharkutan.

Fig. 4
Primary Child Grave No. 1050 at Dzharkutan (photo MAFOuz-Protohistoire)

have been capable of holding back infiltration of the soil in order to create space for decomposition, allowing movement of the bones.

Grave No. 100, Ulug-depe **(Fig. 5)**

Grave No. 100 consists of a north-south oriented L-shaped burial pit, with an east-facing opening. The opening was sealed with three stacked bricks, measuring 50 × 25 × 10 cm. Osteological study reveals that the inhumed was a child between 4 and 5 years of age, lying on his right side (lateral decubitus position) in a crouched position, the head pointing to the south. The hands were close to the face. The entire skeleton was almost perfectly articulated, except the first several cervical vertebrae, which were disarticulated, and located between the right hand and the mandible. The entire left hand was disarticulated but in a pronated position. It appears that the inhumed individual decomposed in a filled space, despite the L-shaped burial pit, which is generally composed of an empty, unfilled space. However, it is possible that the pit was filled slowly over time due to the percolation of water (because it is doubtful that the brick seal was watertight), as shown by the movement of the joints, which break down rapidly during decomposition (unstable or labile) such as the spine (cervicals) and some limb bones (the left hand and foot).

Fig. 5
Primary Child Grave No. 100 at Ulug-depe (Photo MAFTur)

Relative chronology

First, it should be noted that these subadult burials have no associated artifacts or offerings, with the exception of grave No. 1026 in Dzharkutan, which contained a pair of bronze bracelets formed from simple rings. But each of these primary child burials can be dated through well-studied stratigraphy to several periods within the Iron Age.[14]

At Dzharkutan, graves No. 1026 and No. 1027 are clustered in a 2-meter radius within trench 4. They were partially dug into a much deteriorated brick structure, dating to the Bronze Age, but located at the same depth as numerous pits, which have been securely dated from the Early Iron Age (12th to 11th centuries BCE).[15]

The same is true for grave No. 1050 found in trench 7 in the northeast section of the Citadel. A notable number of structures related to habitation and storage were discovered in close proximity to the grave. According to multiple C-14 dates, these structures mark an occupation of the citadel between the 13th and the 10th centuries BCE.

Grave No. 100 from Ulug-depe was encased under a mudbrick and clay platform of more than a meter thick, which supported a building from the Middle Iron Age (dated by C-14 to the beginning of the 1st millennium). The grave was found on top of a series of deposition layers identified by the presence of Early Iron Age handmade painted pottery, thus dating the burial from the beginning of the Middle Iron Age (ca. 10th century BCE).

[14] Unfortunately, analysis of the bone samples revealed that they no longer contain a sufficient amount of residual collagen, rendering dating unfeasible (Centre de Datation, Lyon-France).

[15] These pits contained ceramic material characteristic of the Early Iron Age, as well as wood charcoal dating between 1262–1016 (Lyon-8212) and 1209–980 (Lyon-8217) BCE (calibrated with 2 sigma, Centre de Datation, Lyon-France).

Surface Graves And Other Atypical Tombs

Grave No. 1044, Dzharkutan

This shallow grave was dug into the Early Iron Age levels of trench 7 of the Citadel **(Fig. 6)**. The burial consisted of an adult whose sex could not be determined due to the poor state of preservation (both quantitative and qualitative) of the skeleton.

Only the upper body remained, although it was very disturbed (the spine was not preserved), including some ribs, the very fragmentary craniofacial region, and part of the coxals – the left coxal was only partially articulated with the associated femur and tibia. The rest of the body was absent. The individual was found lying on his right side (lateral decubitus position) in a crouched position, with the axis of the body and the head toward the northeast. Given the shallowness of the tomb, the contours of the pit were unidentifiable. No artifacts associated with the individual were found.

Fig. 6
Adult burial No. 1044 at Dzharkutan (Photo MAFOuz-Protohistoire)

Grave No. 58, Ulug-depe

This grave was found on the surface of the southwest side of trench 6 **(Fig. 7)**, and its pit was difficult to distinguish. A female adult was found lying on her right side (lateral decubitus position) in a crouched position. Extant fragments of the craniofacial region, which was positioned on its right side, were oriented to the west. Of the rest of the axial skeleton, only a few fragments of the ribs and the atlas (first cervical) remained.

The upper limbs were almost entirely absent. The left hand (palmar face with phalanges bent) was isolated and elevated in relation to the rest of the body, forming a 'linear delimitation'[16] in southern boundary of the pit. The right hand, resting on the lower right ribs, was palmar face up. This position appears inconsistent compared to the anterior-medial face presentation of the right humerus, articulated with the right scapula. The right forearm, left upper arm, left femur, as well as the entire pelvis were absent. The femur, tibia, fibula, and foot on the right side were almost perfectly articulated. The proximal fragments of the tibia, as well as the left fibula, were articulated and parallel with their counterparts on the right side of the skeleton. The patellae were in the proper position on the knees.

The anterior surface of the atlas showed traces of an incision or cut-mark. Due to the deep set position of the bone in the neck and omohyoid muscle that protects it, this cut appears to be an indication of a violent skinning (either pre- or post-mortem) carried out with a sharp object **(Fig. 8)**.

Fig. 7
Female burial No. 58 at Ulug-depe (Photo MAFTur)

[16] Bones on one side of the corpse are aligned against a physical limit like the edge of a pit, of a coffin or the base of a wall, etc.

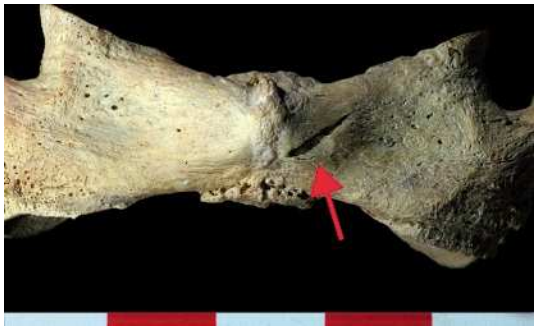

Fig. 8
Traces of incisions on the atlas of the individual in Grave No. 58 at Ulug-depe (Photo MAFTur)

Grave No. 59, Ulug-depe

This tomb, discovered in trench 12, contained an adult, elderly female who was buried at the bottom of a pit (perhaps a silo) more than a meter deep **(Fig. 9)**. The deceased was found crouched on her left side in a particularly contracted position (face to knees). Both tibias and feet were completely articulated and elevated above the rest of the body. The right arm was extended and the left arm folded against the cranium at the bottom of the pit.

The subject presented a fracture on the fifth right metacarpal. The right leg (tibia and fibula) showed a double fracture. Bone growth at the site of the fracture created a distortion, marked by a small fusion between the two bones, indicating that the individual walked with an accentuated limp.

Fig. 9
Female burial No. 59 at Ulug-depe (Photo MAFTur)

The various joints of the axial skeleton, such as the limbs and the cranium, were perfectly articulated (both persistent[17] and labile articulations), and the rib cage and the coxal had kept their position and volume. These taphonomic characteristics indicate that the inhumed body decomposed in a completely filled-in space.

Two metatarsals from a subadult with unossified epiphyses (individual under 10 years) were found in the fill of the pit. Could this be a second, disturbed burial pit? Is this an area of excarnation? These questions remain open for the time being.

Grave No. 80, Ulug-depe

This burial was set inside a silo within trench 3. The pit, oriented northeast-southeast, is oval in shape and measures 0.60 × 0.55 m. Inside was a child between 2–4 years of age **(Fig. 10)**, laid on his stomach (ventral position). The cranium was found with the superior-parietal face up, the right arm bent (hands brough up under the shoulders in supination), and the left arm extended. The entire thorax (which retained its original position and volume) appeared on the left posterior-lateral face. The neck, including the atlas and the base of the cranium, and the first eight thoracic vertebrae are perfectly articulated. However, the lumbar vertebrae are entirely disarticulated. The coxal bones also partially retained proper orientation, with the left coxal in an oblique position, against the bottom edge of the boundary of the pit.

The lower limbs were tucked against the right posterior-lateral side of the cranium, with the head toward the bottom of the pit and the feet located at less than 10 cm above the child's head. Nevertheless, the lower limbs were perfectly articulated, notably the tarsal bones and the phalanges. These taphonomic elements show that the body decomposed in a filled space. The final burial position of the individual indicates an atypical body movement, which could only be the result of the attachment of the ankles to the upper body or the body being forced into this position as a result of an external wrapping, such as a shroud or woven bag.

Grave No. 101, Ulug-depe

This burial of an adult woman was found in trench 16 **(Fig. 11)**. It consisted of a body partially placed inside a large pit, constructed posterior to the Early Iron Age brick structures. The lower bent limbs elevated in comparision with the rest of the skeleton,

[17] These are the anatomical connections that break in a slower manner during decomposition.

were lying on the right side. Both feet were loosely articulated. The superior part of the body had slipped slightly toward the bottom of the pit at some point during decomposition.

This movement is confirmed by the position of the upper body, which is located beneath the lower body, and one coxal which retained its position but was no longer articulated with the lower four lumbar vertebrae found at an even lower depth.

Several thoracic vertebrae and ribs were found with the lumbar vertebrae, as well as with the articulated left forearm, all in supination position. The rest of the body was not preserved or was never placed in the burial. These taphonomic indications show that there was space for decomposition around the deceased (decomposition in a void) as shown by the disarticulation of the sacroiliac), but also partially decomposition in a filled space (around labile elements such as the hands and feet). This can be explained by the presence of a wrapping made of ephemeral material.

Relative Chronology

Again, we are dealing with graves that have no associated archaeological material. Some of the graves could not be dated because of the poor preservation of residual collagen in the bones. Despite the shallowness of some burials (No. 1044 Dzharkutan; No. 58 Ulug-depe), all are connected to stratigraphic layers of the Early Iron Age (13th to 12th centuries BCE at Dzharkutan) and the Middle Iron Age (around the beginning of the first millennium BCE at Ulug-depe). Burial No. 1044 at Dzharkutan is connected to a pit-house (Yaz I) located at less than one meter to the south. Both graves 58 and 59 at Ulug-depe are related with the constructions and occupation layers dating to the Middle Iron Age (Yaz II). The silo burial No. 80 at Ulug-depe should be attributed to the same period. Finally, the silo burial No. 101, which was found less than a meter northeast of the child primary burial No. 100, can be dated to the beginning of the Middle Iron Age, or to the end of the Early Iron Age around the first millennium BCE.

Fig. 10
Child burial No. 80 at Ulug-depe (Photo MAFTur)

Fig. 11
Adult female grave No. 101 at Ulug-depe (Photo MAFTur)

Secondary Burials

Secondary multiple silo burial No. 1034, Dzharkutan

The burial is inside a large Iron Age silo pit located in trench 4 of the Citadel. The remains of several individuals – mixed with various ceramics (Bronze and Iron Age), fragments of bricks, and animal bones – were identified at a depth of 2.8 m from the surface **(Fig. 12)**. Four individuals were identified, all partially preserved.

Individual No. 1, best represented in terms of extant bones, is an adult female **(Figs. 13–14)**. The

Fig. 12 Multiple burial No. 1034 at Dzharkutan, first stage of excavation (Photo MAFOuz-Protohistoire)

Fig. 13 Multiple burial No. 1034 at Dzharkutan, second stage of excavation (Photo MAFOuz-Protohistoire)

Fig. 14 Multiple burial No. 1034 at Dzharkutan, third stage of excavation (Photo MAFOuz-Protohistoire)

upper limbs seem to be neither articulated nor in place, but it must be noted that the spine, oriented southwest-northeast, is almost entirely articulated (cervicals 1–4 were detached and found elsewhere). The spine and the thoracic cage were partially articulated with the sternum. The coxal bones were articulated with the right femur, but disarticulated with the left. However, the left tibia and the left foot seemed to be in their original positions. The individual was laid on her left side (lateral decubitus position), with the lower limbs bent together. The upper body was no longer in its original position, the head (posed on its right side), the mandible, and the first four cervical vertebrae were articulated, and placed under and against the pelvis **(Figs. 14–15)**. This entire group of bones was carefully fixed atop three large pebbles **(Fig. 16)**. Analysis of the articular surfaces between the fifth cervical vertebra (found in position with the rest of the spine) and the fourth cervical vertebra, as well as the articular surfaces between the first three vertebra which were connected to the neck, revealed that they belong to the same subject (individual No. 1).

The remains of a second adult male (***Individual No. 2***) were found on top of the first individual **(Fig. 12)**. The coxal bones were articulated with the sacrum and positioned as if the individual was partially placed on his right side with an axial orientation of the body toward the northwest. The right femur was loosely articulated and had been rotated to lie on its posterior side. Except for a certain number of osteological elements of the spine that could not correspond to the individual No. 1 – who possessed a complete and almost entirely articulated spine – it was difficult to decide to which of the first two individuals (No. 1 or No. 2) the other identified adult bones belonged (scapulas, ribs, right humerus, proximal radius, and corresponding left hand). This shows that only a section of both upper bodies of these individuals were found in the tomb.

Individual No. 3 was a subadult between 10–14 years old, found at different levels throughout the pit, with both femurs showing unossified femoral heads and metacarpals (epiphyses unfused).

Finally, several elements of the ***Individual No. 4***, a child between 3–4 years old, were found dispersed. These elements include the basal of the cranium, vertebrae, ribs, the manubrium, fragments of the clavicle, two scapulae, epiphysis (head) of a humerus, and the remains of a femur.

