







# Journal of Ancient History and Archeology



















## **CONTENTS**

## STUDIES

ANCIENT HISTORY	DIGITAL AND VIRTUAL
Diego PIAY-AUGUSTO,	ARCHAEOLOGY
Patricia A. ARGÜELLES-ÁLVAREZ	Jordi PÉREZ GONZÁLEZ, Oriol
THE OWNERS OF VILLAS IN THE TERRITORY OF ROMAN	MORILLAS SAMANIEGO, Manel GARCÍA
ASTURIAS (SPAIN): ISSUES OF IDENTITY	SÁNCHEZ, Víctor REVILLA CALVO
Lucretiu MIHAILESCU-BÎRLIBA, Ana HONCU THE MOBILITY OF MILITARY RECRUITS FROM RURAL MOESIA	GREEK AMPHORIC EPIGRAPHY IN ROMAN OPEN DATA
INFERIOR: DESTINATIONS, ROUTES, ESTIMATED DISTANCES9	NUMISMATICS
ADCHAFOLOGY	Metodi MANOV
ARCHAEOLOGY	THE SILVER AND GOLD COINS OF THE ALEXANDER TYPE IN
Mohammad Hossein REZAEI  ANALYSIS OF BRONZE AND IRON AGES (YAZ CULTURE)	THE WEST PONTIC AREA IN THE 3 <sup>RD</sup> CENTURY BC – "PEACE-MONEY", "PROTECTION MONEY" OR SOMETHING ELSE
SETTLEMENTS IN GOLBAHAR DISTRICT OF CHENARAN	Cristian GĂZDAC, Marius BARBU, Andrei GONCIAR
COUNTY: A LANDSCAPE ARCHAEOLOGY APPROACH	COINS IN ARCHAEOLOGICAL CONTEXT (V). THE VILLA
Selin GÜR	RUSTICA FROM RAPOLTU MARE - "LA VIE" (HUNEDOARA
A THEORETICAL APPROACH TO LINGUISTIC POWER	COUNTY, ROMANIA)
	Dmytro YANOV
DAVUT YİĞİTPAŞA, AYNUR YAĞCI	DIGITIZATION OF ROMAN COIN FINDS FROM THE SOUTH-
LIFE ACTIVITIES IN THE REGION IN THE NEOLITHIC, CHALCOLITHIC, AND BRONZE AGES IN THE LIGHT OF THE	WESTERN UKRAINE: AFE-UKR DATABASE
STONE TOOLS FOUND IN THE ORDU AND SINOP MUSEUM41	IN MEMORIAM
Sergey YARYGIN, Ayşe AVLI, Sergazy SAKENOV	
KARKARALY KORGANTAS - ANCIENT CULT OBJECT IN	Csaba SZABÓ
CENTRAL KAZAKHSTAN <b>58</b>	IN MEMORIAM ROGER L. BECK (1937–2023). HIS LIFE AND
	IMPACT ON THE STUDY OF ROMAN MITHRAS. 145
Mohsen Heydari DASTENAEI, Ebrahim Roustaei FARSI	
INVESTIGATION AND STUDY OF THE FINDINGS FROM THE RESCUE EXCAVATION IN SARI GOL CRYPT AND GRAVEYARD.	REVIEWS
NORTH KHORASAN PROVINCE	
NORTH MICHAEL TROVINGE	Csaba SZABÓ
Sorin COCIŞ, Szilamér-Péter PANCZEL, Katalin SIDÓ	REVIEW: ZSUZSANNA TURCSÁN-TÓTH, ALAPVETÉS AZ ARTEMIS EPHESIA-SZOBROK IKONOGRÁFIAI ELEMZÉSÉHEZ
THE TYPOLOGY AND PRODUCTION OF BROOCHES	(NOTES ON THE ICONOGRAPHIC ANALYSIS OF THE ARTEMIS
ON THE EASTERN LIMES OF DACIA SUPERIOR ON THE	EPHESIA STATUES), MARTIN OPITZ: BUDAPEST, 2023, P. 368.
BRÂNCOVENEȘTI-CĂLUGĂRENI SECTOR	ISBN: 978-615-6388-07-0
Marius-Mihai CIUTĂ, Florian BOIȘTEANU	
A FUNERARY MONUMENT FROM COLONIA AURELIA	
APULENSIS, RECOVERED BY AN UNESPECTED PATH <b>101</b>	

DOI: http://dx.doi.org/10.14795/j.v10i4 ISSN 2360 266x ISSN-L 2360 266x

Design & layout: Francisc Baja



Editura Mega | www.edituramega.ro e-mail: mega@edituramega.ro

## **Sergey YARYGIN**

Branch of Margulan Archaeology Institute in Astana sergeyyarygin80@gmail.com

## **Ayşe AVLI**

Ataturk University, Erzurum ayseavli8@gmail.com

## **Sergazy SAKENOV**

Branch of Margulan Archaeology Institute in Astana sergazi\_82@mail.ru

> DOI: 10.14795/j.v11i1.960 ISSN 2360 – 266X ISSN-L 2360 – 266X

# KARKARALY KORGANTAS – ANCIENT CULT OBJECT IN CENTRAL KAZAKHSTAN

**Abstract:** Karkaraly korgantas is a large archaeological site in Central Kazakhstan, known in sources as the "Kalmyk Wall." Based on new research conducted at the site and in its surroundings, an interpretation of the monument as a ritual and cult one is given. Karkaraly korgantas includes various landscape elements: rocks, passages in rocks, flat areas on the tops of rocks, small outcrops, as well as man-made structures: stone walls and alleys. There are five main elements in the structure of the monument—two long stone walls running along the top of the ridge, a central part with a stele, a natural platform in the southern part of the complex, and a rectangular structure to the west of the central part. The study of similar types of cult objects in adjacent territories made it possible to attribute this monument to the Late Bronze Age. According to researchers, the monument is associated with the cult activities of ancient communities of Karkaraly and the observation of the sunrise on the day of the spring equinox.

