

Archaeological research at the Kuraily-asar burial ground in 2024

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Keywords: Eastern Aral Sea region, Jetiasar culture, Kuraily-asar settlement, burial ground, sub-kurgan inhumation burials

Түйін сөздер: Шығыс Арал маңы, Жетіасар мәдениеті, Құрайлы-асар қалашығы, қорым, жер асты жерлеу орындары

Ключевые слова: Восточное Приаралье, Жетыасарская культура, городище Курайлы-асар, могильник, подкурганые грунтовые погребения

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The article examines funerary structures of the Jetiasar culture in the Eastern Aral Sea region. In 2024, investigations were conducted by the Aral Sea Archaeological Expedition of the Margulan Institute of Archaeology at the Kuraily-asar burial ground, located in the Karmakshy District of the Kyzylorda Region. Particular attention was paid to kurgans Nos. 5, 6, and 7. All the structures share an identical construction. Each kurgan is surrounded by a ditch with causeways on the northern and eastern sides, with a burial pit located at the center. In kurgan No. 5, the skeletal bones were found scattered, whereas in kurgan No. 6 the buried individual was laid in an extended supine position, oriented to the north. In kurgan No. 7, no skeletal remains were recorded. In the burial pit of kurgan No. 5, remains of a sacrificed sheep (skull and postcranial bones) were identified, indicating the presence of a sacrificial ritual. Taking into account the lambing season in the Syr Darya valley (February–April), it can be assumed that the burial rite was performed in late spring. Based on the analysis of the burial assemblage and comparison with previously investigated kurgans, the kurgans are dated to the 2nd–4th centuries AD.

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Құрайлы-асар қорымындағы 2024 жылғы археологиялық зерттеулер

Мақалада Шығыс Арал маңындағы Жетіасар мәдениетінің жерлеу орындары қарастырылады. 2024 жылы Ә.Х. Марғұлан атындағы Археология институтының Арал археологиялық экспедициясы Қызылорда облысы Қармақшы ауданында орналасқан Құрайлы-асар қорымында зерттеу жүргізді. Зерттеу барысында № 5, 6 және 7 обаларға ерекше назар аударылды. № 7 обада адам қаңқасы тіркелмеді, ал № 5 және 6 обалардың

құрылымы мен жерлеу рәсімі бірдей. Обалар шеңбер тәріздес ормен қоршалған, ордың шығысында немесе солтүстігінде кіреберісі бар. Обалардың ортасында жерлеу шұңқыры орналасқан. № 5 обада адам қаңқасы шашыраңқы күйде ашылды, ал № 6 обадағы адам қаңқасы дорсальды бетімен (арқасымен, тігінен) жатқызылған және басы солтүстікке бағытталған. № 5 обаның жерлеу шұңқырынан құрбандыққа шалынған қойдың сүйектері (бас сүйегі және басқа сүйектері) тіркелді, тиісінше бұл құрбандық шалу рәсімін көрсетеді. Сырдария алқабында қойдың төлдеу уақытын (ақпан-сәуір айлары) ескере отырып, обалардың жерлеу рәсімі көктемнің соңы деп болжауға болады. Жерлеу материалын талдау және бұрын зерттелген обалармен салыстыру негізінде обалар б.д. II–IV ғасырларымен мерзімделді.

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Археологические исследования на могильнике Курайлы-асар в 2024 году

В статье рассматриваются погребальные сооружения жетыасарской культуры в Восточном Приаралье. В 2024 году Приаральской археологической экспедицией Института археологии им. А.Х. Маргулана были проведены исследования на могильнике Курайлы-асар, расположенном в Кармакшинском районе Кызылординской области. Особое внимание уделено курганам № 5, 6 и 7. Все объекты имеют идентичную конструкцию. Каждый курган окружён рвом с перемычками с северной и восточной сторон, в центре которых располагается погребальная яма. В кургане № 5 кости скелета были разбросаны, в то время как в кургане № 6 погребённый был уложен в вытянутом положении на спине, с ориентировкой на север. В кургане № 7 костные останки не зафиксированы. В могильной яме кургана № 5 зафиксированы останки принесённой в жертву овцы (череп и посткраниальные кости), что свидетельствует о наличии жертвенного ритуала. Учитывая сезон охота овец в долине р. Сырдарьи (февраль–апрель), можно предположить, что обряд захоронения проводился в конце весны. На основании анализа погребального предметного комплекса и сопоставления с ранее исследованными курганами курганы датируются II–IV вв. н.э.