The interpretation of such a complex funerary structure remains difficult. Indeed, the structure initially consisted of a silo dating to the Bronze Age, which was partially re-dug and reused later still as a silo during the Early Iron Age. It is after this point that the four bodies were buried. At least two of them, an adult man and a woman (Individuals No. 1 and No. 2) were buried fragmented: it is indeed clear that they were placed in the pit in the same physical condition as they were found, that is, relatively mutilated (maybe after a partially natural mummification).[18]

The position of the head of the female adult individual No. 1 on three pebbles, oriented to the

[18] Sellier/Bendezu-Sarmiento 2013.

west with the face turned north, provides an understanding of the funerary practices involved **(Figs. 15–16)**. The rest of the body was placed with an axial orientation very close to southwest-northeast, and care was taken to place the cranium between the buttocks and the heel of the left foot. As previously noted, the second individual, markedly less well preserved, was placed directly on top of the first individual, oriented northwest.

The preliminary study of the bones, which are largely poorly preserved, shows no particular traces of cut-marks or another modification to the surface of human bones. The cutting of the fresh bodies took place soon after death, as shown by the state of articulation between bones in this multiple burial. Individual no. 2 must have been temporarily decomposed unburied, as evidenced by the bite marks observed in the lower part of the diaphysis of the right femur. The nature of the bite marks indicates a powerful jaw, suggesting that they do not belong to a burrowing animal that disturbed the body after burial **(Fig. 17)**. Buried in a sealed space, the very incomplete bones of the third and fourth individuals were taken from another area where they were initially allowed to decompose, perhaps the same area where the Individual no. 2 was kept before being buried in this spot. Does this constitute indirect proof of the existence of a sort of *dakhma*[19] during this period? It is difficult to make such a conclusion based on the present state of our research.

Fig. 15
Multiple burial No. 1034 at Dzharkutan, fourth stage of excavation (Photo MAFOuz-Protohistoire)

Fig. 16
Multiple burial No. 1034 at Dzharkutan, fifth stage of excavation (Photo MAFOuz-Protohistoire)

Fig. 17
Multiple burial No. 1034 at Dzharkutan, traces of bite marks on the femur of individual No. 2 (Photo MAFOuz-Protohistoire)

Secondary silo burial SU 4058, Dzharkutan

The ensemble was found in a large silo, partially opened by our Uzbek colleagues in the 1990s and completed by our team. The form of the pit is difficult to identify, but we were able to determine that the fill was subdivided into two very different layers of sediment **(Fig. 18)**. The first (upper) was yellowish and very compact, while the second layer underneath is filled with clay. Throughout its history, the first layer had been cut into by small Early Iron Age pits. The bottom layer, however, contained a mix of numerous human and animal bones, as well as many large ceramic fragments dating to different periods of the Bronze and Early Iron Ages **(Fig. 19)**. The excavation of the lower layer in five levels **(Figs. 19–22)** enabled us to see that the human remains were dispersed and presented no particular connection to each other.

Our analysis did not reveal any modifications on the surface of the human bones, because they were poorly preserved and difficult to read, especially since they had been deposited in an already disarticulated state, were very dry, and some bones were fragmentary.

The initial anthropological analysis of the bones allowed the identification of a Minimum Number of Individuals (MNI) of eight people, including four adults (determined by four right femurs) and four subadults of different age groups. The group of subadults included a perinate, identified by the ilium; a child aged 1–4 years, identified by the metacarpals; an adolescent, aged 10–14, identified by the mandible and partial dental eruption; and finally a young adult, aged 15–19, identified by the distal epiphysis of a femur showing no fusion.

[19] This term refers to any place dedicated to the exposure of a body for excarnation in a Zoroastrian context after the middle of the first millennium BCE.

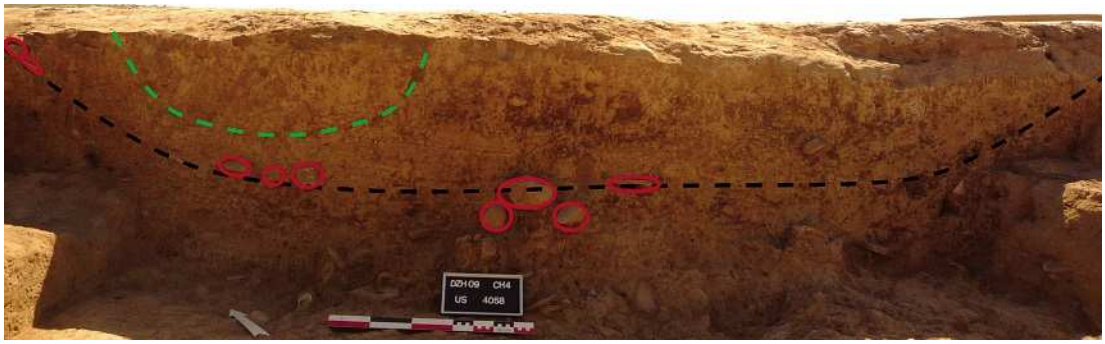

Fig. 18
Stratigraphic section of secondary grave SU 4058 at Dzharkutan with two different layers of sediments

Fig. 19
Secondary grave SU 4058 at Dzharkutan, second stage of the excavation (Photo MAFOuz-Protohistoire)

Fig. 20
Secondary grave SU 4058 at Dzharkutan, third stage of the excavation (Photo MAFOuz-Protohistoire)

Fig. 21
Secondary grave SU 4058 at Dzharkutan, fourth stage of the excavation (Photo MAFOuz-Protohistoire)

It is interesting to note that the upper part of the lower layer containing the bones appears to have been closed off with a row of rather large stones, which delineate an intentional and symbolic closure of the area **(Fig. 18)**. In terms of the bones, all elements are present, with the exception of several isolated teeth. Among adults and subadults, the head and the axial parts of the body are best represented (ribs and vertebrae), whereas only unossified coxal bones of subadults are present. Out of long bones, it is mainly the lower body (femurs, tibias, and feet) that is best represented, while hand bones remain rare. These findings are typical for secondary burials (from emptied burials?), where the body had the time to completely decompose, or excarnation, attested by the lack of small bone elements, such as labile articulations and teeth. Only dry bones, sometimes mixed with faunal elements, were placed inside this disused silo.

Absolute and relative chronology

Based on the analysis of the bones of the first and fourth individuals, the multiple secondary burial No. 1034 in the citadel of Dzharkutan can be dated between the 13th and 11th centuries BCE.[20] These are currently the oldest dates obtained for the graves of the Iron Age in Dzharkutan. As for the secondary burial SU 4058, we have specified that the pit contained scattered bones that were superimposed by a stratigraphic layer and a small pit both can be dated by ceramic material of the Early Iron.

Additionally, it should be noted that during excavations in the 1970s, a set of eleven human skulls and other human bones (undetermined) were discovered within a pit that contains a large majority of Early Iron Age pottery.[21] A. Askarov noted that the skulls were poorly preserved and that there is no mention of the identification or the state of preservation of the other bones. In light of our discovery of two secondary burials at the site, we can legitimately ask whether this entire pit and the osteological ensemble was not, in reality, another burial of the same type.

Reconsideration of old data

Taking into account these recent data, we can now reassess the old data (both published and unpublished) concerning the funerary practices of the Iron Age, in order to propose a new interpretive scheme. This old information is often poor, and in the best cases accompanied by a photograph or drawings containing few details.[22]

Fig. 22
Secondary grave SU 4058 at Dzharkutan, fifth stage of the excavation (Photo MAFOuz-Protohistoire)

The graves of the chust culture

While graves almost disappear in the southern part of Central Asia during the Early Iron Age, the Chust culture located in the Ferghana Valley[23] remains a distinctive case in the region **(Fig. 1)**.

Extensive excavations have uncovered the presence of a number of individual graves, which appear to be primary burials, either multiple and/or 'plural' (?), as well as secondary burials.[24] At the eponymous site of Chust[25] and that of Osh,[26] a total of six individual burials have been published. However, it is within the settlement of Dal'verzin that the majority of graves – 16[27] – were found among the three (lower, middle, and upper) occupation levels that correspond to three main architectural phases, all dated to the Early Iron Age and associated with the Chust culture.[28]

Individual graves

The individual burials are located within settlements or at their periphery behind an enclosure wall, and are generally without any associated material, although in rare cases one or two painted

[20] These dates were obtained from bone samples Lyon-8220 (calibrated date [2-sigma] 1263 to 1052 BCE) and Lyon-8221 (calibrated date [2-sigma] 1262 to 1016 BCE) from the Centre de Datation par le Radiocarbone in Lyon, France.

[21] Аскаров 1976.

[22] Generally, these tombs are only briefly described, without given detailed numbers. The majority of the described positions, articulations, and taphonomy could only be understood through our current study of the existing graphic documentation.

[23] Заднепровский 1962; Заднепровский 1997.

[24] All of the anthropological identifications of the Chust culture mentioned in this article were carried out by V. V. Ginzburg (Гинзбург 1962) and V. Ja. Zezenkova (Зезенкова 1958).

[25] Спришевский 1955; Спришевский 1957; Заднепровский/Матбабаев 1984; Зезенкова 1958.

[26] Заднепровский 1997.

[27] Of which 15 are published.

[28] Заднепровский 1962, 20–24; Заднепровский, 80–99; Матбабаев *et al.* 2006.

Fig. 23
Dal'verzin, sector VII, Grave in the lower horizon (after Zadneprovskij 1978, Fig. 30,2)

ceramics were found inside the graves **(Figs. 28, 31–33)**. The bodies were in a crouched position lying on their left sides **(Figs. 31, 33)**, right sides **(Figs. 26, 28, 30, 32)** or on the back **(Figs. 25, 27, 29, 34)**, and the legs are more or less bent, with hands clasped and raised in front of the head or chest. This treatment applies equally to children, adolescents, and adults of both sexes.[29] Different orientations of the skeletons can be observed in the burials: to the west, south, southwest, east, southeast, and northeast. However, it seems that the northeast and southeast orientation predominates

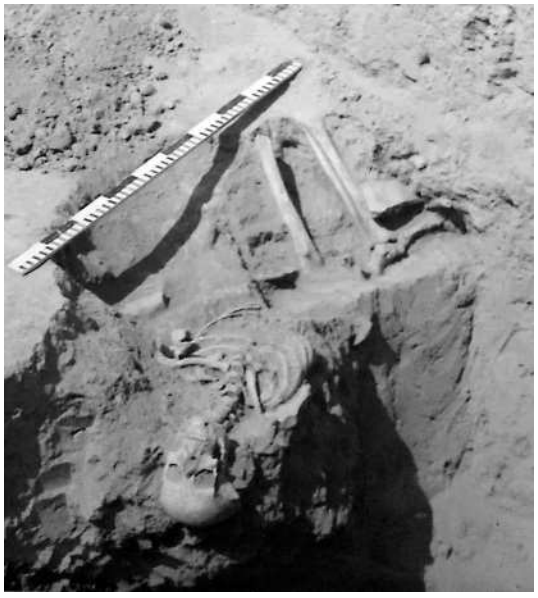

Fig. 24
Dal'verzin, sector VII, Grave in the middle horizon (after Zadneprovskij 1978, Fig. 30,1)

[29] Заднепровский 1962; Заднепровский 1978.

at the site of Dal'verzin, whereas southwest is the most frequent orientation at Chust. Eight skeletons found in a crouched position – on the right or left side – are much more common than bodies laid on their backs.

Other graves with individuals buried in a position to describe as atypical or paradoxical also exist. Two burials of this type were discovered in trench VII at Dal'verzin.[30]

The first interred individual **(Fig. 23)** was laid prone, the head turned to the left, with the lower limbs partially bent and the upper body lying on its left side.[31] The hands seem to have been gathered together and joined between the legs at the pelvis. Decomposition occurred in a filled space, as indicated by the position and volume of the ribs, thorax (?), and pelvis. These elements appear to be in perfect labile articulation (coxals to femurs) with the lower limbs (which themselves are perfectly articulated with the feet).

The second individual **(Fig. 24)** appears to have been found within an oval pit, which initially seems wider than the space occupied by the inhumed body. Is it, again, a reused silo? The upper body was found on its back, with the head downwards in relation to the upper left bent leg (the right leg is no longer in position; it was perhaps taken out during excavation). The upper limbs are absent, indicating a position very similar to that of the individual from grave No. 101 from Ulug-depe **(Fig. 11)**. Some elements, such as the cervical vertebrae (in perfectly connection with the craniofacial region and mandible); lumbar vertebrae (articulated with the sacrum); and the left limb, which is folded, elevated and perfectly articulated with the foot, provide evidence that we deal with a primary burial in a filled space.

In course of the excavation, two kinds of burials were identified: either the deceased was interred in a simple pit[32] or possibly a reused silo-pit, or the deceased was simply placed in the ground. For the latter case the publications deliver no information, whether the body was left in open air, or covered in some manner. At the site of Osh, the burial on the fifth terrace discovered near the pit-house No. XII by Ju. Zadneprovskij, was placed within two connected silos.[33] There are no notable modifications to the tomb itself. However, at the site Dal'verzin B. Matbabaev, B. Abdullaev and B. Juldashev[34] discovered stones, with a diameter of 10–

[30] Заднепровский 1978.
[31] The orientation of the skeleton is not noted. This is also the case with the individuals shown in Fig. 24–27.
[32] The contours of pits were rarely excavated or documented. Their forms remain unidentified, as can be seen in Fig. 24–27.
[33] Заднепровский 1997, fig. 10.
[34] Матбабаев *et al.* 2006.