**Keywords:** ancient sanctuary, religious object, organization of space, stone wall, stone stele.

#### INTRODUCTION

The inland territories of Central Asia, remote from the ancient centers of civilization of the Far East and Western Asia, seemed for a long time underdeveloped in cultural and technological terms. However, the work of archaeologists in the mid–20th – early 21st centuries shows that already from the Chalcolithic Age, this region was actively included in the Eurasian "world-system" of commodity exchange in the latitudinal and meridional directions.¹ Its population was a highly dynamic and developed community. The key resource that was exported starting from the Late Bronze Age was non-ferrous metals, including tin.² Control over copper and tin deposits allowed the Central Kazakhstan tribes of the 2nd millennium BC to have strongholds for wide expansion from the Ural Mountains and the Volga region to Sayano-Altai and Xinjiang and from Western Siberia up to the Oxus civilization.³

Over time, these communities, having survived the crisis of the end of the Bronze Age, influenced the formation of the early nomadic cultures of steppe Eurasia. In central Kazakhstan, the core of one of the largest Early Saka communities was formed, represented by the Tasmolin archaeological culture, as

<sup>&</sup>lt;sup>1</sup> PEREGRINE 1996; HALL/KARDULIAS/CHASE-DUNN 2011.

<sup>&</sup>lt;sup>2</sup> KUSHTAN 2012.

<sup>3</sup> TKACHEVA/TKACHEV 2008.

evidenced by studies of the Tasmola, Nurken–2, and Taldy–2 burial grounds.  $^4$ 

Modern data show that the population of Central Kazakhstan, within the designated chronological framework, had a highly developed and unique culture that combined cattle breeding with metallurgy. Mapping of the monuments shows that the region was very densely populated; a large number of settlements, burial grounds, and mines have been identified. Thus, at the present stage of development of archaeology, issues related to economic activity are well represented, and the features of the funeral rite are revealed. In recent years, new data has emerged on the widespread distribution of religious monuments in Central Kazakhstan—stone steles and deer stones.<sup>5</sup>

This article presents data on a new type of archaeological site, which is a large-scale stone structure on a dominant hill. Some parallels to the architecture and individual elements make it possible to attribute the object to the period of the Late Bronze Age and associate it with the activities of the populations that left monuments of the Begazy-Dandybay culture of the 2nd millennium BC.

In the field season of 2023, researchers from the branch of the Institute of Archaeology named after A.Kh. Margulan conducted a survey of the complex monument "Karkaraly name (Fig. 1). The name "Karkaraly korgantas" was proposed by a famous specialist in the field of ancient history of the region, archaeologist A.Z. Beysenov.

GNSS (global navigation satellite systems) along with the Leica GS16 (base), GS18 (rover) geodetic class receivers and DJI Phantom 4 RTK quadcopter were employed to survey the monument in 2023. The data was subsequently processed using Agisoft Photoscan and ArcGIS Desktop software.

The Kalmyk wall, also known as Korgantas, is listed in the registry of subsoil areas with special ecological, scientific, and cultural significance, designated as protected natural areas of republican importance. In a number of directories, it is marked along the entire length of the rocky section crossing the valley, but the survey made it possible to correct this information.

The monument occupies only the part that overlooks a wide valley with a stream; this is the eastern rocky and steep edge of the upper terrace of a wide treeless valley extending into the Karkaraly mountain range from the east. The length of the valley section, limited by the structure of the monument elongated along the north-south line, is about 2.7 km. The width of the valley at the entrance to the massif is about 2 km. The height difference between the upper and lower levels of the terrace is 34 m. The object is a heavily

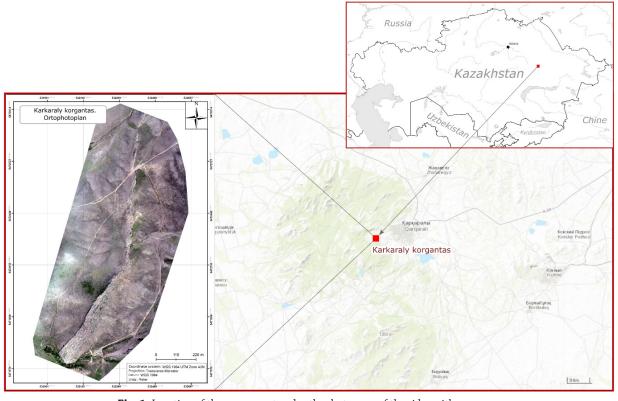


Fig. 1. Location of the monument and orthophoto map of the ridge with masonry.

korgantas" (Kalmyk wall). The monument is located in the Karkaraly district of the Karaganda region of the Republic of Kazakhstan, on the western edge of the Karkaraly mountains and 1 km to the south-east of the village with the same

deteriorated structure, located at the very edge of the top of the ridge. Basically, this is a continuous stone wall, which is interrupted only by high rock outcrops on the surface of the ridge; the total length of the monument is approximately 950 m.

The Karkaraly Mountains are part of the Karkaraly-Kent Mountain cluster, which represents separate low-mountain

<sup>&</sup>lt;sup>4</sup> BEYSENOV 2018.

<sup>&</sup>lt;sup>5</sup> BEYSENOV 2016; KASENOVA 2020.

massifs. The relative elevations of landforms over the adjacent plains are 100–150 m, and in the central watershed, the peaks rise 400–500 m above the valleys. They consist of a mountain range forming a network of rocky ridges and peaks, separated from each other by deep gorges, intermountain valleys and sloping plains. On the territory of the massif itself, the Tar-Kezen and Akpet, Buguly and Air ridges diverge at an angle; the Zhiren-Sakal (1403 m), Shankoz (1360 m), Buguly (1323 m), Koktobe (1,254 m) and a number of other hills less significant in height rise in separate peaks. The mountains have a noticeable landscape asymmetry: their northern slopes are steeper and noticeably richer in springs and vegetation than the southern and western ones

The selection of construction materials for the object is determined by the geological structure of the Karkaraly massif and rocky outcrops available for mining. Porphyritic biotite granite, which emerges together with massifs composed of alaskite granites in relief depressions and in the form of outliers, has become the most convenient for mining and processing. These materials are characterized by an unevengrained, medium and fine-grained groundmass with numerous small xenolith inclusions, displaying a grayish-white and yellowish-gray color. Additionally, various other types of granite found in the region were also utilized for construction purposes.<sup>7</sup>

#### RESEARCH RESULTS

As part of the Karkaraly korgantas complex, five main elements connected by one plan can be distinguished: 1) the northern line of the masonry; 2) the center of the complex with an installed stele; 3) the southern line of masonry; 4) the natural rock platform; 5) the square construction (Fig. 2).

