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USHBULAK-1 ARCHAEOLOGICAL COMPLEX IN SOUTHERN TARBAGATAI (results of 2024 field research)

The paper presents preliminary results of archaeological research at the Ushbulak complex in the 2024 field season. The complex, located in the southern foothills of the Tarbagatai ridge, consists of a Bronze Age burial ground, 10 multi-layered dwellings of a settlement nature, as well as several groups of petroglyphs. The purpose of the study is to determine the cultural and chronological affiliation of the Ushbulak archaeological complex. Today, the study of various archaeological sites in the complex is of great scientific importance. Since it reveals the entire life of an ancient society. To solve the tasks, the study of the complex and its materials was carried out in a holistic manner. In the course of the study, traditional methods of archeology in general were primarily used: excavations using a comprehensive methodology, as well as mapping of monuments with reference to settlements and water sources, studying the topography and layout of burial grounds, classifying the material complex, dating methods by similarity and natural science methods. As a result of scientific work in the specified field season, 2 burial mounds, 1 settlement and a complex of rock paintings were studied. In the course of comparative typological analysis, as well as radiocarbon ¹⁴C AMS dating, these two burials were attributed to the Bronze Age. The study of the dwelling located next to the burial ground showed that people lived in this area in different historical periods. As a result of exploration work in the gorge, 17 planes with images were identified, the bulk of which are also dated to the Bronze Age and the Early Iron Age. The set of images includes figures of mountain goats, horses and several camels, there are also anthropomorphic characters and scenes of hunting with a dog. The data obtained from the Ushbulak complex will make a great contribution to future studies of the material and spiritual culture of the region as a whole.

Keywords: East Kazakhstan, Tarbagatai Ridge, Ushbulak, cemetery, early Iron Age, Bronze Age, petroglyphs, settlement.

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Тарбағатайдың оңтүстік беткейіндегі Үшбұлақ-1 археологиялық кешені (2024 жылғы далалық зерттеулердің нәтижелері)

Мақалада 2024 жылғы далалық маусымда Үшбұлақ кешеніндегі археологиялық зерттеулердің алғашқы нәтижелері берілген. Тарбағатай жотасының оңтүстік етегінде орналасқан кешен қола дәуірінің қорымынан, отырықшылық сипаттағы 10 көпқабатты тұрғын жайдан, сондай-ақ петроглифтердің бірнеше тобынан тұрады. Зерттеудің мақсаты – Үшбұлақ археологиялық кешенінің мәдени-хронологиялық тиістілігін анықтау. Бүгінгі таңда кешендегі әртүрлі археологиялық ескерткіштерді зерттеудің ғылыми маңызы зор. Өйткені ол ежелгі қоғамның бүкіл тіршілігін анықтауға мүмкіндік береді. Міндеттерді шешу үшін кешен мен оның материалдарын зерттеу біртұтас жүргізілді. Зерттеу барысында, ең алдымен, жалпы археологияның дәстүрлі әдістері қолданылды: кешенді әдістер қолданылған қазба жұмыстары, сонымен қатар елді мекендер мен су көздеріне сілтеме жасай отырып, ескерткіштерді картаға түсіру, қорымдардың жер бедері мен орналасуын зерттеу, материалдық кешеннің жіктелуі, ұқсастық және жаратылыстану әдістері бойынша мерзімдерін анықтау әдістері. Көрсетілген далалық маусымда жүргізілген ғылыми жұмыстардың нәтижесінде 2 оба-қоршау, 1 қоныс және жартастағы суреттер кешені зерттелді. Салыстырмалы типологиялық талдау, сондай-ақ радиоөміртексті ¹⁴C AMS анықтау барысында бұл екі жерлеу қола дәуіріне жатқызылды. Қорымға жақын орналасқан тұрғын жайды зерттеу бұл аймақта адамдардың әртүрлі тарихи кезеңдерінде өмір сүргенін көрсетті. Шатқалдағы барлау жұмыстарының нәтижесінде бейнелері бар 17 жазықтық анықталды, олардың негізгі бөлігі де қола және ерте темір дәуірлеріне жатады. Суреттер жиынтығына тау ешкі, жылқы және бірнеше түйе фигуралары, сонымен қатар антропоморфтық кейіпкерлер мен итпен аң аулау көрі-

ністері кіреді. Үшбулак кешенінен алынған деректер болашақта жалпы аймақтың материалдық және рухани мәдениетін зерттеуге үлкен үлес қосады.