Fig. 25
Dal'verzin, sector VII, Subadult grave in the lower horizon (after Zadneprovskij 1976, Fig. 5,1)

Fig. 26
Dal'verzin, sector I, Child grave in the lower horizon (after Zadneprovskij 1978, Fig. 30,3)

Fig. 27
Dal'verzin, sector VII, Grave under the floor of Building 6 (after Zadneprovkij 1969)

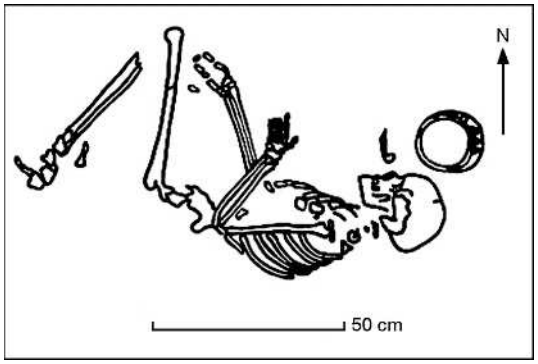

Fig. 28
Dal'verzin, sector I, Child grave 12–13 years old (after Zadneprovkij 1962, Fig. 4,1)

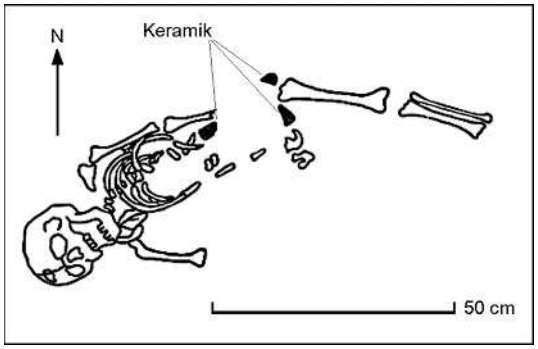

Fig. 29
Dal'verzin, sector I, Child grave 11–12 years old, in the upper horizon (after Zadneprovskij 1962, Fig. 4,4)

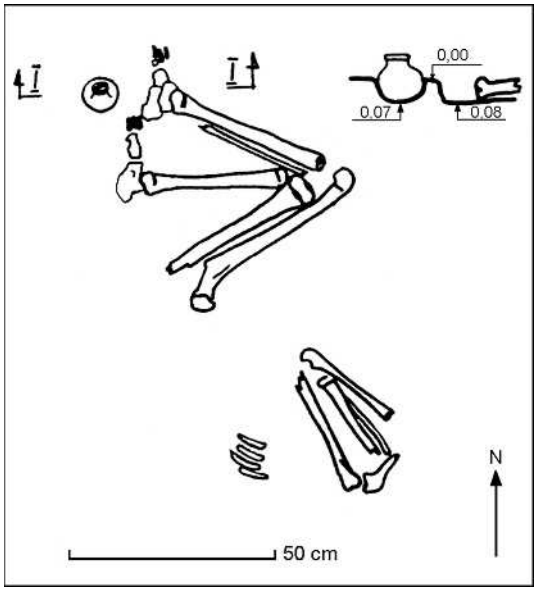

Fig. 30
Dal'verzin, sector X, Grave (after Zadneprovskij 1978, Fig. 28,4)

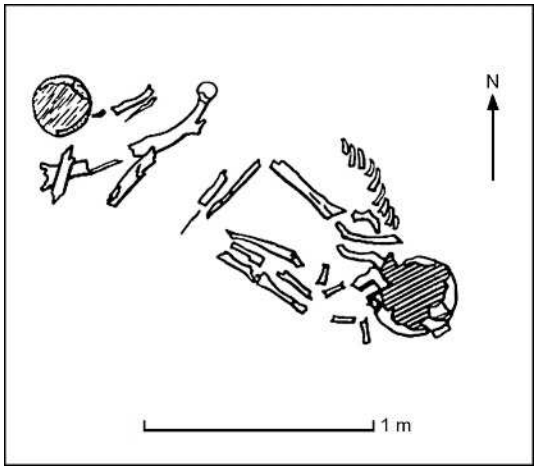

Fig. 31
Dal'verzin, southeast zone, Grave (after Zadneprovskij 1973)

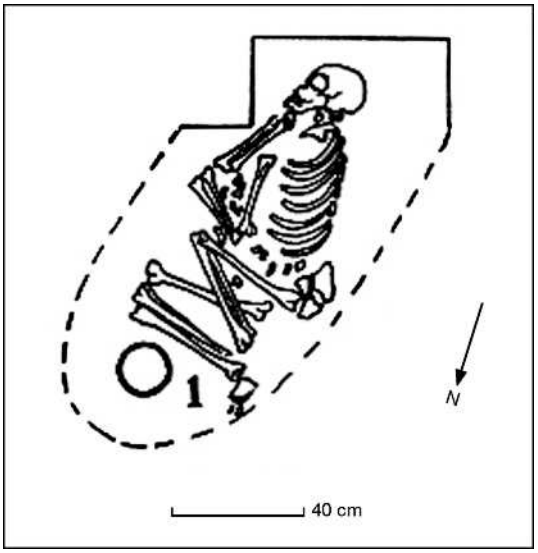

Fig. 32
Dal'verzin, sector IV, Subadult grave in the upper horizon (after Matbabaev et al. 2006, Fig. 1)

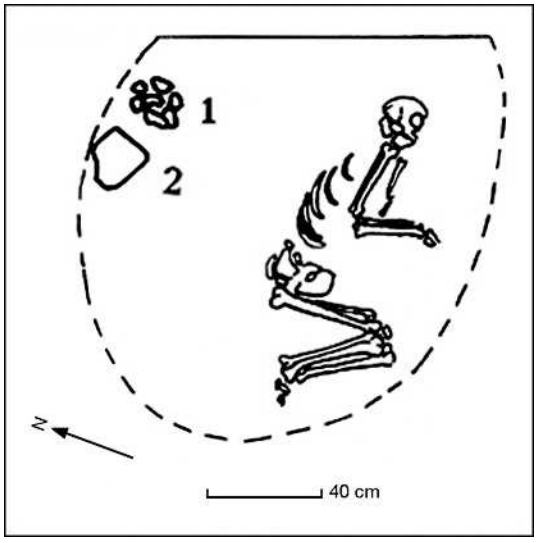

Fig. 33
Dal'verzin, sector V, Subadult grave in the lower horizon (after Matbabaev et al. 2006, Fig. 3)

15 cm, placed on the top of one of these pits, that had been carefully arranged, and under which poorly preserved bricks were found.[35] This "closure" made of pebbles and other elements is reminiscent of the findings at Dzharkutan (SU 4858, **Fig. 18**) and Ulug-depe (Grave No. 100), which were discussed above.

Also at the site of Dal'verzin, a grave with two individuals – a female of about 25 years old and a male approximately age 40 old – were found in what has been labeled as the middle horizon **(Fig. 34)**.

The female was lying on her left side (lateral decubitus position); the head with articulated mandible was oriented to the southwest and the legs were slightly bent (the left more so than the right). Although the drawing of the burial is not very detailed, it may be noted that the entire left side (coxal bone, lower limb, and foot) was perfectly articulated, while both upper forearms were missing.

The male is laid on his back, as can be interpreted from the upper body, which is the only part of the skeleton that appears to be more or less in place. His head with articulated mandible was oriented northeast. According to the author, the right femur of the better preserved female individual, covered the right forearm of the male, which, according to the published imageseems to have been only partially in place.

Ju. Zadneprovskij interprets this as two separate burials. This interpretation remains the most probable conclusion, and can be understood as a sequence of events that begin with the interment of the male as a primary burial, which was then disturbed by the secondary female inhumation **(Fig. 34)**.

Finally, there are primary burials which contain Chust material artifacts, but which are connected to the Kajrak Kum culture. These burials appear to be more closely linked with the funerary practices of the northern steppes of Central Asia, which will not be examined in this paper.

The necropolis of Dashti-Asht, located on the right bank of the Syr-Darja River, in the north-west of the Fergana Valley, is composed of a series of kurgans associated with the steppe-related Kajrak Kum culture.[36] Inside these kurgans skeletons are often found lying on their backs (dorsal decubitus position), hands placed along the body, with the head oriented to the southwest, and rarely, to the north. The head is typically placed on a stone headrest. Occasionally, disarticulated skeletons, probably displaced with subsequent burials, are found at the back of the chambers. The artifacts found in the

[35] In another example, yellowish colored brick fragments 60 cm away from the legs of a skeleton were interpreted as a possible hearth structure. An accumulation of pebbles was found in the same stratigraphic level as the tomb.

[36] Салтовская 1982.

chambers are varied, but consist primarily of ceramics, mostly wheel-made, with several handmade vessels comparable to those from the Chust culture. This raises the question of cultural attribution to either the Chust or Kajrak-Kum cultures, as the interred individuals were buried with Chust type ceramics in a necropolis clearly associated with the Kajrak-Kum culture. The presence of this pottery might be explained by simple exchanges between the Chust and Kajrak-Kum cultures. Furthermore, contacts between these two cultures could be one way of explaining the fact that there are a more significant number of burials in the Chust culture than in other Early Iron Age sedentary cultures, since burials never disappear among the steppe populations.

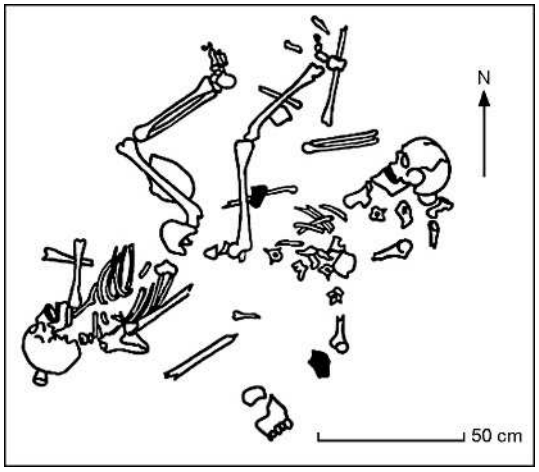

Fig. 34
Dal'verzin, sector I, Multiple burial of a male and a female (after Zadneprovskij 1962, Fig. 4,2)

Multiple burials

As in the case of the individual burials, there is no evidence of preferential orientation or of the deposit of associated funerary material.

At Dal'verzin a shallow (0.45 m), oval pit (2.3 × 2 m), which was discovered in the central part of the settlement,[37] contained the skeletons of eight individuals,[38] including several children **(Fig. 35)**.

Individual No. 1, the southernmost one, is a subadult, laid on his stomach **(Figs. 35.1, 35.3)**, with the head on the left side and oriented to the southwest. The upper limbs do not seem to have been articulated, as is also the case with parts of the lower limbs (tibias to fibulae and feet). Despite the generally poor preservation of the body, the coxal bones appear to have kept their shape spatially, and were found articulated with the entire spine. The cervical bones and the cranium were also in articulation.

To the north, parallel to the lower body of the first subject, ***individual No. 2***, also a subadult, was found **(Figs. 35.1, 35.3)**. The individual is represented only by the upper body, with the head oriented to the southwest, and was placed on its right side, with the left arm (of which only the humerus articulated with the scapula remains) extended perpendicularly to the axis of the body. The skeleton retained a part of the articulated spine, and other elements (such as the left coxal bone and the articulated right fore-arm), which indicates that the body was originally more complete.[39] The most interesting element is the left humerus, which was placed between the knees of individual No. 1, indicating that the deposition of the two individuals was likely to be contemporaneous.

Individual No. 3 **(Figs. 35.1, 35.3)** was a child, found crouched in particularly contracted position and perfectly articulated. Only the bent left humerus is visible on the photo. The craniofacial region appears to have been completely articulated with the mandible, and the entire skeleton was oriented to the north-northeast. The lower body, particularly the pelvis and the heels of the feet, was covered by the head and left clavicle of individual No. 1. The indications concerning the position of each individual and their relationship to each other currently suggest a primary triple burial simultaneously[40] carried out in a rather filled space.

The second group, located northwest of the first group, is composed of individuals No. 4 to 8, thereof several are only partially preserved or represented. ***Individual (no. 4)*** was laid on his left side in a crouched position, the head to the southeast, with very contracted lower and upper limbs **(Figs. 35.1, 35.3)**. According to the documentation, the pelvis retained its position and was articulated with the lower limbs. The spine, including the cervicals, was equally articulated with the sacrum and the cranium/mandible.

Individual No. 5, an adolescent,[41] was laid on its back, with the head to the east-southeast, the upper limbs bent, and the hands gathered together at the shoulders **(Figs. 35.1, 35.2)**. The lower right limb was bent and elevated (the distal epiphysis of

[37] Заднепровский 1971.

[38] According to V. V. Ginzburg, two of the craniums exhibited an anomalous shape of the intermaxillary bone, a trait that is considered as being hereditary (Заднепровский 1978, 86).

[39] The bones corresponding to the lower limbs were possibly removed during the excavation, but it may also be a question of preservation as the pit was rather shallow. Unfortunately, again, information about these excavations is incomplete.