The main structural elements that form the architecture and determine the appearance of the monument are the northern and southern lines of the masonry. Their identification as independent architectural units is associated with the features of the terrain. The ridge is naturally divided into two sections by a rocky platform, from under which a natural source of water flows. The northern wing is oriented almost strictly along the north-south line, and the southern wing joins it at an angle of about 20° and is oriented along the southwest-northeast line. The length of the northern wing is about 420 m, the southern wing is 520 m, and the length of the platform is about 14 m. The width of the paired masonry, where this can be visually recorded, varies from 0.5 to 2 m in different areas.

The northern edge of the long northern stone wall has the form of a flattened path with a recorded width of 1.7 m and height of 0.2 m. It is docked at the southern foot of the rock ridge, which goes to the northeast and is a continuation of the main natural ridge. A modern field road passes through the masonry in this area, going from the village of Karkaraly to the inner part of the mountain range. The southern edge of the wall ends at the central rocky platform and is closely

connected to the vertical stele by a string of slabs tightly installed in one line.

The northern edge of the southern long masonry begins on a steep slope immediately after the central platform with the stele and runs along the eastern edge of the widening platform of the ridge. The southern edge culminates in a sharp descent down the slope, featuring a design of vertically installed wide and narrow granite slabs.

Five types of stones were identified in the stone rows: 1) blocks with a pointed top; 2) blocks with a flat or rounded top; 3) long and narrow blocks; 4) wide rectangular slabs; 5) stones of natural shapes (Fig. 3). Some blocks showed traces of drilling. The diameter of the hole at the mouth is 6 cm, the diameter on the inside is 3.5 cm, and the depth is 5 cm. The diameter of the inlet hole from the instrument is 0.5–2 cm.

Three architectural methods for constructing the wall have been recorded. The first is in the form of a double row of vertically installed granite slabs and stones, the internal space between which is filled with soil and rubble, in rare cases with large torn stones. The second type is stonework about 0.5 m wide, made of parallel flat slabs tightly fitted to each other. The third option is represented by rows of slabs and boulders installed vertically in one line. However, it is likely that the second parallel line was completely destroyed in some areas over time.

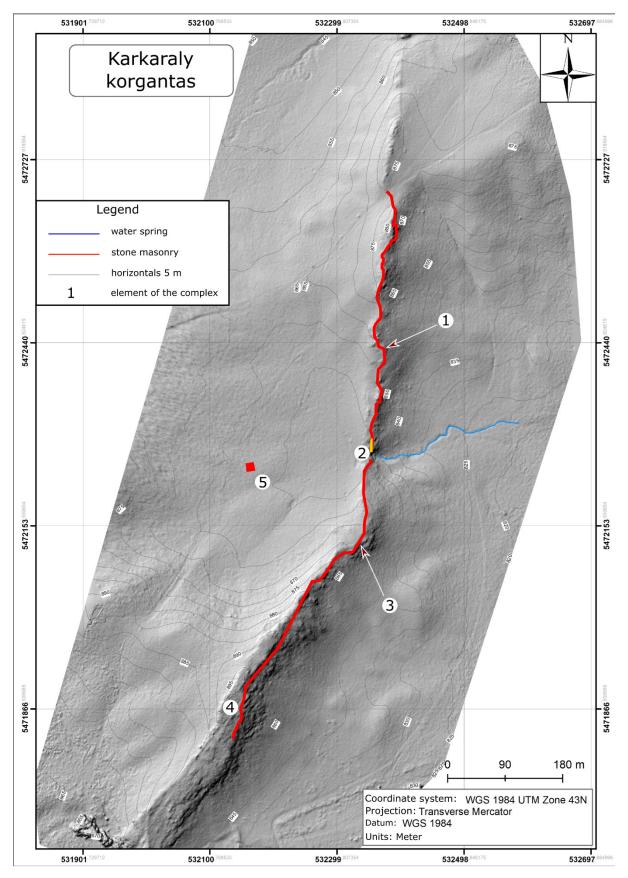
Parallel rows of masonry are arranged according to the standard architectural design for the monument. The eastern string of stones is larger than the western one. Some of the stones from the eastern row subsequently fell out and moved lower along the slope of the ridge.

The stone walls do not form a continuous chain; they are interrupted by small rocky outcrops that are closely integrated with them. These small mountain outcrops were a natural component of the overall structure. In one instance, at the center of the northern wing of the complex, there is evidence of the ancient builders' deliberation on incorporating such natural features in the complex. In this section the masonry, following the relief, passes in an arc, going around a large pile of rocks with a leveled top, descends somewhat lower and joins its southern edge. At the same time, the next section has a different architectural appearance in the form of an alley of high and narrow slabs. It begins with a tall stone, probably a stele. The alley passes through a ravine and adjoins the next natural outcrop, on which large boulders are installed in natural openings, which are covered with soil at the base and reinforced with small stones. Similar alternations of natural stone outcrops and artificial pavements occur on the northern wing of the complex about five times. On the southern side of the last large mountain outlier, in the northern wing of the monument, stones of the largest sizes are installed—up to 1 m high and up to 0.2 m thick. In the eastern row, there are both flat wide slabs, square blocks, and large blocks with natural shapes. The western row is practically not visible—the stones of its construction are mixed with the stones of the internal filling of the layout that have spread across the surface.

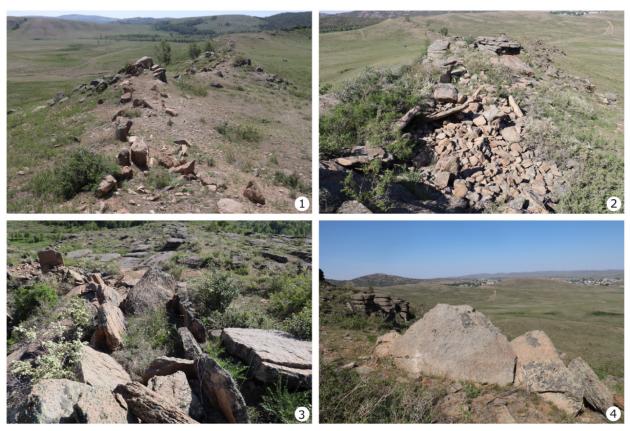
In another case, it was recorded how the layout strictly followed the relief. After the large ravine noted in the previous paragraph and a large outcrop, the ridge sharply turns

<sup>&</sup>lt;sup>6</sup> KARKARALY NATIONAL NATURE PARK 2023.