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Introduction

The Kuraily-asar burial ground is the necropolis of the eponymous settlement (another designation of the site in the materials of the Khorezm Archaeological and Ethnographic Expedition is Jetiasar No. 7) and is located 14 km west of the village of Turmagambet (Karmakshy District, Kyzylorda Region). The necropolis includes several hundred kurgans forming three large groups [Galieva 2024]. In 2023, the expedition of the Margulan Institute of Archaeology (headed by A.A. Tazhekeyev) began excavations of the third group of kurgans, as a result of which four kurgans were investigated. In three of them, burial pits with side niches were recorded, while one contained a simple burial pit. All burials were preserved intact (in situ). Judging by the nature of the grave fill and the position of the buried individuals, the funerary rite in these kurgans was uniform. The deceased were laid on the bottom of the burial pit on a layer of plant matter, in a supine extended position, with straightened legs and arms. In all burials, the individuals were oriented with the head to the north. The burial inventory is characterized by uniformity and includes

ceramic vessels and spindle whorls, a mirror, as well as elements of costume (earrings, an amulet, buckles) [Onggaruly et al. 2024].

During the 2024 field season, archaeological work was continued within the third group of kurgans, where three more kurgans (Nos. 5–7) were excavated (Fig. 1)*. (*Illustrations prepared by the authors.) The present study also presents the results of an archaeozoological analysis of the material obtained during the excavation of kurgan No. 5.