[40] The temporal deposition of the bodies was counterclockwise: first, individual No. 3, then No. 1, and finally individual No. 2.

[41] It should be noted that in figure 35.2 the individual presented distal epiphyses of the ulna, the radius had begun ossification, but the head of the humerus was unossified. Therefore, the subject was between 14–18 years of age.

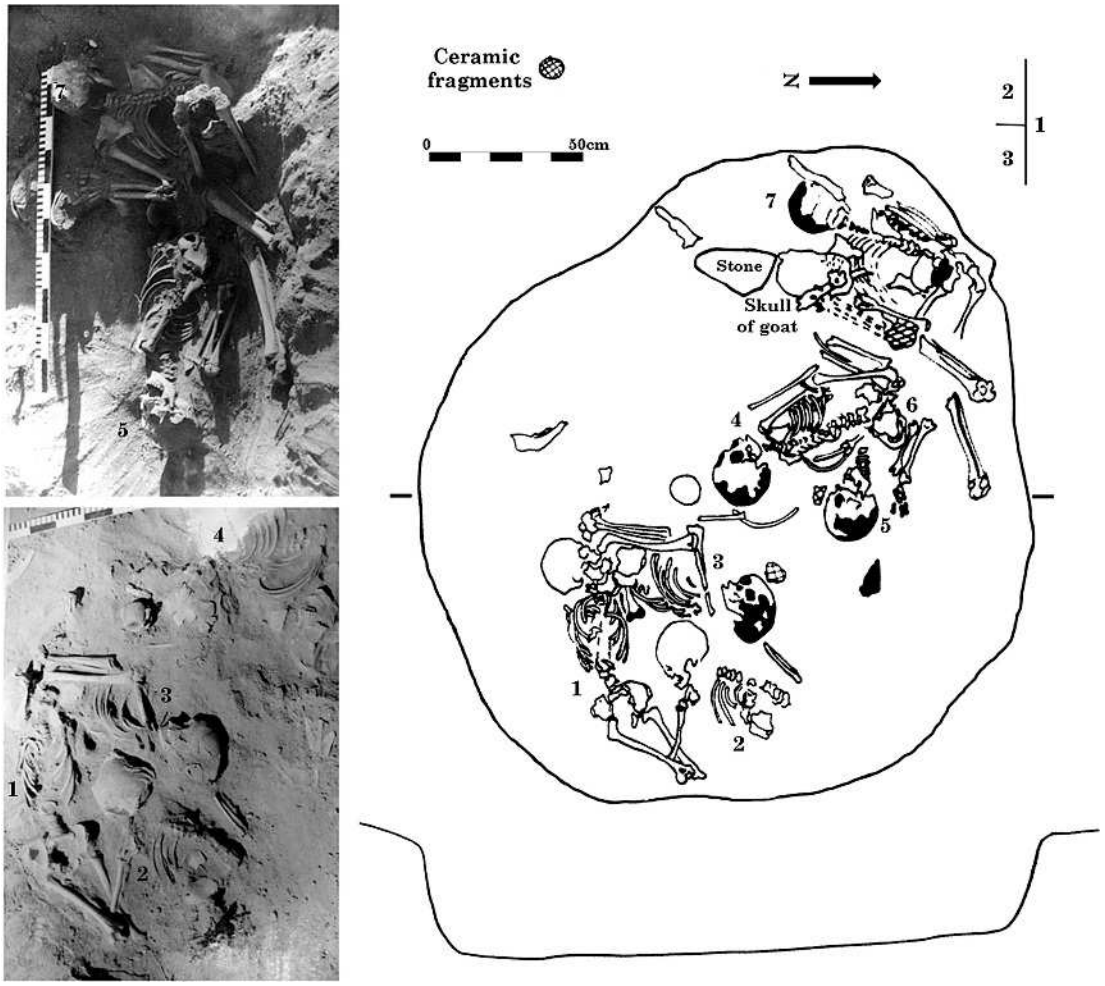

Fig. 35
Dal'verzin, sector VIII, Multiple burial of eight subadult individuals (after Zadneprovskij 1978, Fig. 27,2.3)

the femur was disarticulated and found 10 centimeters deeper). The entire spinal column (primarily the upper part) was in connection, including the cervicals to the craniofacial region (the mandible only loosely articulated). The coxal bones were more or less in position and articulated with the right femur. Although the upper body was discovered under the individual No. 4, the right arm was found bent while the left seems to have been stretched under the abdomen of the individual No. 7 (as will be discussed further below).

Individual No. 6, according to the pictorial documentation **(Fig. 35.1)**, appears to be represented by several bones from the limbs, by a mandible, and possibly by fragments of the cranium found under the pelvis of the individual No. 4.[42] ***Individual No. 8***, must have been found in the same state of preservation, because the skeleton is mentioned but not documented in the images. ***Individual No. 7***, an adolescent,[43] was laid on its stomach, with the head to the south-southwest and the upper limbs bent and brought up to the shoulders **(Figs. 35.1, 35.2, 35.3)**. The lower limbs were bent underneath the right leg of the individual No. 5.[44] The whole of the upper body that was visible in the photograph **(Fig. 35.3)** was perfectly articulated: the cranium with the cervicals, the thorax with the ribs, and the scapulas with the humerus. Only the lower part of the spine (some thoracic and lumbar vertebrae) had been compressed (linked to the narrow size of

[42] We do not have any detailed information about the positions or any relation between the various skeletons of this grave.

[43] Neither the distal epiphyses of the ulna and radius, nor the head of the humerus reveal initial stages of ossification. This is also the case for the distal epiphyses of the tibias and fibulas. The subject was therefore between 13 and 17 years old.

[44] Although the lower left limb of this individual was situated under the body of individual No. 7.

the pit?), giving an accentuated curvature to the upper part of the spinal column.

This second group of individuals (Nos. 4–7 and No. 8 [?]) is characterized by the complexity of the deposit. The interlacing of subjects No. 5 and No. 7 is one of the primary indications permitting the identification of these two individuals as the earliest burials (from this second group). Individual No. 4 could have been buried posterior to the first two, but from an archaeological point of view, we can consider the interment of these three individuals (Nos. 4–5 and No. 7) to be simultaneous, especially, since these are primary burials with decomposition having taken place within a relatively sealed space, according to evidence provided by the connection of the bones. However, the decomposition also indicates that the interment occurred in a partially empty space, probably formed by a shroud or sack enveloping or covering the body.

This pit also contained stones and animal bones, including a cranium of an ovicapridae, as well as a bronze ring that was found under a stone. The primary positions of the various partial or complete skeletons (excepting individuals Nos. 6 and 8), and the shallowness of the pit, allow us to interpret these burials as successive inhumations within a multiple grave.

A second multiple inhumation, at the site of Dal'verzin, contained the bones of four individuals. The data indicate that they were not placed in a pit, but rather placed on the same floor (?) covering a surface of about 1.2 m in length. According to the author of the report, it does not appear that any of the skeletons were articulated. The order of deposition of the bodies is currently impossible to determine.[45]

A third group, deposited in a "pile", included three craniums and other human bones (possibly in partial connection), and was identified in close proximity to the second inhumation.[46] The information provided by the excavator's report indicates that this ensemble of bones belonged to seven individuals, including women, children, and, probably, men. It is difficult to determine the relationship between these two funerary structures, which may very likely be part of a single funerary complex.

Secondary burials in the chust culture

At the eponymous site of Chust, the most common secondary burials are those with bones of the craniofacial region,[47] placed on the ground of the settlement or in isolated pits. The first example is that of a pit within a settlement, which contained a calvaria belonging to an adult female. In the second example, a cranium of an adult female (?) was found in an identical pit near another settlement.[48]

At the site of Chust, among a group of animal bones, V. Sprichevskij also discovered two mandibles of a child and an adult, as well as an ulnar fragment with what appear to be incisions cutmarks on the head of the ulna.[49]

A vase containing the crushed skull of an adult male was found against the wall of the Citadel of Chust, and a second recipient containing a jaw and a human radius was found several meters further to the north.[50] Finally, an oval pit (2.4 × 1.5 m),[51] about 1.55 m deep, was discovered containing various animal bones, as well as the disarticulated human bones of at least six individuals: four craniums, six mandibles, and an assortment of long bones.[52]

At Dal'verzin, several deposits have been recorded, including that of the poorly preserved cranium of a woman between 20–22 years old, which was found inside the settlement.[53] Inside a pit from Zone B, excavators discovered human bone fragments mixed with animal bones, ceramics, and stone objects.[54] In pit No. 13, Ju. Zadneprovskij identified elements of two adult craniums (facial side of a female cranium and the cranium of what is likely to be of a male individual) in the lower horizon. In the same level other fragments of bones and a part of the cranium of an adolescent aged 14–16 years, most likely female, were also found, indicating the presence of at least three individuals.[55]

There are also assemblages of several craniums, which were associated with animal bones as well as various other materials. At Dal'verzin, in Zone G in the lower horizon, an assemblage of eight calvarias and one mandible, in various positions, was found.[56] This osteological group was discovered inside of a single stratigraphic layer, indicating a common and simultaneous deposit **(Fig. 36).** Nearby, a second assemblage was identified, and contained five craniums that belong to individuals of various sexes and ages, including two children be-

[45] Заднепровский 1978.
[46] Заднепровский 1978.
[47] Whether these elements consisted of a calvaria or an entire cranium with the mandible was generally not recorded.
[48] Заднепровский/Матбабаев 1984.
[49] Спришевский 1955.
[50] Заднепровский/Матбабаев 1984.
[51] In this particular case, one might suppose that this burial is a reused silo.
[52] Заднепровский/Матбабаев 1984.
[53] Заднепровский 1962.
[54] In total, the anthropologist V. Ginzburg was able to identify eight individuals, including the cranium of an 18–20 year old woman, and the lower jaw of an adult male.
[55] Заднепровский 1962.
[56] Заднепровский 1962; Заднепровский 1978.

Fig. 36
Dal'verzin, sector I, Lower horizon, pit with eight craniums (after Zadneprovskij 1978, Fig. 30,4)

tween 7–9 years, a young female, and two adults of undetermined sex.[57]

In trench VII at Dal'verzin, four human craniums were found associated with animal bones, notably the articulated and almost complete skeleton of a horse placed on its right side with the head to the southwest.[58] It is interesting to note that this skeleton was associated with other animal skulls (sheep and goats) and remains of horns. Human skulls[59] were found around the horse, three on the southwest side, one to the north of the horse skull, and another north of the assemblage.[60] It is possible that, due to the absence of anthropological analyses, other human remains were not documented (as on the example **Fig. 37**).

Fig. 37
Dal'verzin, middle horizon, dispersed human bones (after Zadneprovskij 1965)

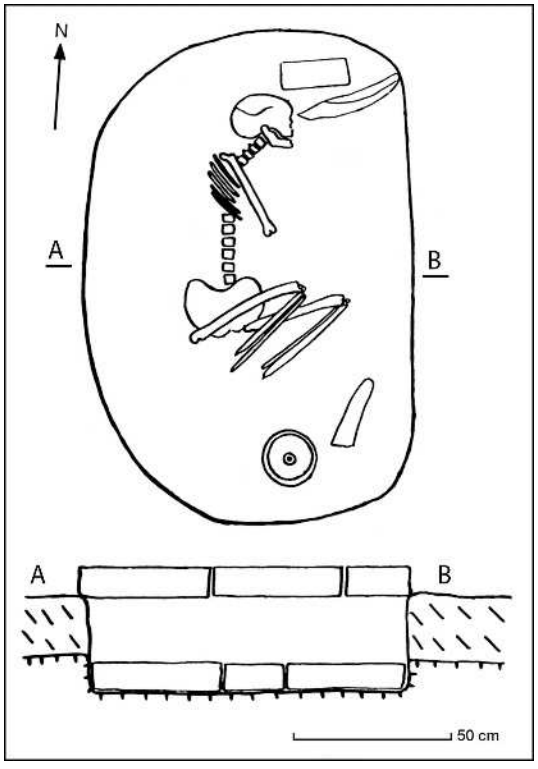

Fig. 38
Tujabuguz, Grave located in settlement No. 1, Early Iron Age (after Duke/Abdullaev 1980, Fig. 2)

Human remains discovered elsewhere in central Asia

The majority of the graves from this chronological period presented below contained individuals lying on their back (dorsal decubitus position), with the upper limbs often bent. The orientation of the bodies varies widely, and the presence of associated archaeological material is rather rare.

Uzbekistan

In the Chach region, near Tashkent, what seems to be a primary burial was found in the west part of settlement no. 1 at the site of Tujabuguz.[61] The individual was buried within a north-south oriented pit (1×1.55 m) edged at the top with a course of mudbricks measuring $40 \times 24 \times 10$ cm. The skeleton, partially preserved,[62] was lying on its left side (lateral decubitus position) in a crouched position, head to the north **(Fig. 38)**. The body was placed on a bed of mudbricks lining the bottom of the pit. Animal bones found together with the human skeleton, included a bovine bone found near the cranium and another similar fragment situated to the southeast of the lower limbs of the individual. In

[57] Заднепровский 1962; Заднепровский, fig. 50.
[58] Заднепровский 1971.
[59] The cranium is without doubt the easiest type of bone to identify, but it is very likely that other bones, such as post-cranial bones, were present but not identified or recorded.
[60] Заднепровский 1978.
[61] Дуке 1985, 9.
[62] The bones were found in a very poor state of preservation, due to the humidity of the soil. A part of the skeleton was further missing (Дуке 1985).

the southern part of the pit a broken vessel, characteristic of the Early Iron Age of the Burguljuk culture, was found. Was this object associated with the deposit? It should be noted that this grave was firmly attributed chronologically to the Early Iron Age (Burguljuk culture) by the excavator.