<sup>&</sup>lt;sup>7</sup> POTAP'YEV/MALIKOVA 1974, 56–57.



**Fig. 2.** Plan of the Karkaraly korgantas complex: 1 – northern line of masonry; 2 – center of the complex with an installed stele; 3 – southern line of masonry; 4 – natural rocky platform; 5 – square construction.



**Fig. 3.** Types of arrangement of stone masonry: 1 – two parallel rows with soil backfill inside; 2 – layout with high side slabs and stone filling inside; 3 – narrow box-like structures made of standardized slabs; 4 – a string of large wide slabs.

to the east and after 15 m again "heads" to the south, forming an angle of about 90°. The structure in this area is made using long granite slabs, the width between two parallel rows reaching 2 m. The corner of the structure is formed using wide, flat slabs, which, over time, fell inward.

In one case, a technique with steps was used, which are made of smooth rectangular blocks and lead to the top of a wide rocky platform in the southern section of the complex. In the area where they meet the rock, granite rock was cut down to create a narrow opening.

The size of the natural platform at the wide southern end of the ridge is about  $25 \times 175$  m. Along its eastern edge, artificial masonry is recorded in just a few places. Only 390 m to the south of the stele of the central section does the layout take on a fairly expressive appearance. The section, which is about 30 m long, begins at this mark to zigzag down. In a number of cases, box-like structures approximately 0.5 m wide were identified. In the last, lowest section, wide flat slabs were used in the construction.

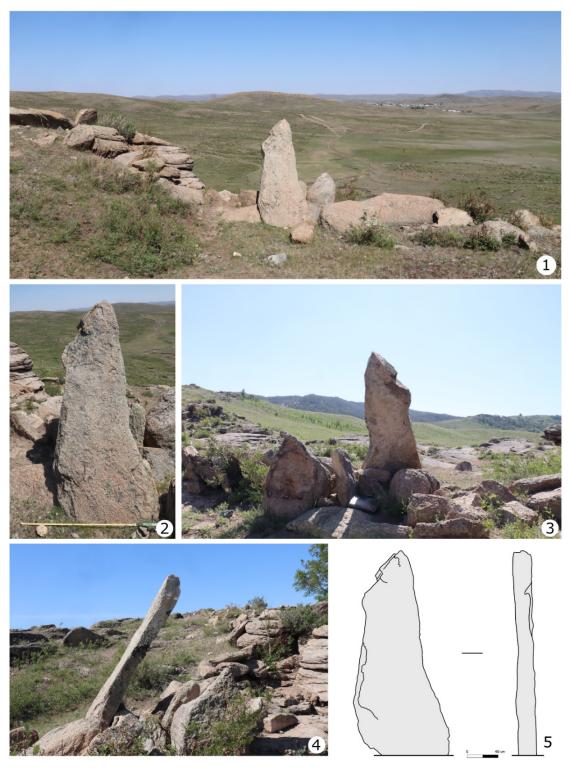
The northern and southern wings of the complex are separated by a natural platform measuring about  $14\times14$  m. From under the stones, a seasonal spring emerges onto the platform, which crosses it and falls from a rocky cliff. Apparently, during the period of snow melting, it is intensified by the watercourse flowing down from the northern slope of the ridge. Further, 900 m to the east and down the slope, it connects with the Suykbulak stream. At the foot of the cliff, there is a shallow grotto in the rock.

On the northeastern side of the seasonal spring, on the edge of the rocky platform, there is a stone stele (Fig. 4). It

is made of stone of the same type as the main part of the layout. The stele has a widened base and a sharp beveled top, which form weak anthropomorphic features. The stele is oriented with its beveled side along the north-south line. The height from the modern surface is about 2.85 m, the width at the base is 0.9 m, and the thickness is 0.5 m. The upper part of the stele is highlighted; its height is 0.8 m, width is 0.5 m, and thickness is 0.2 m. Exactly in the center of the beveled part is an ancient chip, giving it a stepped appearance. From the eastern side of the stele (at its base), it is clear that it was reinforced with slabs and stones, which are connected to the southern end of the layout of the northern wing of the complex. From the stele to the west, there is a short chain of three stones with a total length of 3.5 m.

172 m from the stone stele to the west, the remains of a stone-earth square structure were discovered, probably part of the same architectural ensemble as the complex. The dimensions of the object are  $15.5 \times 15.5$  m. A structure of  $6 \times 6$  m is fixed inside. The structure is oriented with its eastern wall facing the stone stele (Fig. 5).

As a result of the inspection of the masonry itself and the area around the monument, no lifting material/surface finding was discovered. During the work, a number of depressions and trenches attracted attention. The main part stretches on the western side of the stone displays. Along the northern wing of the complex, they are recorded almost along its entire length—0.5 m from the stone lining and along the slope of the ridge. The maximum dimensions are  $1 \times 9$  m, depth 0.6 m. They are probably associated with the construction of the layouts and resulted from the uprooting



**Fig. 4.** Stone stele in the center of the complex: 1 – general view with the stele facing east; 2 – western side of the stele; 3 – eastern side of the stele; 4 – profile view from the north; 5 – drawing of the stele.

of granite stones and slabs to create paired rows, as well as from the extraction of soil in order to fill the internal space between the rows.

Of interest is a group of eight depressions located in an arc from the central platform to the foot of the natural ridge of the southern wing of the complex. The diameters of the depressions range from 5 to 8 m, and the depth is up to  $0.5\ m$ . The radius of the arc formed by them is about 20 m.

No lifting material was identified in them or near them. The depressions could be associated with the extraction of raw materials for construction. However, small depressions are found in the immediate vicinity and along the stone lining of the southern wing, so another interpretation is not excluded.