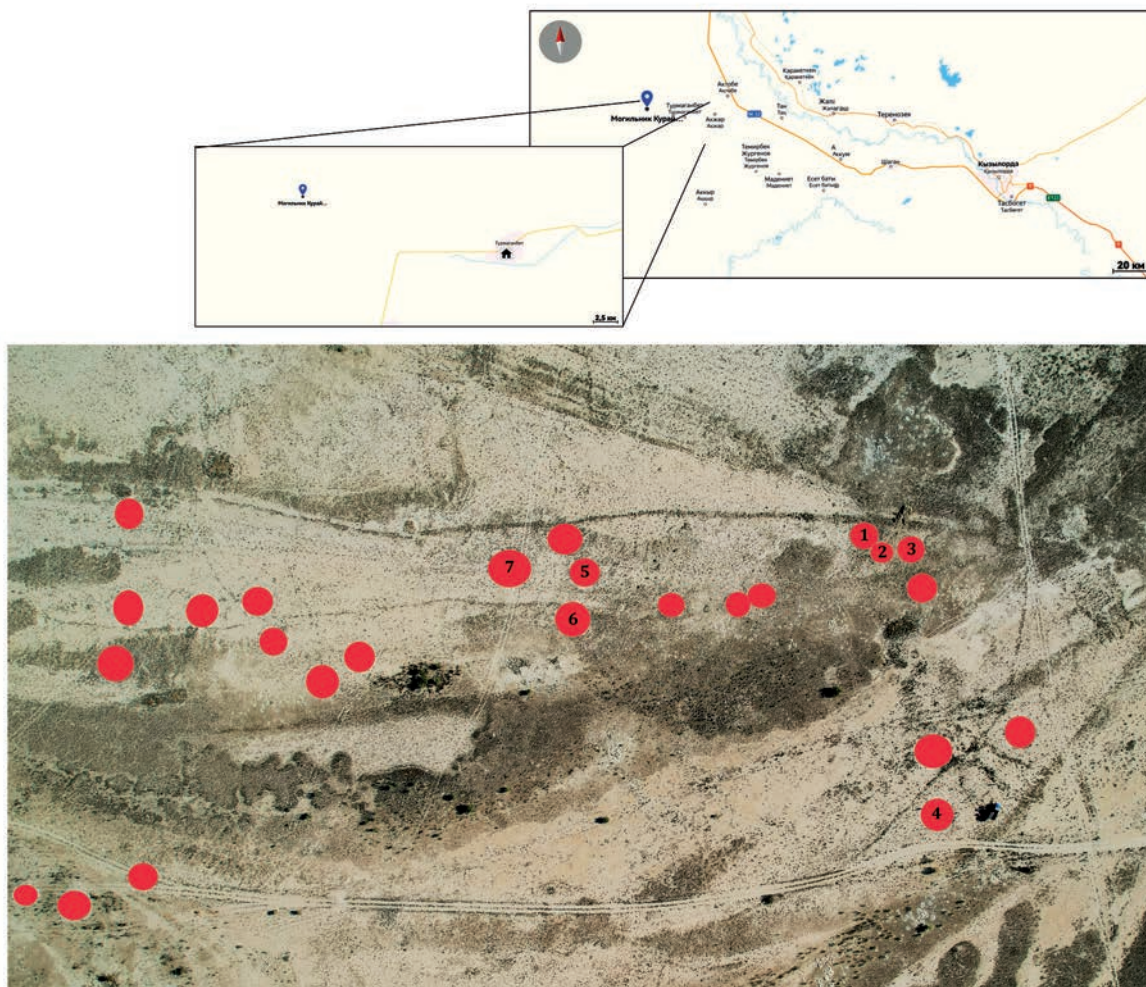


Рис. 1. Карта расположения могильника Курайлы-асар
1-сур. Құрайлы-асар қорымының орналасу картасы
Fig. 1. Kuraily-asar burial ground location map

Material and Methods

Research Methodology

In the study of the archaeological record, traditional methods combining fieldwork and laboratory analyses were applied. The Kuraily-asar necropolis was selected because, despite large-scale investigations conducted by the Khorezm Archaeological and Ethnographic Expedition in the Jetiasar area, no archaeological excavations had previously been carried out at this site.

The kurgan mounds were excavated manually using trenching. Excavated areas were cleaned by air blowing with a specialized tool. A benchmark was established on the elevated part of the necropolis. The positions of the skeletons within the burial pits were documented following the method developed by O.V. Zaitceva and D.I. Razhev [Zaitceva, Razhev 2007: 84–89].

For the purpose of morphological analysis of the osteological material, skeletal elements of a single sheep individual were examined using the reference collection of the Zooarchaeology Laboratory of the Margulan Institute of Archaeology. The age of the animal was determined based on the eruption pattern of the cheek teeth and the condition of the epiphyses [Silver 1969]. Species identification of the elements was carried out using methods of morphological diagnosis [Zeder, Lapham 2010; Zeder, Pilaar 2010]. Osteometric measurements were taken following the methodology of A. Driesch [Driesch 1976], and the estimated withers height was calculated using coefficients for sheep metapodials [Tsalkin 1961]. All bone remains exhibit traces of weathering (stages 1–2 according to [Behrensmeyer 1978]).

Description of the Material

Kurgan No. 5 (diameter 9 m, height 0.10 m) is located 100 m west of kurgans Nos. 1–3, excavated in 2023 [Onggaruly et al. 2024]. After removal of the upper layer, the outlines of a ditch and a burial pit situated at the center of the kurgan were revealed. The ditch has a diameter of 10 m and features a causeway (entrance) on the eastern side (Fig. 2).

The burial pit (b.p.), measuring 2.1×1.2 m, is sub-rectangular in plan (depth –1.76 m from the benchmark) and oriented along the west–east axis; an intrusive looters' pit measuring 0.90×0.70 m adjoins it from the southern side. In the basal part of the burial pit, scattered bones of an adult human skeleton were recorded. To the east of the human skull, the skull and forelimb bones of a sheep were found. In the north-eastern corner of the burial pit, a niche measuring 0.50×0.80 m was recorded; it was found to be empty.

Kurgan No. 6 (diameter 7.8 m) is located to the south of kurgan No. 5 (Fig. 3). The kurgan mound, 10–15 cm high, consisted of yellow clay. Beneath the mound, the outlines of a ditch with a causeway (entrance) on the northern side were identified.

At the center of the kurgan is a burial pit with a depth of –1.39 m, oriented along the north–south axis. A side niche (podboy), smaller in size than the main pit, was constructed beneath the western wall of the burial pit. However, no clear structural separation between the niche and the main burial pit was recorded. At the same time, the floor of the niche is located 18 cm lower than the floor level of the main burial pit. During the excavation of the niche, a skeleton was uncovered; in the pelvic area, the vertebral column of a sheep and an iron buckle were found. Most likely, the buckle fell into the pelvic area after the decay of the belt.