In addition the discovery of a rather poorly preserved human skull in one of the pit-houses (house No. 9 in settlement No. 1), associated with Burguljuk type material is worth mentioning.[63]

At Koktepe in Sogdiana near Samarkand, the skeleton of an infant who died perinatally was discovered inside a small pit with a diameter and depth of only 22 × 15 cm,[64] dug in the floor of an Early Iron Age pit-house.[65] Slightly further to the north, but still in the Early Iron Age levels, a very badly damaged and deformed human skull was found on the floor of what was likely to be a pit-house.

At Talashkantepe I, in Surkhan-Darja, a site dated from the Middle-Late Iron Age, three graves were recorded inside Tower No. 6,[66] two of which (Nos. 2–3) were dug into the wall.[67]

The first grave was that of a young adult male, between 20–25 years old.[68] The skeleton – the head on its side, the face to the west – was placed in a rectangular, northwest-southeast oriented pit (1.7 × 0.5 m).

The second grave, located in a large niche (2.5 × 0.55 m, orientation not indicated), contained a young female aged 18–20 years old. The skeleton was found in dorsal decubitus position, with the hands folded under the chest. In the southwest part of the tower, a third niche (2 × 0.6 m) was found containing a female between 20–25 years of age, in dorsal decubitus position with the head to the south and hands at the abdomen.

A grave from the nearby site Kuchuk-tepe should also be mentioned. It consists of an L-shaped (*podboj*) pit. The top of the grave is documented at a depth of 0.6 m, the bottom of the pit at a depth of 2.1 m.[69] A brick structure is mentioned in the documentation, but no further information is noted. The individual was placed at the bottom of the pit on a layer of pebbles, laid on its back, head to the north, the left arm bent and against the thorax, and the right arm bent with the hand near the head.

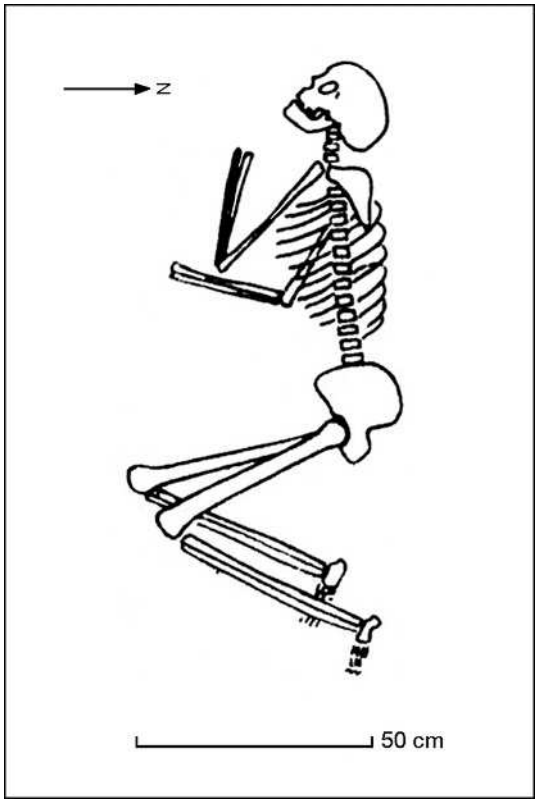

Fig. 39
Dashly 17, Grave, Early Iron Age (after Babakov *et al.* 1986, Fig. 3,1)

The inhumation must have occurred after the site was abandoned. Based on two bronze arrowheads discovered against the left shoulder and left knee of the individual, the authors of the report date the site to the Kuchuk IV period[70] (Late Iron Age).[71]

Turkmenistan

In the Margiana, near Kaushut in the foothills of the Kopet Dagh about 100 km to the east of Ashgabat, in the oasis of Dashly, at the sites Dashly 17 and Dashly 30, primary burials[72] were excavated within the levels reliably dated to the Early Iron Age.[73]

At Dashly 17, a tomb found on the mound No. 5 contained the skeleton of a female (?) between 40–45 years. In this case the individual is lying on her right side (lateral decubitus) in a

63 Дуке 1982, 27.
64 Исамиддинов *et al.* 2003.
65 A burial right at the exterior of a pit-house at Dzharkutan also contained a perinate (*cf. Supra* Grave No. 1050).
66 The bottom of the tomb was found in stratigraphic layer (*yarus*) III.
67 Шайдуллаев 2000, 52; Šajdullaev 2002, 281.
68 According to the analyses carried out by the anthropologists T. K. Khodzhajov and S. Mustafakulov.
69 Аскаров/Альбаум 1979, 11 fig. 3.
70 The stratigraphical position of the pit, its particular construction and the position of the individual are additional indications that confirm that this tomb cannot be attributed to the Late Medieval period.
71 Аскаров/Альбаум 1979, Pl. 25.1–2.
72 The osteological study on the finds from Dashly was carried out by anthropologists O. Babakov and T. K. Khodzhajov.
73 Бабаков *et al.* 1986; Pilipko 1986.

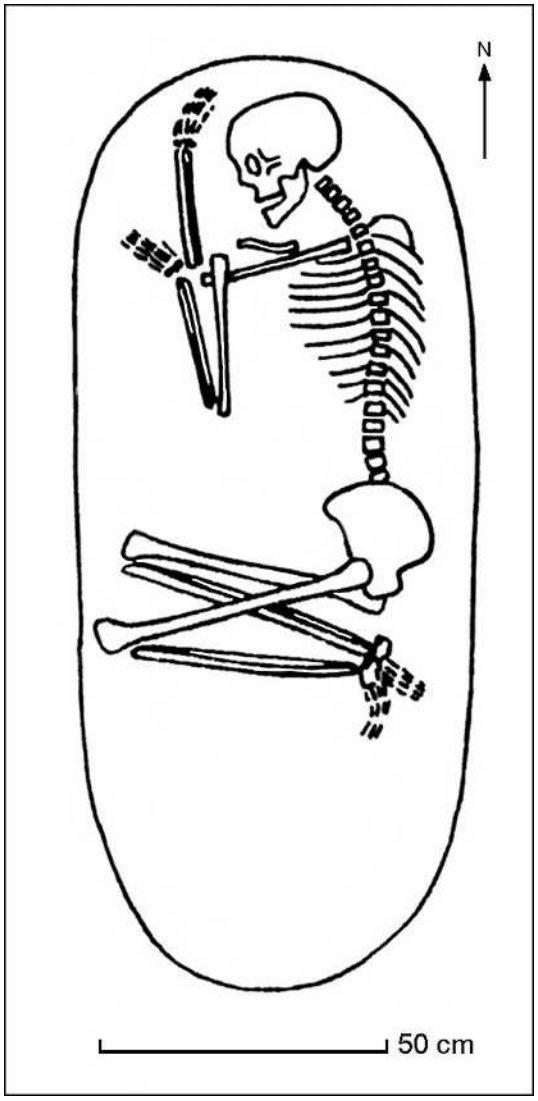

Fig. 40
Dashly 30, Grave No. 8, Early Iron Age (after Babakov *et al.* 1986, Fig. 3,2)

crouched position **(Fig. 39)**,[74] with the head to the west.[75]

At Dashly 30, eight inhumations were identified,[76] all located in the courtyard of a large building dating to the last occupation period on the settlement – to the Early Iron Age.[77] These graves are contemporaneous and can be attributed to the Early Iron Age.[78] ***Grave No. 2***, which contained an adult female between 30–35 years old, was found at a depth of 1.6 m. The individual was lying on her right side (lateral decubitus) in a crouched position, the head oriented to the west-southwest, with the lower limbs particularly contracted, and the upper limbs extended along the sides of the body **(Fig. 41A)**.[79] From what can be determined from the poor quality of the graphic documentation, the skeleton appears to have been perfectly articulated.

Grave No. 8 contained the burial of a female between 35–40 years old, found in an oval pit (1.6 × 1.85 m). The skeleton was lying on her right side (lateral decubitus) in a crouched position with the head to the north **(Fig. 40).**[80]

Grave No. 18 held a female aged between 45–50 years old, found at a depth of 1.55–1.75 m. The individual was lying on her left side (lateral decubitus position), with the limbs bent and the head to the west-northwest. The skeleton appears to be only partially articulated (the cranium was found 30 cm lower than the first cervical).

Grave No. 19, located east of the previous burial, contained an adult female between 40–45 years old, found at a depth of 1.6 to 1.75 m. The individual was lying on her right side (lateral decubitus position), with the limbs bent and the head to the south.

Grave No. 20 held a female aged 18–20 years, and was found at a depth of 1.9 m. The subject was lying on her right side in a crouched position with the skull oriented to the south-southwest **(Fig. 41B)**. The hands were near the head.

Grave No. 21, belonging to a child between 4–5 years old, was found at a depth of 2 m. The child was lying on his left lateral side (lateral decubitus position), with the skull to the north, the upper limbs bent and the left hand near the face. The lower limbs were also bent, with the right leg positioned against the pelvic bone.

Grave No. 22 contained a male of 40–45 years, and was found at a depth of 1.78 m. The body was laid on his stomach, with the head face down and the cranium to the northwest. The upper limbs were bent, and the hands against the shoulders **(Fig. 42A)**.[81] The left lower limb was very contracted and drawn up against the coxal bone, while the lower right limb was extended.

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[74] In the article (Бабаков *et al.* 1986), an error was made by numbering the tombs. This individual is not the one documented in Fig. 1.1, but might be the one in Fig. 3.1.

[75] It seems that this tomb did not had a pit dug for inhumation.

[76] 23 graves were excavated at this site, of which 15 date to the Islamic period.

[77] All eight inhumations were located at a depth of between 1.6 and 2.0 m.

[78] Tomb No. 2, which partially covers tomb No. 8, indicates a relative chronology.

[79] Fig. 2 in Бабаков *et al.* 1986 is indicated as illustrating the graves 12 and 19, but actually depicts graves 2 and 20.

[80] This is a numbering error (Бабаков *et al.* 1986): the subject is not the one in Fig. 1.2 as indicated in the article, but is rather depicted in Fig. 3.2.

[81] This individual is not presented in Fig. 3 after Бабаков *et al.* 1986, but in Fig. 1.

Grave No. 23 also contained a 40–45 year old adult male, and was located at a depth of 1.97 m. The skeleton was laid on his stomach, with the upper limbs bent and the right hand brought up to the shoulder. The right lower leg was folded under the abdomen and was articulated with the right foot, which was located under the left coxal bone **(Fig. 42B)**. The lower left limb, partially folded against the slope of the pit, was extended. The skeleton seems to have maintained a relatively complete articulation.

At both, Dashly 17 and 30, there is evidence of pit burials, as well as burials in which the skeletons were placed on the ground (surface graves?), and then covered with sediment, sometimes in close proximity to one of the walls of the courtyard. The individuals were lying, on either the right (5) or the left (2) side (lateral decubitus position), but were also laid on the stomach (ventral decubitus) (2). In the latter case, it appears that the two adult males were interred with associated material (one with a whetstone and the other with a bronze awl). The excavators suggested that these objects are associated with funerary cothes rather than funerary deposits.[82]

A grave from the Early Iron Age was also discovered at El'ken-depe, within the settlement and located only about 1 meter from the exterior of the fortification citadel wall. The individual was lying on his left side (lateral decubitus) in a crouched position, the head to the southeast.[83] No associated material was found, and no further information about the burial pit, the age or sex of the buried individual, had been documented.

At Yaz-depe,[84] the tomb of a young female 17–18 years old was discovered.[85] The individual was lying on her left side (lateral decubitus) in a particularly contracted, crouched position, head to the southeast, and the hands drawn up to the mandible **(Fig. 43)**. A small conical vase containing phalanges (probably from the same individual) was placed against the right hand, near the face. Based on this artifact and the stratigraphy, the author dates this grave to the Middle Iron Age (Yaz II).

Two Middle Iron Age graves were also excavated at the site of Jashily-depe.[86] According to the authors, they were found close to the single brick platform.