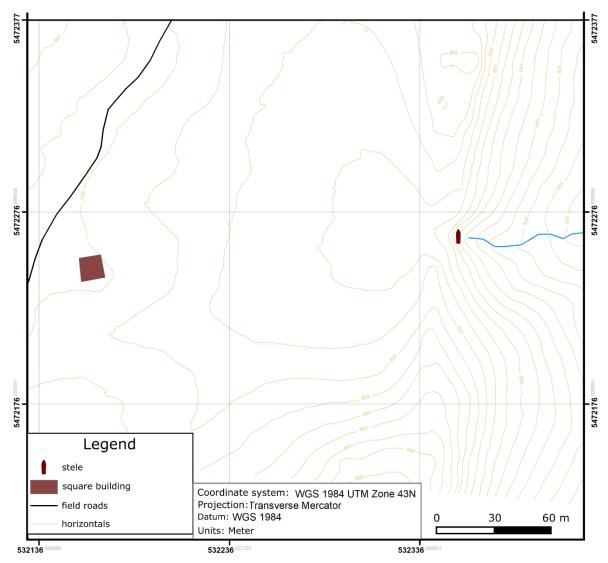


Fig. 5. Topographic plan of the site with a square structure and a stone stele.

#### THE DISCUSSION OF THE RESULTS

Judging by the research carried out, Karkaraly korgantas is an extraordinary monument, the identity of which can be more accurately determined after large-scale excavations. At the same time, preliminary observations allow us to speak about its chronology and probable purpose.

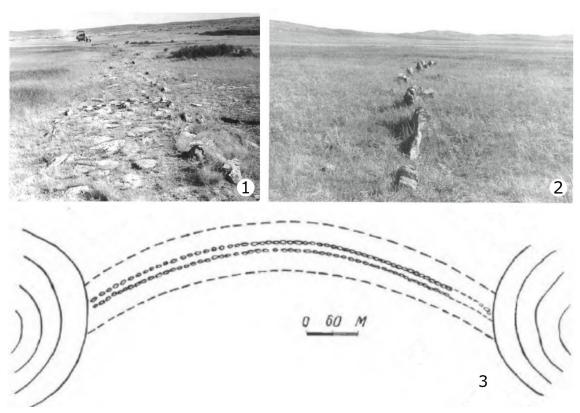
The archaeological context of the monument is represented by objects that date back to the Bronze Age and Iron Age. On the territory of the study region, three settlements of the Late Bronze Age are known: Karkaraly–1, Karkaraly–2, Suykbulak (Karkaraly–3), as well as Bronze Age fences in the Mukhtarovo tract, a Bronze Age burial ground near the Tasbulak stream and an Iron Age burial ground near the settlement of Suykbulak. In the nearby mountains of Kent, one of the centers of the Begazy-Dandybay culture is located; twelve settlements and ten burial grounds have been identified along the banks of the Kyzylkenysh River, including Kent, the administrative and political center of the Late Bronze Age population.

The most representative monuments of the Late Bronze Age belong to the Sargarin-Alekseyev or Begazy-Dandybay cultures. Analysis of archaeological objects of these cultures on the territory of Central Kazakhstan allowed A.Kh. Margulan to identify several main types of monuments: 1) settlements and sites with remains of residential constructions and outbuildings; 2) mines; 3) stone fences and monumental rock mausoleums; 4) alleys of menhirs and a single stele; 5) remains of hydraulic engineering structures.<sup>8</sup>

Ancient dams are of interest due to the peculiarities of layout and architecture. The first and most complete summary of them was made by A.Kh. Margulan. According to the researcher, the remains of dams are widespread from the Ulutau Mountains to the Bayanaul Mountains, north of Lake Balkhash. Most of them are associated with ancient mine workings or settlements of metallurgists of the Bronze Age. The scientist's map shows 19 points with the location of these objects. The same work provides a description of 15 dams or their complexes. Dams made of large granite slabs installed on edges protect deep sais, ravines, gorges, and the beds of small rivers fed by fissure water.

Several Late Bronze Age dams have been identified in the Karkaraly district. The Tunduk dam is located at the source of the river with the same name, flowing at the northern foot

<sup>&</sup>lt;sup>8</sup> MARGULAN 1998, 381–382.



**Fig. 6.** Dams of the Late Bronze Age (according to A.Kh. Margulan): 1 – Altyn-Kazgan; 2 – Korgantas; 3 – Plan and drawing of dams.

of Mount Ushan, 16 km south-east of the central estate of the village of Bakhty, Karkaraly district, Karaganda region. The dam is constructed from two rows of flat slabs dug vertically into the ground. The space between the rows of slabs is filled with large fragments of stones and gravel. The length of the dam is 70 m, and the thickness of the stonework is 2 m. On both sides of the stonework, in some places, there are remains of a powerful embankment of earth, gravel, and stone fragments, due to which the thickness of the dam reaches 10 m.

The Keregetas dam is located on the site of the ancient Keregetas mine, near the old wintering quarters of Baymurza. The dam is built from two rows of natural blocks of stone installed vertically. The thickness of the stone wall is up to 3 m, the total width of the dam with an earthen embankment is 12 m, and the length is about 305 m, with a preserved height of 60 cm.

One of the largest irrigation structures of this period is the Korgantas dam. It is located at the western foot of the Aulie-Kyzyltau mountain (Bayanaul district of Pavlodar region). The dam is built from two rows of huge granite blocks dug on the edge. The thickness of the stonework is 2.5 m, and the total preserved width of the earthen embankment is 12 m. The dam blocks off a wide mountain valley, which has a common slope to the west. Its length is about 600 m, its preserved height is 1.5 m, and the area of the artificial reservoir (an ancient water mirror) covers about 200 thousand square meters. A cross-section showed that vertical stones are dug into the ground to a depth of 60 cm.