The skeleton is positioned on the dorsal surface, i. e., supine in an extended position, with the head oriented to the north. The skull rests on the occipital bone and is situated higher than the postcranial part of the skeleton. It is possible that the skull was intentionally placed in this position. The mandible was disarticulated, with the lower jaw open. The vertebral column forms an almost straight line, the long axis of which is parallel to the long axis of the pit. The rib cage is “closed,” meaning that the sternal ends of the



Рис. 2. Могильник Құрайлы-асар, курган № 5
2-сур. Құрайлы-асар қорымы, № 5 оба
Fig. 2. Kuraily-asar burial ground, kurgan no. 5



Рис. 3. Могильник Курайлы-асар, курган № 6
3-сур. Құрайлы-асар қорымы, № 6 оба
Fig. 3. Kuraily-asar burial ground, kurgan No. 6

ribs from both sides are brought together and are in a position close to the anatomical one. The bones of the arms and legs are arranged in an extended position.

Kurgan No. 7 is located to the west of kurgan No. 5 (Fig. 4). It has an irregularly rounded shape measuring 15.2×14 m. The kurgan mound, 10–15 cm high, like the previously described kurgans, consists of yellow clay. The kurgan is encircled by a ditch and has two narrow causeways on the northern side. After cleaning the upper layer, the outline of the burial pit was not identified; therefore, a trench was laid in the central part of the kurgan. Subsequently, a rectangular burial pit with rounded corners, oriented along the west–east axis, was revealed in the center of the kurgan. However, no human remains or other finds were discovered within the pit. It is possible that this kurgan was prepared but never used.

Characteristics of Animal Bone Remains

As part of the burial assemblage of kurgan No. 5, animal bone remains were identified and analyzed. They belong to small ruminants and are represented by a skull and postcranial elements of the distal parts of the limbs (Fig. 5).

As a result of the morphological analysis of the bone remains, the following elements were identified: a fragmented skull with partially preserved upper jaws, both mandibles, the atlas, two central tarsal bones, metacarpal and metatarsal bones, as well as a series of phalanges (I–III).

The skull (cranium) is preserved fragmentarily; the alveolar rows of the upper jaw (*arcus alveolaris maxillae*) are partially intact. Individual dental alveoli of deciduous premolars (*alveoli premolarum deciduorum* Dp1–Dp3) and the first permanent molars (*alveoli molarum permanentium* M1) are present. The body of the maxilla (*corpus maxillae*) and the alveolar processes (*processus alveolaris maxillae*) are preserved fragmentarily, whereas the processes and tuberosities (*processus nasalis*, *processus frontalis*) are destroyed. The dentition was at a stage of morphogenesis: the first permanent molar (M1) had fully erupted, while the second molar (M2) was at the stage of calcification and crown formation. The cranial sutures (*suturæ craniales*) remained unfused; the jugular process (*processus jugularis*) and the occipital condyles (*condyli occipitales*) exhibited a spongy structure (*substantia spongiosa*). On both halves of the mandible, deciduous premolars Dp1–Dp3 were recorded, as well as an erupted first permanent molar (m1). The second molar (m2) was at the stage of eruption and partial crown calcification. The articular surfaces of the condylar processes retained morphological integrity, and no pathological changes were identified.

The atlas is partially preserved: the lateral wings and the dorsal and ventral tubercles are destroyed, and the articular surfaces of the atlas are deformed as a result of soil pressure.

Among the postcranial skeletal elements, two central tarsal bones (*ossa tarsalia centralia*), metacarpal bones (*ossa metacarpi*), metatarsal bones (*ossa metatarsi*), as well as eight first, two second, and one third phalanges (*phalanges digitorum*) were identified. The periosteal tissue of most bones is destroyed; the epiphyses are either not formed or preserved fragmentarily. Epiphyseal fusion was absent, which corresponds to an animal age of approximately one year. Osteometric measurements carried out according to the method of Driesch [Driesch 1976] were largely conditional due to the poor preservation of the material (Table 1).

Osteological Reconstruction

For the funerary rite, the skull, mandibles, the atlas (first cervical vertebra), and the metapodials with phalanges of the animal were used. The age of the animal was determined following Silver's method [Silver 1969], based on the presence of the m1 tooth. Considering that sheep in the Syr Darya valley lamb between February and April, it is assumed that the burial ritual was performed in late spring. Osteometric