Түйін сөздер: Шығыс Қазақстан, Тарбағатай жотасы, Үшбулак, қорым, ерте темір дәуірі, қола дәуірі, петроглифтер, қоныс.

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Археологический комплекс Ушбулак-1 в Южном Тарбагатае (результаты полевых исследований 2024 года)

В статье представлены предварительные результаты археологических исследований на комплексе Ушбулак в полевом сезоне 2024 года. Комплекс, расположенный в южных предгорьях хребта Тарбағатай, состоит из могильника эпохи бронзы, 10 многослойных жилищ поселенческого характера, а также из нескольких групп петроглифов. Цель исследования – определение культурной и хронологической принадлежности археологического комплекса Ушбулак. На сегодняшний день изучение различных археологических памятников в комплексе имеет большую научную важность. Так как оно раскрывает всю жизнедеятельность древнего общества. Для решения поставленных задач изучение комплекса и его материалов проводилось целостно. В процессе исследования в первую очередь применялись традиционные методы археологии в целом: раскопки по комплексной методике, а также картографирование памятников с привязками к поселениям и водным источникам, изучение топографии и планировки могильников, классификация вещевого комплекса, методы датирования по сходству и естественнонаучным методам. В результате научных работ в указанный полевой сезон были изучены 2 курган-ограды, 1 поселение и комплекс наскальных рисунков. В ходе сравнительно-типологического анализа, а также радиоуглеродного ^{14}C AMS датирования эти два погребения были отнесены к эпохе бронзы. Исследование жилища, расположенного рядом с могильником показало о проживании людей в данной местности в разные исторические периоды. В результате разведочных работ в ущелье были выявлены 17 плоскостей с изображениями, основная масса которых датируется также эпохой бронзы и ранним железным веком. Набор образов включает фигуры горных козлов, лошадей и нескольких верблюдов, также имеются антропоморфные персонажи и сцены охоты с собакой. Полученные данные из комплекса Ушбулак внесут большой вклад будущие исследования материальной и духовной культуры региона в целом.

Ключевые слова: Восточный Казахстан, Тарбағатайский хребет, Ушбулак, могильник, ранний железный век, эпоха бронзы, петроглифы, поселение.

Introduction

In 2024, an archaeological expedition from the Al-Farabi Kazakh National University (headed by R.S. Zhumatayev) conducted research at the Ushbulak archaeological complex, located in the foothills of southern Tarbagatai (Fig. 1).

The southern spurs of the Tarbagatai Range have played a special role in the development of various cultural societies since ancient times. Especially in the Bronze Age and the period of early nomads, this territory was a contact zone linking material and spiritual cultural features between the population of adjacent regions – Sayan-Altai, Saryarka and Zhetysu. To solve both general and specific problems concerning the formation, development and evolution of ancient cultures, it is extremely important to conduct research in such subregions.

The archaeological complex is located in the Urzhar district of the Abay region, 5 km north-

east of the Taskesken-Bakhty national highway, on hilly terrain at the entrance to the gorge. The complex consists of various archaeological sites, including burial sites dating from the Bronze Age to the mazars of the ethnographic period, as well as rock paintings covering a wide chronological range (Fig. 2).

The southern slopes of the Tarbagatai Range are a poorly studied region in archaeological terms. Brief information about the history of the study of the designated territory was presented by us in the following works (Zhumatayev et al. 2024: 160-168; Омапов et al. 2018; Yergabylov et al. 2024: 18-25).

The first scientific research at the Ushbulak archaeological complex was conducted in 2015 by scientists from the Al-Farabi Kazakh National University. In addition to exploration work in the region, burial sites were excavated at the Ortabulak and Ushbulak cemeteries. (Омапов et al. 2016).