Many of them, judging by the accompanying finds and objects located nearby, were arranged for washing and wet

enrichment of ore and ore flotation. Thus, the small Altynsu dam blocks the bottom of a narrow ravine up to 50 m wide. It is located on the Altynsu River, the left tributary of the Nura River, in the territory of the Karaganda region. Near the dam, there are large dumps of the ancient Altynsu mine and outcrops of the mineral ashirite (dioptase). The length of the dam is 30 m, the width of the double-row stonework is 2 m, the thickness of the dam with the embankment is 4.5 m, the height of the vertical stones is about 60 cm, and the area of the reservoir is 1800 sq. m. The earthen embankment has been almost completely washed away; only the stone base has been preserved. The dam was fed primarily by fissure water. Its economic purpose is associated exclusively with the development and flotation of ore. A large number of similar dams and weirs (about 25) were discovered in the Zhezkazgan region. The second significant part of the dams was intended for irrigation of fields. Such dams differ from reservoirs of metallurgical production in that they are larger in size and lack industrial waste. The area surrounding them is completely clean. There are no traces of crushing and enrichment of ore in the form of dumps and pits. From this series of monuments of ancient irrigation engineering, the Akshi and Kresto-Zapad dams, adjacent to the Zhezdy River valley, the lower dam near the Zhanai Mountains and the Kipchakpai dam stand out in large size.9

In terms of architectural solutions and technological approach, Karkaraly korgantas is fully consistent with the tradition of constructing dams from the Late Bronze Age of Central Kazakhstan—in the form of two fairly long parallel

<sup>&</sup>lt;sup>9</sup> MARGULAN 1998, 317–324, Fig. 155–160.

rows of vertically installed stones filled with soil, gravel, and stones. However, an important part of the complex of irrigation structures was the presence of a dam. The fact that the complex studied in 2023 did not have a reservoir is clearly evidenced by the absence of traces of constant moisture. The topography of the monument, the elevation of its location and the planigraphy indicate that the purpose of the object was clearly not related to ore flotation or irrigation. According to an oral report by V.S. Voloshin, long stone pavements crossing the tops of the hills and descending to their foot were discovered as a result of exploration in the Ereymentau Mountains and on the river Akkoshkar, south of Lake Kerey in the Akmola region.

Funeral structures similar in technological construction methods are characteristic of the Begazy-Dandybay culture. During their construction, masonry is often used, in some cases in combination with vertically installed slabs. Today there are 56 square-shaped structures known. In their central part, an above-ground burial chamber was arranged in the form of a stone box made of large slabs mounted on edge. Similar planigraphy is demonstrated by a square object located to the west of the stone stele in the Karkaraly korgantas complex.

An important detail of the complex, which also speaks about the chronology and cultural affiliation of the Karkaraly korgantas complex, is the stone stele in the center of the monument. Similar objects have been studied and recorded on the territory of Central Kazakhstan. A significant part of them was included in 1979 by A.Kh. Margulan in the corpus of characteristic monuments of the Begazy-Dandybay archaeological culture of the Late Bronze Age that he identified. Objects dating from this period were named "koitas" (from Kazakh-"ram stone"). The area where koitas have been found covers the entire territory of Central Kazakhstan. The largest number of sculptures are concentrated in the valley of the Nurtai River-in the tracts of Kyzyl-Shoky, Kanattas and Aktas—, in the valley of the Baigana River, in the Karkaraly steppe and Northern Balkhash region, in the mountains of Buguly, Kotyr-Kyzyltau, Nar-Shokken and Karazhal.<sup>11</sup> Steles are found next to stone altars or in their center, on the territory of burial grounds, near a settlement, or near mines. In the Buguly III complex, it was installed in the mound embankment. 12 The tradition continued among the local population in the Early Iron Age, as evidenced by excavations of the Early Saka mound No. 2 of the Nazar-3 burial ground, next to which there was a stone stele 2 m long, with a beveled top and a narrowed base. According to researchers, the origins of the installation of objects in the form of cult stones are associated with the previous Begazy-Dandybay culture.13

The stele from the Karkaraly korgantas complex can be classified as one of the most common upright stone slabs in the Bronze Age; they are trapezoidal in cross-section, the upper part is strongly beveled, and one of the faces adjacent to the high part of the beveled top is narrower. The

appearance of koitas of this type is evidenced by research in the Koyshoki tract (Karaganda region), where on the slope of a nearby hill there was an outcrop of natural slabs with a beveled top, near the place where the stelae were discovered. According to the fair remark of A.D. Kasenova, such slabs required minimal processing effort and could be used almost immediately to create steles.<sup>14</sup>

Koitas of Central Kazakhstan, like stone steles in other regions, are associated with places of ancient cults; they could designate open altars where religious or memorial rituals and ceremonies were held. These could be the rituals of ancient cattle breeders associated with spring lambing, agricultural rituals related to sowing and harvesting, or rituals of miners and metallurgists. <sup>15</sup>

Based on its architectural features, the Karkaraly korgantas complex can be included in the same type of monument as the Taskamal complex, explored on the territory of the Burabay mountain forest in the north of the Akmola region.<sup>16</sup> It was tentatively dated to the Bronze Age and classified as a cult site of the local mining and pastoral communities. The monument has a linear planigraphy and fits into the terrain. It consists of two megalithic long walls, an embankment terrace and two embankment ramps. The main wall was erected on a natural ridge, the rocky outcrops of which were dismantled to the ground and used in construction, in addition to monoliths from other workings. The central axis connecting both artificial masonries is a high rock mass elongated along the north-south line. It is recorded that rows of small stones form geometric shapes at the foot and, in some symbolic way, connect artificial and natural objects from the southeastern edge of the wall towards the central rock. The northeastern wall starts from the foot of the mountain range and runs along the top of a natural hill.

Objects of a similar type, with stone shafts and walls, are known in Khakassia and the Altai Mountains. They are called "sve" or "shibe" and date from the Bronze Age to the Early Middle Ages. Various opinions are expressed about them. Some of the structures could have been ancient fortresses, but some of them certainly had a cultic character. Analysis of the relationship between natural and man-made structural components with astronomical elements at sites such as the Saratsky and First Chests in Khakassia allowed researchers to consider them as astroarchaeological and religious structures, a kind of ancient religious observatories of prehistoric astronomy.<sup>17</sup> A typologically similar monument of the Late Bronze Age—the Shara-Tebseg sanctuary—was discovered and studied in Western Transbaikalia. The object includes various landscape elements: rocks, passages in rocks, flat areas on the tops of rocks, as well as man-made structures: stone walls and ramparts. According to researchers, the beginning of the construction of the Shara-Tebseg sanctuary is associated with observations of the sunset on the days of the winter solstice and spring equinox. Near the sanctuary, there are a khereksur and a deer stone, which, judging by

<sup>10</sup> KUKUSHKIN 2023, 96–107, Fig. 2.