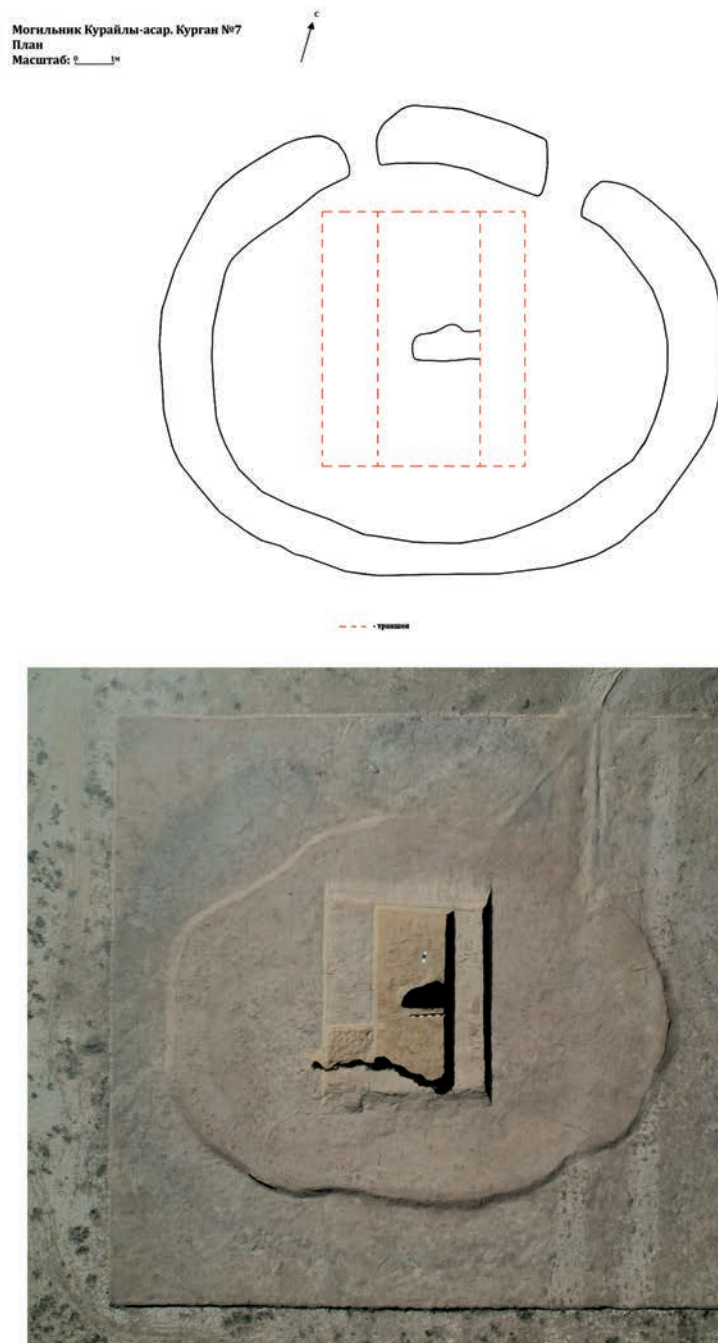


Рис. 4. Могильник Курайлы-асар, курган № 7
4-сур. Құрайлы-асар қорымы, № 7 оба
Fig. 4. Kuraily-asar burial ground, kurgan No. 7



Рис. 5. Могильник Курайлы-асар, курган № 5. Фрагменты черепа и посткраниальные элементы скелета овцы
5-сур. Құрайлы-асар қорымы, № 5 оба. Қой қаңқасының бас сүйегінің бөлшектері
мен басқа сүйектерінің элементтері

Fig. 5. Kuraily-asar burial ground, kurgan No. 5. Fragments of the skull and postcranial elements
of the sheep skeleton

analysis of the metacarpal and metatarsal bones indicate a withers height of 63–64 cm. Comparison with the materials from kurgan No. 4 excavated in 2023 [Onggaruly et al. 2024] revealed complete correspondence in the set of skeletal elements used in the ritual: the skull, mandibles, atlas, and the fore and hind limbs with phalanges. The first cervical vertebra was left articulated with the skull, which likely had a specific ritual significance. In both kurgans, particular elements of the sheep skeleton were deliberately selected for sacrificial purposes.

The differences concern the age of the animals and the presence of additional elements. In kurgan No. 4, the sacrificial sheep was 3.5 years old; the first cervical vertebra of a camel was also found, and pathological changes were recorded on the metapodials and phalanges. In contrast, the sheep bones from kurgan No. 5 show no pathological alterations, and their damage is related to soil erosion. Thus, the materials from kurgan No. 5 make it possible to reconstruct the ritual as the deliberate sacrifice of a young sheep with the preservation of specific skeletal elements, analogous to the practice documented in the neighboring kurgan.