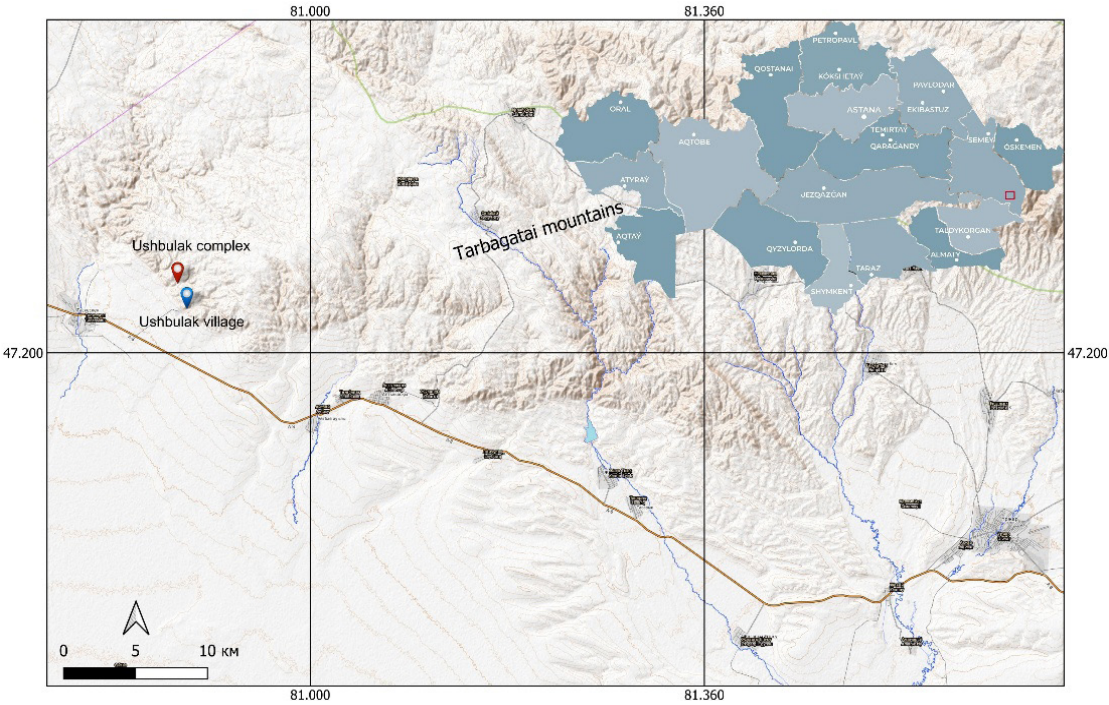


Figure 1 – Location of the Ushbulak complex cemetery on the map

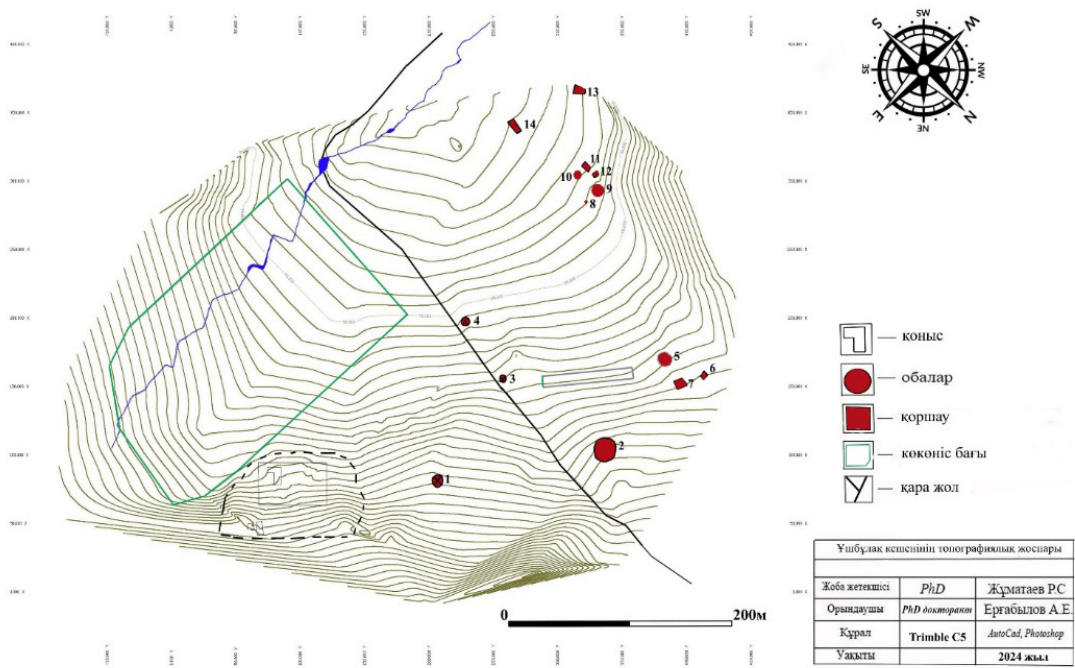


Figure 2 – Topographic plan of the site

The main objective of the study is to determine the cultural and chronological affiliation of the studied sites. Specific tasks include a comprehensive description of the archaeological source and the identification of dated analogies.

Materials and methods of research

Field work was carried out in two directions. The first direction was archaeological exploration aimed at identifying new sites and collecting material. The second, main one was excavations at the cemetery and in one of the dwellings of the ancient settlement, as well as studying the rock complex. The methodology of specific studies includes, first of all, traditional archaeological methods of study: mapping, studying the topography and planigraphy of complexes, stratigraphic observations, classification of the material complex, the method of dated analogies, formal typological analysis, elements and methods of statistics, the retrospective method.

In order to determine the cultural and chronological aspects, a comparative typological analysis of the studied objects was used in the course of the study, and the results of ^{14}C radiocarbon AMS dating were also obtained in the laboratory of the Center for Physical Sciences and Technology in Vilnius (Lithuania) using a mass accelerator

During the analysis of ceramic materials, the sizes of the vessels were determined, the features and differences in their manufacture and shape were described. The study of the morphological features of the vessels of this site was carried out by the method of comparative analysis with the ceramic material of other sites, which made it possible to establish their common features and differences.

For a comprehensive study and holistic reconstruction of the origins and main stages of development of rock paintings at the Ushbulak complex, a set of historical methods was used.

Discussion and results

Research in that year included excavations of two burial enclosures and a settlement, as well as a study of a rock art complex.