<sup>&</sup>lt;sup>11</sup> MARGULAN 1998, 332, 337, Fig. 164, 1; 169, 1-4.

<sup>&</sup>lt;sup>12</sup> MARGULAN 1998, 158–159, 179, 340, Fig. 8, 9, 11, 12, 36, 166, 168,

<sup>&</sup>lt;sup>13</sup> BEYSENOV 2016, 17-22, Fig. 6, 7.

<sup>&</sup>lt;sup>14</sup> KASENOVA 2020, Fig. 2.

<sup>&</sup>lt;sup>15</sup> MARGULAN 1998, 384.

<sup>&</sup>lt;sup>16</sup> YARYGIN/SAKENOV 2022; YARYGIN/TAVUKCU/SAKENOV 2024.

<sup>&</sup>lt;sup>17</sup> SOYONOV 2008; LARICHEV et alii 2008; LARICHEV/GIENKO/ PARSHIKOV 2013.

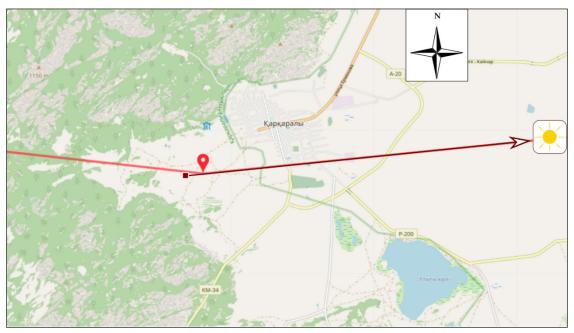


Fig. 7. Direction towards sunrise in the last days of March (model based on data from the site: https://hinode.pics/lang/ru/maps/sun).

the planigraphy, are associated with the monument.<sup>18</sup> Some parallels in the planigraphy of the Karkaraly korgantas complex can be seen in the artificial terraces of ancient Iranian architecture, which were made of large stone blocks and were called "ayadana".<sup>19</sup>

One of the observations may indirectly indicate that the Karkaraly korgantas monument is a religious object. Using an open-access service for modeling sunrise and sunset points based on the OpenStreetMap map, it was possible to identify one pattern: if you place a virtual visor from the center of the rectangular structure on the stele in the center of the complex, you can observe that at the end of March the sunrise falls above it, which coincides with the period of spring equinox (Fig. 7).

Despite the architectural correspondence of the object with Bronze Age dams, we exclude its functional affiliation with this type of structure. Considering the presence of a stele and a platform in the central part of the object, as well as a square structure, Karkaraly korgantas can be attributed to a rare group of monuments of the Altai "sve" type, found in Central and Northern Kazakhstan, and tentatively dated to the Late Bronze Age.

During this period, important changes in the socio-economic sphere occurred in Central Kazakhstan. Large settlements of the proto-urban type, arranged according to the plan and type of Kent or Semiyarka, and burial structures in the form of rock mausoleums—these are Buguly III, Aibas-Darasy, Sangyru I, Karazhartas, and Enbek-Suygush—appeared. The monuments clearly show that the formation of elite groups took place in the region, exercising control over deposits of non-ferrous metals, tin and their redistribution.<sup>20</sup> In this context, the appearance of large-scale monuments for cultic and religious purposes is quite consistent

with the general trends in the development of the ancient population, and a new type of monuments complements and expands the existing ideas about the culture and beliefs of the ancient population of Central Kazakhstan at the end of the 2nd millennium BC.

#### CONCLUSION

In 2023, research of the Karkaraly korgantas monument, located on the western edge of the Karkaraly mountains, was carried out. The study made it possible to accurately determine its boundaries and identify the main structural elements—two long stone walls in the form of two parallel rows of stones, a stone stele in the center of the complex, a wide natural area in the southern part of the ridge and a square structure to the west of the stele and masonry. The length of the object was 950 m. The width of the masonry varies from 0.5 to 2 m.

The architecture of the site is similar to that of the Late Bronze Age dams that are widespread in Central Kazakhstan from Ulutau to Bayanaul. The recorded features of the construction methods in Karkaraly korgantas can be compared with the construction of mausoleums and ordinary funeral structures at the end of the Bronze Age. The stone stele also dates back to the same chronological period. Similar objects are well represented in the antiquities of the Begazy-Dandybay archaeological culture.

The planigraphy of the monument finds analogies in buildings of the "sve" or "shibe" type in Southern Siberia and Central Asia, which date back to the Bronze Age. Similar planigraphic features are demonstrated by the linear megalithic complex of Taskamal in Northern Kazakhstan.

It appears that the object can be classified as a cult object and associated with the ritual practices of ancient cattle breeders and miners who settled in the Karkaraly mountain forest area at the end of the 2nd millennium BC.

 $<sup>^{18}</sup>$  ANTONOVA/TASHAK 2014; TASHAK/ANTONOVA 2015; TASHAK/ANTONOVA 2018.

<sup>19</sup> GIRSHMAN 1978

<sup>&</sup>lt;sup>20</sup> VARFOLOMEYEV 2011, 49–51; SAKENOV 2017.

#### **ACKNOWLEDGMENT**

The study is funded by the Science Committee of the Ministry of Higher Education and Science of the Republic of Kazakhstan. Grant AP13068420 "Monuments of megalithic architecture of the Bronze Age in Burabay".

#### **REFERENCES**

#### ANTONOVA/TASHAK 2014

Antonova, Yu.Ye./Tashak, V.I., Drevniye svyatilishcha Zapadnogo Zabaykal'ya: voprosy definitsiy i tipologii, *Vestnik buryatskogo nauchnogo tsentra SO RAN 4/*16, 191–200.

#### **BEYSENOV 2016**

Beysenov, A.Z., Kamennyye izvayaniya i mengiry sakskoy epokhi, *Vestnik Khakasskogo gosudarstvennogo universiteta* 16, 17–22.