Table 1 – Morphometric dimensions of cranial and postcranial elements of the sheep skeleton
1-кесте – Қой қаңқасының бас сүйек және басқа сүйектері элементтерінің морфометриялық өлшемдері
Таблица 1 – Морфометрические размеры краниальных и посткраниальных элементов скелета овцы

Trait	After – Driesch 1976	Measurements, mm	
Maxilla (Upper Jaw)			
Length of pm1–m1 (left)	–	44.3	
Length of pm1–m1 (right)	–	46.0	
Mandibula (Lower Jaw)			
Crown length of Dp3 (right)	–	19.5	
Length of alveolar row (right)	7	69.5	
Crown length of Dp3 (left)	–	20.1	
Length of alveolar row (left)	7	66.9	
Atlas			
Greatest breadth	GB	58.0	
Breadth of the facies articularis caudalis	BFcd	48.7	
Length from cranial articular margin to caudal articular margin	GLF	32.0	
Greatest length	GL	45.0	
Os tarsi centrale			
Greatest length	GB	13.0	
Metacarpus			
Breadth of proximal end	Bp	26*	24.3
Smallest breadth of shaft	SD	13	12.1
Breadth of distal end	BD	20.9	–
Greatest length	GL	131	130.1

End of table 1
1-кестенің соңы
Окончание таблицы 1

Metatarsus			
Breadth of proximal end	Bp	21.9	22.1
Smallest breadth of shaft	SD	11.8	12
Breadth of distal end	BD	–	–
Greatest length	GL	116**	119
Phalanx 1 anterior/sinister			
Smallest breadth of shaft	SD	10	10.1
Breadth of distal end	Bd	12.5	12
Greatest length	GL	33	34
Phalanx 1 anterior/dexter			
Smallest breadth of shaft	SD	11	10.5
Breadth of distal end	BD	12	11
Greatest length	GL	32	32
Phalanx posterior/sinister			
Smallest breadth of shaft	SD	9.1	9.2
Breadth of distal end	BD	11	9.8
Greatest length	GL	32	31.5
Phalanx 1 posterior/dexter			
Smallest breadth of shaft	SD	10.1	9.9
Breadth of distal end	BD	12	10.5
Greatest length	GL	31	31.5
Phalanx 2 anterior/dexter			
Smallest breadth of shaft	SD	7.1	7.5
Breadth of distal end	BD	8.9	8.6
Greatest length	GL	18.2	19
Phalanx 3			
Smallest breadth of sole	MBS	6.0	
Greatest length of sole	DLS	24.0	
Length of dorsal surface	Ld	19.0	
Note: * – right; ** – measurements are given conditionally, as the epiphyses are unfused.			

Results and Conclusions

The results of the archaeological excavations conducted in 2024 in the area of the third group of the Kuraily-asar necropolis made it possible to expand our understanding of the funerary practices of the population of the Jetiasar culture in the Eastern Aral Sea region. The investigated kurgans Nos. 5–7 demonstrate the stability of architectural traditions and ritual practices previously identified in earlier-

studied burials of this necropolis. The documentation of both simple burial pits and burials with side niches indicates variability in constructive solutions that does not contradict the overall canonical model of the rite. Analysis of the position of the skeletons, their orientation, and the associated grave goods, including elements of sacrifice, allows us to assert the presence of stable ideological and ritual concepts characteristic of the Jetiasar culture kurgans of the 2nd–4th centuries AD.

The osteological data indicate a selective choice of specific anatomical parts of animals for the performance of the funerary rite. In contrast to the majority of Jetiasar burials, where, according to L.M. Levina [1996: 120], hip portions of sheep predominated (98%), kurgans Nos. 4 and 5 of the Kuraily-asar burial ground yielded an identical set of bones: the skull, atlas, and distal parts of the limbs. This selection of elements allows the reconstruction of a ritual involving the placement of an animal hide with the head and hooves left attached, which finds parallels in the horse burials described by L.M. Levina. The similarity in the composition of skeletal remains in both investigated structures indicates the reproduction of a specific ritual algorithm associated with the sacrifice of a symbolic “whole” animal.

The identification of an incomplete kurgan (No. 7), in which no buried individual was present despite the existence of a prepared structure, is of interest for interpretation as a possible example of a symbolic or unfinished burial. Taken together, the materials obtained deepen our understanding of the social and ritual aspects of the Jetiasar culture and provide a basis for further comparative studies of funerary sites in the region.

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- Zh. Sultanzhanov:** conducting research, writing and editing a manuscript, visualization, and data administration.
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