The first grave was found to the north of the platform, in a pit situated at a depth of 1.6 m. The

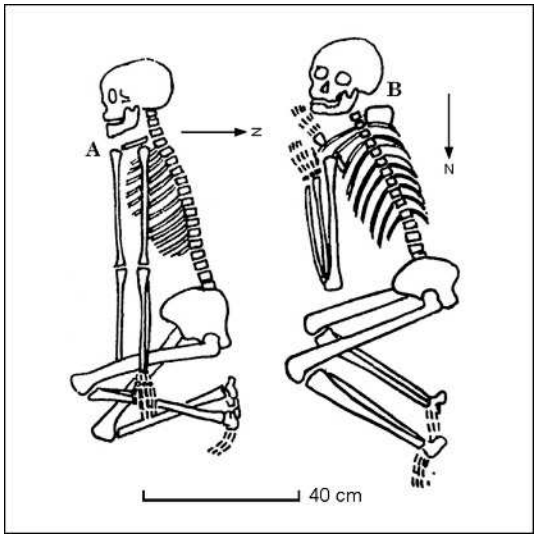

Fig. 41
Dashly 30, Graves Nos. 2 and 20, Early Iron Age (after Babakov *et al.* 1986, Fig. 2)

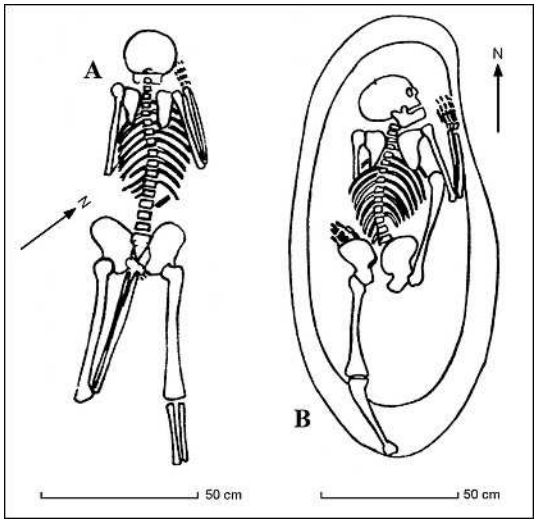

Fig. 42
Dashly 30, Graves Nos. 22 and 23, Early Iron Age (after Babakov *et al.* 1986, Fig. 1)

Fig. 43
Yaz-depe, sector III, Grave, Middle Iron Age (after Masson 1954)

[82] Бабаков *et al.* 1986, 31.
[83] Марущенко 1959, 63.
[84] In the layer (*yarus*) V of a room excavated in quadrant L22 (Массон 1959, 32).
[85] Dolichocephalic Mediterranean type according to anthropologist V. Zezenkova.
[86] Гутлиев/Заднепровский 1985, 46.

Fig. 44
Geokchik-depe, disturbed grave SU 303–433, Early Iron Age (Photo M. Mashkour)

Fig. 45
Edatguly, graves and dispersed human bones, Early Iron Age (Photo J. Bendezu-Sarmiento)

Fig. 46
Edatguly, graves and dispersed human bones, Early Iron Age (Photo J. Bendezu-Sarmiento)

Fig. 47
Tillja-tepe, deposit of a cranium in a beaker, Middle Iron Age (after V. I. Sarianidi)

grave was that of a young adult female,[87] who was lying on her right side (lateral decubitus position), with the head to the west. The lower limbs were bent, the right upper arm folded, and the left stretched out with the hand near the pelvis. The body and the entire pit was covered with vegetal plant material, of a type consistent with woven reeds.

The second grave was at a depth of 0.9 m and located against the east wall of the platform. The pit contained an adult male who had been laid on his back (dorsal decubitus position) with the head to north-northwest. The lower limbs were parallel; the right upper limb partially bent and positioned with the hand on the pelvis, and the left upper limb was folded with the hand on the thoracic cage.

At Geokchik-depe in the Dehistan Plain (southwest Turkmenistan), excavated by O. Lecomte and E. Atagarryev (French-Turkmen Archaeological Mission), a human grave (SU 303/433) identified by a two-winged arrowhead with a spur on its socket was dated to the end of Archaic Dehistan Period (7^{th}–6^{th} centuries BC) **(Fig. 44)**. The oblong rectangular pit was oriented east-west. Four partially articulated individuals (two juveniles) were discovered along with several animal bones.[88]

During the survey in the same region of Dehistan conducted in 2006 by Pr. J. Cordoba (Universidad Autónoma de Madrid) and one of the authors (JBS), 3 adult surface graves in a very poor state of preservation were discovered at the site of Edatguly (Archaic Dehistan Period). It must be noted that the spines of all these individuals were partially articulated. In two cases the individuals were lying on their right sides (lateral decubitus position) in a crouched position, head to the west **(Fig. 45)**. The third individual was lying on his left side (lateral decubitus position) with the upper limbs bent and the head to the north **(Fig. 46)**.

Afghanistan

The examples from Afghanistan – limited to southern Bactria – are rare. At Tillja tepe, a vessel containing a cranium was discovered in the Tillja II level of the citadel **(Fig. 47)**, but V. I. Sarianidi opined that it was displaced from Tillja III level, which corresponds to the Middle Iron Age or Yaz II period.[89] Furthermore, this cylindrical beaker is typologically characteristic of the Middle-Late Iron Age in Central Asia.

[87] Osteological studies were conducted by anthropologist O. Babakov.
[88] Lecomte 2005, 465; Lecomte/Mashkour 1997; Mashkour 1998, 209.
[89] Сарианиди 1989.

Recently, osteological material dating to the first millennium BCE was discovered in Bactria.[90] Primary burials were excavated at the site of Cheshme-Shafa, and (very likely secondary) deposits of skeleton parts were found in a partially excavated pit at Tepe Zargaran. Both groups date to the end of the Achaemenid period (fourth century BCE).[91]

Scattered human remains

Human bones are found in archaeological layers at numerous Early Iron Age sites, but are not identifiable without a detailed osteological study. These bones are usually dispersed among other discovered material, and are often not separated from faunal remains:

In Margiana, in the foothills of Kopet Dagh and in the plain of Dehistan

- At Takhirbaj 1: During his study of fauna, P. Joglekar identified about twenty human bones from all Iron Age levels of the site, but does not elaborate them further.[92]
- At Ulug-depe: Several cranium and post-cranium bones, as well as teeth belonging to more than 50 individuals were found. These remains were discovered scattered in the Early and Middle Iron Age levels throughout the site. One of the bones, a left humerus, had traces of defleshing of a fresh bone on the diaphysis **(Fig. 48)**.[93]
- At Geokchik-depe: many human bones were discovered in several sectors during the excavation of the French-Turkmen Archaeological Mission.[94]

In Sogdiana and in the Chach

- At Sangir-tepe: T. Ermolova mentions the presence of human bones in the Early Iron Age levels of the side, though the nature and the quantity are not specified.[95]
- At Tujabuguz: Human remains were found on the surface of the settlement 8 on this Early Iron Age site.[96]
- At Koktepe, in the Early Iron Age levels: Human bones were recently discovered in several places of the trenches 2 and 4 (in silo-pits converted into trash-pits or in the occupation layers, and mixed with pottery and animal bones). The analyses conducted by one of the authors testify to a good state of preservation and and the absence of traces of incisions. The bones belong to adults, in one case probably a young adult, and correspond to different parts of the body (humerus, metacarpals, ulna, metatarsals, and femurs).

Fig. 48
Ulug-depe, humerus with traces of incisions, Middle Iron Age (Photo MAFTur)

In Bactria

- At Bandykhan/Majdatepa: A. Sagdullaev mentions human bones discovered in 1973 at this Early Iron Age site, but does not give further specifications.[97] Other bones were found in the occupation layers of Majdatepa during excavations carried out by the German mission in Uzbekistan (dir. N. Boroffka and L. Sverchkov).[98]
- At Shortepa: The calvaria of an adult and the cranium of a child were found in a pit also containing fauna, and dating to the Achaemenid period.[99]
- At Kyzylcha 6 and Kyzyltepe: A. Sagdullaev indicates the discovery of a fragmentary human cranium at Kyzylcha 6 and various skeletal elements at the site of Kyzyltepe, in the Iron Age levels.[100]
- At Dzharkutan: A number of pits linked to the Early Iron Age occupation contained human remains, consistently mixed with animal bones and numerous sherds of handmade ceramics from the Early Iron Age **(Figs. 49–52)**. These bones, although in each case small in number, signify the presence of multiple individuals. This is notably the case for pit SU 4052, which contained a fragmentary human cranium. In pit SU 4020, various fragments of long bones and mandibles, belonging to adult individuals were found **(Figs. 49–51)**. Finally, pit SU 4264 was exactly placed in the center of the western section of an octa-

90 Marquis/Besenval 2007.
91 A publication by the excavators, detailing the excavations and the context of the discovery, is currently in progress.
92 Joglekar 1998, 115.
93 Bendezu-Sarmiento 2006.
94 Lecomte 2005, 466.
95 Ермолова 1974, 100.
96 Дуке/Абдуллаев 1980, 12.
97 Сагдуллаев 1990, 34.
98 Personal communication N. Boroffka.
99 Personal communication V. Mokroborodov.
100 Сагдуллаев 1990.

Fig. 49
Dzharkutan, detail of a mandible in pit SU 4020, Early Iron Age (Photo MAFOuz-Protohistoire)

Fig. 50
Dzharkutan, detail of a vertebra in pit SU 4020, Early Iron Age (Photo MAFOuz-Protohistoire)

Fig. 51
Dzharkutan, Detail of various in bones from pit SU 4020, Early Iron Age (Photo MAFOuz-Protohistoire)

gon-shaped pit-house, a typical dwelling of the Early Iron Age. The pit was sealed by several successive levels of floors and by a central post-hole. Inside, rather slender bones from young adults and adolescents were found **(Fig. 52)**. This correlation between the pit and the pit-house raises the question of the status of the human remains: were they placed voluntarily in an ossuary pit (?) in the center of the dwelling or were they thrown into a refuse pit?

Fig. 52
Dzharkutan, Detail of a mandible in pit SU 4264-2, Early Iron Age (Photo MAFOuz-Protohistoire)

It is likely that human bones have gone unnoticed among the osteological material typically considered to belong to fauna, which has been very rarely studied. Likewise, evidence of traces of incisions, or other secondary traces, is currently insufficiently recorded.

A typology of Iron age burials in central asia

At this stage it should be noted that the dead were not destined only to active excarnation, as it appears at first glance; but rather primary burials, although not numerous, still existed. The bodies of the dead were in some cases mutilated and placed in silos. After defleshing and cleaning of areas, where the corpses were exposed, dried bones were sometimes dispersed or placed in pits, in order to rejoin the domestic world. For the communities of the Iron Age, to whom views of death and the dead were not fixed, it seems that there was no systematic relationship between the world of the dead and that of the living (and between the "sacred" world and the "profane" one?) **(Fig. 53)**. Whether there was a need to separate these two worlds is not clear at all. Various attributes indicate that there must have been two types of dwellings: permanent and seasonal.[101] The recurring discovery of depos-

[101] Lhuillier 2013a; Lhuillier *et al.* 2013.

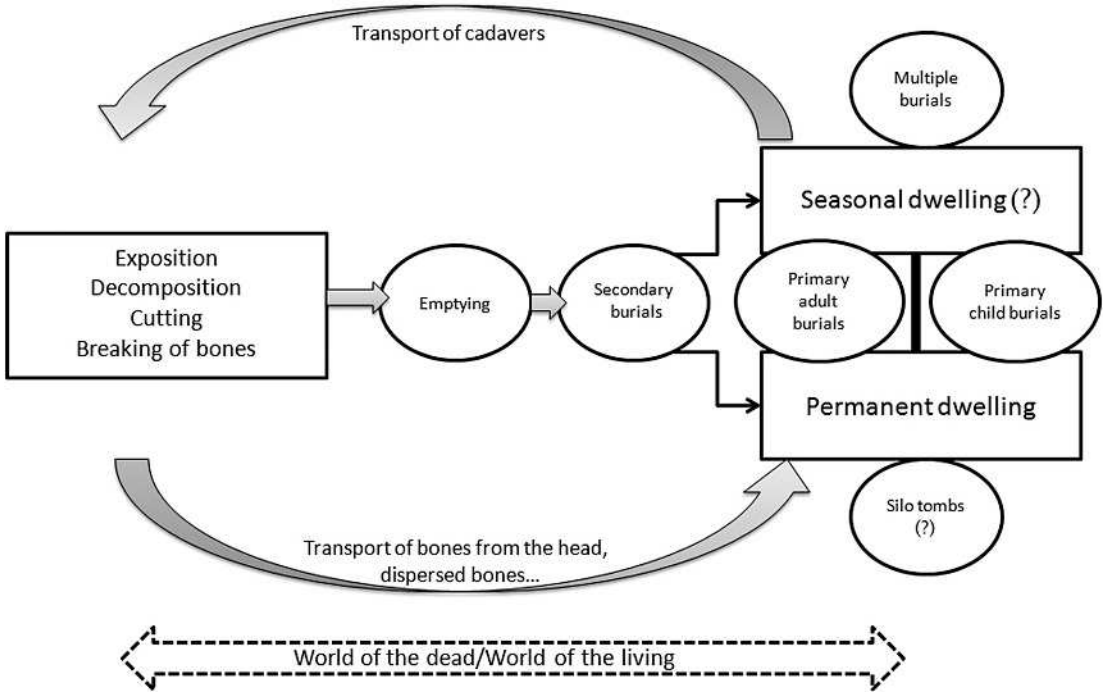

Fig. 53
Representation of funerary practices during the Early Iron Age

its of human remains – complete and partial skeletons and dry, dismantled bones – allows the presentation of the state of research pertaining to certain manipulations of bodies and skeletons during the Iron Age. This rereading of complex and hierarchical practices also encourages reconsideration of the vocabulary used to describe and analyze not only the steps carried out in these funerary practices (exposure of the body, cutting, etc.), but also the cultural manifestations of the populations of the Early and Middle Iron Age.