#### **BEYSENOV 2018**

Beysenov, A.Z., Elitnyye kurgany tasmolinskoy kul'tury Tsentral'nogo Kazakhstana. In: Zoloto vlastelinov kazakhskikh stepey. Sovmestnyy Katalog Respubliki Koreya i Respubliki Kazakhstan (Astana-Seul), 68–99.

#### **GIRSHMAN 1978**

Girshman, R.M., Religii Irana. Ot VIII veka do n. e. do perioda islama. In: Lukonini, V.G. (ed.), *Kul'tura Vostoka. Drevnost' i ranneye srednevekov'ye* (Leningrad: Avrora), 67–73.

#### HALL/KARDULIAS/CHASE-DUNN 2011

Hall, T./Kardulias, N./Chase-Dunn, Ch., World-Systems Analysis and Archaeology: Continuing the Dialogue, *Journal of Archaeological Research* 19, 233–279. DOI: 10.1007/s10814-010-9047-5

## KARKARALY NATIONAL NATURE PARK 2023

Karkaraly National Nature Park, https://karkaralinskpark.kz/about. Accessed 15 January 2024.

#### KASENOVA 2020

Kasenova, A., Izucheniye drevnikh izvayaniy (zoomorfnykh stel) i olennykh kamney Saryarki, *Journal of history* 2/97, 186–192.

### KUKUSHKIN 2023

Kukushkin, I.A., Osnovnyye kharakteristiki pogrebal'nykh kompleksov Tsentral'nogo Kazakhstana v epokhu pozdney bronzy, *Vestnik arkheologii, antropologii i etnografii* 4/63, 96–107.

#### KUSHTAN 2012

Kushtan, D.P., Trans"yevraziyskiy «olovyannyy» put' epokhi pozdney bronzy, *Rossiyskiy arkheologicheskiy yezhegodnik* 2, 246–262.

## LARICHEV/GIENKO/PARSHIKOV 2013

Larichev, V.Ye./Giyenko, Ye.G./Parshikov, S.A., Nablyudatel'naya astronomiya i sistemy schisleniya vremeni bronzovogo veka Severnoy Khakasii (k probleme astral'nogo kharaktera religii zhrechestva okunevskoy kul'tury). In: Dashkovskiy, P.K. (ed.), Mirovozzreniye naseleniya Yuzhnoy Sibiri i Tsentral'noy Azii v istoricheskoy retrospective 6, 120–146.

#### LARICHEV ET ALII 2008

Larichev, V.Ye./Giyenko, Ye.G./Parshikov, S.A./Prokop'yeva, S.A., Pervyy Sunduk – Mirovaya gora, dostigayushchaya vysoty solntsa (k metodike vyyavleniya zakonomernostey razmeshcheniya v kul'turno obustroyennom prostranstve sakral'nykh pamyatnikov), *Problemy arkheologii, etnografii, antropologii Sibiri i sopredel'nykh territoriy* 14, 184–189.

#### MARGULAN 1998

Margulan, A. Kh., Sochineniya. V 14 tomakh. Begazy-dandybayevskaya kul'tura Tsentral'nogo Kazakhstana, Vol. 1 (Almaty: Atamüra).

#### PEREGRINE 1996

Peregrine, P., Archaeology and World-Systems Theory, *Sociological Inquiry* 66/4, November 1, 486–495.

## POTAP'YEV/MALIKOVA 1974

Potap'yev, V.V./Malikova, I.N., *Balans veshchestva v protsesse* formirovaniya karkaralinskogo plutona. Trudy instituta geologii i geofiziki. Vypusk 76. (Novosibirsk: Nauka).

#### **SAKENOV 2017**

Sakenov, S.K., Paleo-economy of North Kazakhstan during the Bronze Age based on the materials of the Shagalaly settlement, *Anthropological Notebooks* 23/2, 83–98.

#### SOYONOV 2008

Soyonov, V.I., Gornyye kamennyye sooruzheniya shibe yuzhnoy okrainy Chuyskoy kotloviny. In: Soyonov, V.I./Oinoshev, V.P. (eds.), *Izucheniye istoriko-kul'turnogo naslediya narodov Yuzhnoy Sibiri* 7 (Gorno-Altaysk: AKIN), 5–17.

#### TASHAK/ANTONOVA 2015

Tashak, V.I./Antonova, Yu.Ye., Lineynyye kamennyye konstruktsii v drevnikh kul'tovykh ob"yektakh Zapadnogo Zabaykal'ya. In: Tokareva, Ye. (ed.), *Ancients Cult Centers and Ritual Practices* (Zimovniki: Zimovniki Regional Museum), 101–111.

#### TASHAK/ANTONOVA 2018

Tashak, V.I./Antonova, Yu.Ye., Shara-Tebseg – drevniy kul'tovyy i arkheoastronomicheskiy ob"yekt v Zapadnom Zabaykal'ye, *Izvestiya Laboratorii drevnikh tekhnologiy* 14/2, 74–92.

#### TKACHEVA/TKACHEV 2008

Tkacheva, N.A./Tkachev, A.A., Rol' migratsii v razvitii andronovskoy obshchnosti, *Arkheologiya, etnografiya i antropologiya Yevrazii* 3/35, 88–96.

#### VARFOLOMEYEV 2011

Varfolomeyev, V.V., Begazy-dandybayevskiy fenomen: kul'tura i subkul'tura. In: Kahbdullina, M.K. (ed.), *Margulan Readings*–2011: *Materials of the International Archaeological Conference*. *Astana*, *April* 20–22, 2011 (Astana: ENU after L.N. Gumiley), 49–51.

#### YARYGIN/SAKENOV 2022

Yarygin, S.A./Sakenov, S.K., Novyy pamyatnik megaliticheskoy arkhitektury v gorakh Kokshetau, *Vestnik. Istoricheskiye i sotsial'no-politicheskiye nauki* 3/74, 254–267.

## YARYGIN/TAVUKCU/SAKENOV 2024

Yarygin, S./Tavukcu, Z./Sakenov, S, Megalithic Structure from Burabay: Gold Mining and Cult Communities of the Late Bronze Age of Northern Kazakhstan. Available at SSRN: https://ssrn.com/abstract=4718491 or http://dx.doi.org/10.2139/ssrn.4718491.