Strictly speaking, a grave is a place used for the deposition and protection of a body.[102] It is impossible to deny the application of funerary vocabulary to the diversity of practices we have just described.[103] Funerary practices do exist, with the only particularity of these practices being the case of primary burials, which show great variety in terms of orientation and positioning of the body. This tends to impede the identification of trends and, even more, the understanding of the set of criteria used to select those interred.[104] However, even if primary burials are known (notably those of adults), they are rare: we have nine individuals at Dzharkutan and Ulug-depe, about 30 in the Chust culture, and no more than 20 others in Central Asian sites, totaling to about sixty individuals. We can also include the approximately one dozen subjects found in secondary graves (craniums, limbs, dispersed bones, etc.) from Dzharkutan and Ulug-depe, as well as at least 32 individuals at Chust culture sites. At other Central Asian sites, no more than 80 individuals are known from all contexts. Altogether, approximately 180 individuals highlight the important fact that there is a particular lack of interred bodies during more than a millennium in this region.

In the Early Iron Age, a burial within inhabited areas houses and protects the body of adult individuals, but also those of subadults. Is it possible to discuss the subject of primary burial of children during the Early Iron Age? The context of habitation at the sites of Dzharkutan and Ulug-depe provides numerous examples. These burials constitute what is doubtless one of the proven marginalizations that reoccurs throughout time: perinated subjects were found intact or fragmentary inside a dwelling, but

[102] In the *Dictionnaire de la Préhistoire*, J. Leclerc and J. Tarrete (1988) give an archaeological definition of a grave: (transl.: *Place where the remains of one or more deceased are deposited, and where there is sufficient evidence in the deposit to allow the archaeologist to identify the intention to carry out a funerary act*).

[103] This intention is confirmed because we have the inhumations (either complete or partial) sometimes in sealed pits (silo), or in reconverted structures, which are filled in and subsequently used as a place of burial.

[104] We can also note that women and children are at least twice more represented than adult males.

with no clearly defined funerary space.[105] Infants who died prematurely always seem to benefit from atypical funerary practices, which confine these burials to the familial sphere of the dwelling.[106] The Iron Age in Central Asia is no exception: with the death of an infant, the steps leading to the acknowledgement and recognition of the infant by the group have not been completed, its acceptance by the living not yet realized. Putting aside the world of the dead is, in these cases, inevitable. Therefore, the infant is not included in the same treatments dedicated to adults, such as excarnation, and is instead buried in the only environment it has ever known, the dwelling.[107] This was already the case among the societies of the Central Asian Bronze Age, where the majority of infants are found interred in dwellings rather than in a necropolis. These criteria for selecting those inhumed continued into the Iron Age among the populations of the steppe, where there is no evidence of kurgans for children in infancy.[108]

Additional features of the Central Asian Iron Age graves include the absence of a pit (surface burial) and the incomplete nature of the buried body. These practices require us to ask, whether these are actually graves *stricto sensu,* as it is uncertain whether the deposit of the body (complete or partial) is actually an intentional inhumation. This phenomenon is accentuated by the absence of grave goods. It appears, however, that despite the absence of a pit, the individuals were positioned (often lying on the right or left side in a crouched position)[109] and, as testified by the good preservation of the bones and articulations, even buried under thin layer of soil. This demonstrates the presence of a specific intention to preserve the body, proving the constitution of a grave. But how might the partial deposition of a body be interpreted? In our excavations, it can be noted that the bones are often uncovered with anatomical articulations preserved, indicating an intentional burial, either primary or secondary. There is also evidence of other practices such as dismemberment, which are less obvious to interpret **(Fig. 53)**.

Among the array of funerary practices presented here, it is also important to note the reuse of old structures such as storage silos,[110] as well as secondary burials.[111] Skeletons found in these silos are mostly female, some are incomplete. It is difficult to say that silo burials are feminine, but certain skeletons (such as that of Grave No. 1034 at Dzharkutan) are positioned in a markedly discordant fashion, as a result of the body having been manipulated prior to the interment in the silo. This includes dislocation of the femoral head and atypical flexion of the limbs. The study of the taphonomic process of decomposition reveals the presence of an enveloping textile (clothing and/or shroud). The excavation of Grave No. 1034 suggests that an anatomical selection was made: it appears that the gravediggers brought mainly the lower portion of the bodies,[112] and the cranium and the first few cervical vertebrae are often disarticulated and found at a distance, but associated with the pelvis. The good condition of the occipito-altoid and the temporo-mandibular joint appears to confirm deferred decollation during the decomposition of the body, but before the bones were entirely de-fleshed. This finding is supported by the presence of completely articulated cervical vertebrae. These indications suggest the steps carried out in the complex handling of death and the dead, which involve cutting up the body and partially moving it to the final burial place situated in the settlement area, or elsewhere.

Other skeletons found in silos are only partially represented and were interred in a wide variety of positions, including some which appear to have been unceremoniously "thrown" in.[113] They present significant osteological gaps that show beyond a doubt that the bodies were more or less moved, while others seem to have been hastily manipulated and scattered at the bottom of the pit. Grave No. 59 at Ulug-depe, where the bones of a second subadult were found next to the primary interred individual, provides a clear example of this phenomenon.

Interpreting the context

These different practices indicate an association between the funeral and storage structures. In sedentary societies such as those of the Iron Age, the

105 Tillier/Majó 2008.

106 The practice of burying infants within domestic units, dwellings, or workshops, is a quasi-universal phenomenon attested from the Chalcolithic period onwards into the historic period (Laubenheimer 2004; Tillier/Majó 2008).

107 Additionally, the study of many traditional societies, such as in Africa (Thomas 1980), or ancient societies (Néraudau 1987) may assist in understanding proto-historic funerary acts: this type of grave, away from the group, is normal, and corresponds to the only treatment reserved for an individual not yet socialized.

108 Bendezu-Sarmiento 2007.

109 Graves No. 1044 at Dzharkutan, No. 58 at Ulug-depe, or certain graves of the Chust culture and the sites of Dashly 17 and Dashly 30.

110 Graves No. 1034 at Dzharkutan and Nos. 59, 80, and 101 at Ulug-depe; grave at Osh.

111 Such as that of SU 4058 at Dzharkutan.

112 As indicated above, one of the femurs was gnawed by an animal outside of the grave (Fig. 17).

113 The original positions of these fragmented and "thrown" bodies (often still perfectly osteologically articulated) are associated to the method of closing of the structures immediately after the funeral.

presence of burials in a silo perhaps transforms the subjects interred inside into intermediary protectors and/or guardians of crops (those to be grown or already harvested). This hypothesis may be meaningful if we consider that the survival of these rural populations of the Iron Age could have based on proper storage of grain.[114] Here, the world of the living (with silos with the function of conservation) is united with the world of the dead (a grave in which decomposition is inevitable). The concepts of "space" and "time" must be considered in tandem, in order to understand the relationship between the moment of the deposition of the body, the utilization of the structure and the organization of the village.

The deceased in these graves (principally primary) were in some ways removed or rather chosen among their peers. Indeed, the general perception of pathological trauma (such as fractures) and health (such as degenerative bone disease) of the individuals that are buried in silos does not provide any particular differentiation among the interred. All ages are represented, with a larger quantity of adult females. The understanding of funeral and cultural practices during what we propose calling the *sine sepulchro* period, in terms of not only the body itself (including status and gender of the individual), but also the decomposition process of the skeleton rises further questions. Why does this over-representation of females exist? Should a connection with their reproductive function necessarily be made? Is a reification of the female to determine? These questions are symbolically complicated by the selection of one or more dry bones, such as crania[115] or lower limbs. Are we dealing with sepulchral representation *pars pro toto* from the time of the deposition of what is considered the "principal" part of the skeleton?

In fact, the removal of the head encompasses the majority of examples presented in this article. Thus, the accumulation of skulls may be related to a cult of the veneration relics that hold magical power or to a cult dedicated to the worship of ancestors. This is far from certain, especially as the meaning of isolated heads is not always easily interpreted[116] and some could very well be trophies from conflicts or wars.[117] We also presented other examples where skulls appeared to be associated with animal bones: cattle, equines, and crania of sheep or goats as seen at sites from the Chust culture. How might these associations be explained? Are they simply a coincidence? Should a symbolic significance be attached, since we know that animal tombs exist in Central Asia during the Late Bronze Age?[118] It is difficult to make a direct connection, but the fact that these practices are reminiscent of those of the Bronze Age – practices that do not necessarily disappear during the Early Iron Age – should not be excluded.

Among the secondary tombs and/or those found in the occupation layers of sites, various other dispersed bones (notably small bones, teeth, etc.) were discovered.[119] In terms of the discoveries related to the Chust culture in the Ferghana Valley, Ju. Zadneprovskii writes of a "contemptuous attitude" consisting of throwing human bones into a jumble with animal bones and other refuse, which reflects "barbaric behavior" showing that these individuals were treated as a lower class.[120] Other authors previously explained that the traces of cutting or incisions observed on several bones and/or their association with animal bones could indicate the practice of cannibalism.[121] This model is very unlikely and in any case almost impossible to prove without any clear evidence.[122]

Instead, these bones indicate defleshing (excarnation) processes that were practiced somewhere not far from the settlement **(Fig. 53)**. For the moment, no suitable context or feature that can be dedicated to the exposure of bodies has been found in Iron Age Central Asia, and we must ask ourselves, if there were perhaps wooden platforms that would have elevated the body, allowing the decomposition of the flesh while leaving the bones intact, before being buried elsewhere.[123] This again would suggest a close coexistence of the worlds of the dead and living.

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114 Silo tombs are found in too significant numbers (several dozen) during the European Iron Age (Late Hallstatt and Early La Tène) to be anecdotal. Here, it was not a simple, opportunistic reuse of domestic pits, which is known since the Middle Neolithic in France (Baray/Boulestin 2010). B. Cunliffe (1992) developed a thesis that advocates the notion of ritual connected with the initial function of these structures, the preservation of grain, and a propitiatory action aiming to reconcile chthonic deities through the deposit of a human or animals. Others associate these burials to divinities of fertility and agriculture (Matterne 2001).

115 Prominent symbol of absolute cleanliness, in opposition to the filth of the flesh rotting, embodying persistence in only this element, in opposition to the precariousness of flesh (Thomas 1975).

116 Boulestin/Gambier 2012.

117 Testart 2008.

118 Дубова 2008.

119 Generally, the discovery of scattered human remains can be explained in three ways: either, despite appearances, the bones were intentionally deposited in course of a funerary act; the bones were accidentally displaced; or they were thrown away because they were considered rubbish (Pariat 2005).

120 Заднепровский 1962, 99.

121 Спришевский 1955; Спришевский 1957.

122 Gambier/Le Mort 1996; Le Mort 2003.

123 This type of grave may resemble other structures on platforms, such as the Yakoute *aranas,* which disappeared during the Russian colonization and was replaced with burial (Roux 1963).

This hypothesis can explain certain remains of post-holes that were sometimes found at Early Iron Age sites, often associated with pit-houses or other types of shelters. A passage from Strabo on the Macedonian conquest of Bactria supports this assumption[124] as he wrote about Alexander, who was repulsed by the sight of unburied human bones.[125]

It is also possible that exposure of the bodies took place in open air, far from inhabited areas, which would explain why the numbers of bones discovered is not larger.[126] It appears, after excarnation, the bones were discarded, or stored somewhere which should leave archaeological traces. Therefore, even if there was no specific storage area – since the first ossuaries are documented firstly from the Achaemenid period in Chorasmia[127] – the proportion of bones discovered dispersed at these sites (consisting of less than 100 individuals) should be higher if the context of exposure was contiguous to occupied areas.

Assuming, we can summarize the funerary practices of the Iron Age and the *sine sepulchro* period in a few lines:

- The presence of children graves in inhabited areas.
- The presence of primary adult burials.
- The presence of several individuals in the same structure (multiple or plural graves).
- The presence of surface graves (without a grave pit).
- When grave pits are present, they may be L-shaped (*podboj*) (Middle-Late Iron Age).
- The presence of secondary burials with an accumulation of craniums sometimes associated with faunal elements like bones of sheep, goats, cattle and perhaps dogs.[128]
- The presence of silo burials.[129]
- Certain indicators, such as the presence of only distinctive parts of the body, suggest that there must have existed a primary location, where the bodies were exposed and where excarnation took place, before the body was transferred to a secondary or multiple burial **(Fig. 53)**.
- Various positions and orientations of the bodies, some of which appear to have been thrown unceremoniously (particularly individuals found face down with legs bent).
- The apparent absence of grave goods.

Finally, we must mention a building dating to the Late Iron Age, excavated at Pshak-tepe in southern Uzbekistan, which was interpreted as a place reserved for human cremation.[130] This hypothesis cannot be excluded, as cremation is a practice known in the region during the Bronze Age.[131] However, it seems to be too insufficiently grounded to be definite.

Some circular or square mausoleums were excavated in Chorasmia in Koj-krylgan-kala,[132] Tagisken, and Chirik-rabat,[133] but this area corresponds to the margins of the Saka territory, that may have occupied the region until 400 BC. Indeed, graves are well known in the nomadic world and numerous kurgans are located in the steppes, contrasting strongly with the absence of burials in southern Central Asia, and it is not clear yet if we can explain this disparity between the steppe world and the oasis world only by Mazdeism or Zoroastrianism.

To conclude, we are dealing with graves that represent only a part of the population, although the method of classification of the dead remains undefined. Although there is no single determinative criterion, these funeral practices are not always standardized: the positions of the bodies indicate a certain indifference that may reflect a voluntarily degrading treatment of the body, particularly the ventral decubitus position that is considered denigrating in many societies; or the absence of grave

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124 Where Zoroastrian communities practiced active defleshing by giving corpses to dogs.

125 Strabo, Geography, XI.11 3: Alexander afterwards regulated this practice, as well as the gerontocide, in order to make it less shocking (monitoring places used for excarnation and controlling the immediate removal of bones once collected in ossuaries). For additional commentary on this passage, the exposure of body, and references to religious literature, see Boyce/Grenet 1991, 7–8; Grenet 1984, 73–75.

126 Because this type of exposure tends to allow osteological traces of the body rapidly disappear, as was shown in recent studies of this type of practice (Delaplace 2008).

127 Grenet 1984; Francfort 2001.

128 Some dogs (partial or complete skeletons) were discovered together with human skulls in the citadel of Dzharkutan (Personal communication U. Rakhmonov). One complete skeleton of dog was discovered in Dal'verzin in the Chust culture; further two complete equids (identified as horses), one of them associated with five human skulls (Заднепровский 1978, 87–89). Ju. Zadneprovksij interprets these features as animal graves. The dog is of particular importance in the Mazdean/Zoroastrian funeral practices: the Vendidad (Vd VIII, 14–18) explains his prophylactic function, which makes him able to neutralize the Drug Nasav ("demon" endowed with a power of contagion) staying in the body and to disinfect the path through which the body is brought to the *dakhma* (Grenet 1984, 38).

129 F. Grenet indicates the existence of mythology that may explain the association between future life and annual rebirth of the grain: at the beginning of the 7th century CE the Chinese explorer Wei Tsie described a summer feast in Samarkand where people are looking for the "bones of the divine child" that were "lost". This tradition, probably related to the Babylonian myths of Nana and Tammuw, who symbolize the death and the annual rebirth of the grain (the lost bones are probably the grains), was likely to have been imported during Achaemenid or Seleucid times and could have reused an older local cultural substratum (Grenet/Marshak 1998; Grenet 2009). Silo graves could have been one expression of this tradition.

130 Аскаров 1982, 40–41.

131 Avanesova 1995; Bendezu-Sarmiento 2004. However, it should be noted that in the *Avesta* (Vd. 3.36–42) cremation is condemned because it implies a desecration of fire (Grenet 1989, 559).

132 Вайнберг/Толстов 1967.

133 Вайнберг/Левина 1993; итина/яблонский 2001

Fig. 54
Multiple burial at Gonur-depe, Bronze Age (after Sarianidi 1998, Fig. 32)

goods. Our use of the term "grave" for such burials sometimes requires deciphering: in all scenarios, there is doubtlessly a message that remains to be decoded. It is necessary to begin with the broadest interpretive approach, which can highlight differences or constants in time and space.

What is the connection with Zoroastrianism?

Should the confirmation of the existence of excarnation be derived from these partially conserved bodies or those mutilated before burial in a silo? Without any particular symbolic significance and with the absence of a specific location, would some of these bodies, once exposed to beasts of prey and other scavengers, have been simply thrown in a pit? Excarnation is attested in Zoroastrian rituals that begin in the Achaemenid period, and is understood from archaeological evidence and descriptions in the *Avesta*, the collection of ritual texts of Zoroastrianism.[134] For this reason, the Early Iron Age is considered as the period of the emergence of excarnation. The language used in certain texts in the *Avesta*, in particular the Gathas, is very close to that of the *Rig Veda,* which argues in favor of an earlier date for these texts – the second half of the second millennium – and therefore, also for the contemporaneous cultures described. G. Gnoli considers that this period should be placed between the end of the 2nd and the beginning of the 1st millennia BCE, while Boyce suggests an earlier dating, around 1700 BCE.[135]

Can we therefore conclude that Zoroastrianism has already developed in the Early Iron Age? According to new research, the Gatas were composed to accompany certain rituals and it seems that Zoroaster never forbade animal sacrifice.[136] However, the attested practice of defleshing is not necessarily linked to Mazdaeism; it could instead have existed prior to any religious conceptualization and incorporated into later Mazdaean rituals.

Indeed, excarnation was also practiced by ancient non-Mazdaean populations and contemporary populations in Siberia and Mongolia.[137] In Central Asia the practice of excarnation and the existence of *dakhmas* are evidenced as early as the Bronze Age, as at the site of Gonur-depe.[138] At Gonur-depe North, V. Sarianidi excavated what he interpreted as a "dakhma-mausoleum" (room 92), where he found bones of 11 individuals of all stages of life **(Fig. 54)**. At Altyn-depe, collective deposits for defleshed bones existed, such as the burial chamber 11, which contained the remains of 14 individuals, mostly women and children, in different orientations.[139] **(Fig. 55)**.

These *dakhmas* would have allowed scavenging predators to deflesh the skeletons, as illustrated in several seals,[140] which show the human body on the ground being torn apart by birds of prey and perhaps even dogs **(Fig. 56)**. Therefore, even if Mazdaeism or Zoroastrianism can shed light on a rather marginal practice, there is no evidence to indicate that the communities of the Iron Age were indeed Mazdaean.

In northern Bactria partial inhumations or burials of dismembered bodies were found in Bronze Age contexts. They may indicate active defleshing before the placement of bones in the tomb, such as those at Dzharkutan 4A and 4B,[141] at Kumsaj,[142]

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134 According to the sacred texts of the *Zend-Avesta*, the body is impure by excellence, and it is therefore not a question of tainting "the things belonging to good creation" by proceeding a body in decomposition to the final grave. Hence the custom of exposing the dead away from inhabited zones, in areas known to be frequented by carnivores: vultures in particular are purifiers that will rid the body of rotten flesh, the breeding ground for demonic infection (Boyce 1975; Boyce/Grenet 1991, 130–131; Grenet 1984, 33–34).

135 Gnoli 1980; Boyce 1975. Others texts of the recent *Avesta*, like the *Mihr Yasht*, were likely compiled between the 8th and the 3th centuries BCE.

136 Grenet 2005.

137 Bendezu-Sarmiento *et al.* 2008; Delaplace 2008; Francfort 2005b; Roux 1963.

138 Сарианиди 2006; Sarianidi 1998, 71 Fig. 32; Sarianidi 2008, 185–186 Fig. 21.

139 Masson 1988, Fig. 16.

140 Сарианиди 2006, Fig. 11.

141 Ионесов 1990.

142 Vinogradova/P'jankova 1990.

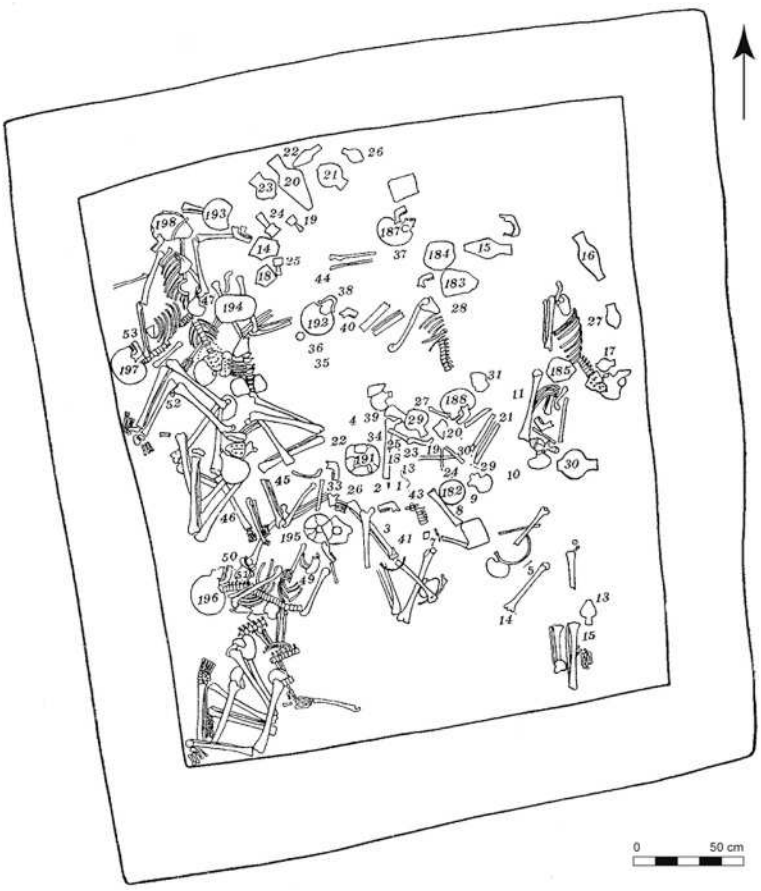

Fig. 55
Multiple burial at Altyndepe, Bronze Age (after Masson 1988, Fig.16)

and perhaps at Kangurttut in graves No. 65 and 74.[143] This is also the case at the necropolis of Bustan VI where "fragments of the dead in the form of cut bones" were found in both, male and female burials, indicating that dismemberment had been practiced.[144] The author interprets this discovery as a cult linked to human sacrifice of an expiatory nature, according to an explanation of the "recognition" of the dead with annexed offering structures ("cenotaphs"[145] containing ochre and chalk).

H.-P. Francfort also notes that the discovery of empty vases and pits containing deposits, but no human remains in the burials of the Late Bronze Age in Tajikistan may correspond to the beginning changes in funerary practice.[146] Several of this type of cenotaph have also been recently excavated in the Bronze Age necropolis at Dzharkutan.[147]

Excarnation had been already sometimes practiced in the Bronze Age, therefore persisted into the Early Iron Age in the whole of southern Central Asia, where it coexisted with other burial practices. However, as we have demonstrated, this practice remains marginal. It is not possible to determine whether this practice of inhumation continued in the tradition of the Bronze Age and thus marks the persistence of ancient practices, while excarnation became progressively more established; or, whether these practices are in fact reflecting a distinctive social status, and were reserved only for a part of the population (migrants belonging to another ethnic group or members of another social group?) that coexists with the population receiving excarnation. It may also indicate that a part of the population practiced another form of religion that executes burial practices such as primary individual and multiple graves. Primary and secondary graves would therefore signify another belief system, in which it was not necessary to maintain contact between the soil and the bones of the deceased. Yet, it is important not to forget that even later Zoroastrian texts mention a resisting of changes in funerary practices, and refusing of adopting the excarnation by a part of the population.[148] Incomplete skeletons may therefore refer both, a voluntary burial practice and an intentional deposition without a funerary importance.

In Central Asia, funerary buildings that are clearly related to Zoroastrianism appear relatively late, around the first century BCE, as to demonstrate with the buildings of Kampyr-tepe, Erkurgan or the *naus* of Shakh-i-tepe, Dalverzin-tepa and Jalangtush-tepe.[149] During the 1st first millennium BCE, graves are also very rare in Iran.[150] The first evidences of the Zoroastrian texts in Iran (defleshed bones in a container) are obviously later than the second half of the1st millennium BCE.[151]

In order to find a better characterization for this *Sine sepulchro* Cultural Complex of Transoxiana during the Iron Age, our thought process should rather examine on a transcultural (geographical) and diachronic level, than confine to a single time period and cultural area. Only a holistic approach that determines valued criteria will enable us to provide better

Fig. 56
Seal from Gonur-depe with excarnation scene, Bronze Age (after Sarianidi 2006b, Fig.11)

143 Виноградова *et al.* 2008.
144 Avanesova 1995.
145 From the Greek: κενοτάφιον = *kenotaphion* (*kenos*, one meaning being "empty", and *taphos*, "tomb"), *"empty tomb"* or a monument erected in honour of a person or group of people whose remains are elsewhere). In archaeology this term is not really appropriate but it was widely used in Soviet literature.
146 Francfort 2001, 231.
147 Bendezu-Sarmiento/Mustafakulov 2013; Мустафокулов/Бендезу-Сарменьто 2009.
148 Grenet 1989, 559.
149 Rtveladze 1987; Sulejmanov 1991.
150 Boucharlat 1991.
151 Huff 2004.

explanations for these phenomena in funerary practices in this key period of Central Asian history.

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Abstract

One of the primary characteristics of the Iron Age (c. 1500–329 BCE) in southern Central Asia is the widespread absence of graves, associated with the appearance of excarnation as the most common funeral practice. Based on new data from recent excavations (Dzharkutan in Uzbekistan and Ulug-depe in Turkmenistan) and a review of available published and unpublished data found in Central Asian and Russian archives, the authors question this widely accepted fact. They show that the funerary practices of the Iron Age populations were more complex than previously understood (individual and multiple burials, primary and secondary burials, collection of selected skeletal remains, excarnation, etc.). The archaeological record refers to a broad variety of interpretations, particularly different levels of interaction between the world of the dead and the living.

Резюме

Одной из главных характеристик железного века (ок. 1500–329 до н.э.) в южной части Средней Азии является повсеместное отсутствие погребений, связанных с появлением экскарнации как распространённой погребальной практики. Этот факт рассматривается авторами настоящей статьи исходя из новых данных, полученных при раскопках последних лет (Джаркутан в Узбекистане и Улуг-депе в Туркменистане) и результатов анализа опубликованных и неопубликованных данных из центральноазиатских и российских архивов. Тем самым становится очевидным, что погребальные практики населения железного века были достаточно сложны и разнообразны (погребения индивидуальные/групповые, первичные/вторичные, сбор определённых частей скелета, экскарнация). Эти практики говорят о множественности возможных интерпретаций мира мёртвых и живых и их взаимодействии.

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