Burial complexes. Kurgan-fence No. 3 is an object with a diameter of about 5 m, made of flagstone and covered with turf vegetation. The planigraphy is recorded as a round internal fence with a central sparse layout, forming a platform with a diameter of 2.9 m. In the southern sector of

the fence, the stones are laid more densely, opposite is a semicircular “loose” zone. In the center of the platform, a spot of a grave pit was recorded, oriented along the west-east axis, in the middle of the spot there was an oblong stone layout oriented to the north. The size of the spot is 2×1.2 m; inside it, longitudinal stonework 1.5×0.4 m is noted. Five separate stones have been preserved 10 cm below the level of the stone embankment, yellowish spots are observed nearby, interpreted as a possible “ejection” from a robbed pit.

The burial structure revealed a rectangular pit measuring 1.8×0.9 m with a west-east orientation. At a depth of about 60 cm from the daylight surface, there was a skeleton of a teenager in an extended position on his back, with his head to the west. The left arm was partially bent at the elbow. The preservation of the skeleton is extremely unsatisfactory: fragments of the spine and ribs, leg bones, and left arm are present. Measurements of the bone lengths (thigh 27 cm, shin 23 cm, shoulder 22 cm, forearm 18 cm) and the body length from shoulders to ankles 103 cm confirm adolescence. Remains of wood were noted near the left shoulder, to the right of the skeleton there is a shallow pit (depth 10 cm; 20×14 cm) and a small spot near the feet.

A comparison of the architecture and ritual of kurgan-fence No. 3 with similar sites in Central and Eastern Kazakhstan allows us to identify a number of common features characteristic of burial complexes of the Bronze and Early Iron Ages. In particular, circular stone fences and central burial pits with an elongated body position are found in the kurgans of the Begazy-Dandybaevskaya culture (Margulan et al., 1966, 71).

This is also indicated by the results of radiocarbon analysis of the bone from the left shoulder area of the buried person. Sample FTMC-UQ16-1 gave a value of 3333 ± 32 BP. Calibration was performed in OxCal v4.4.4 according to the IntCal20 curve (Reimer et al., 2020): 68.3% – 1628–1536 cal BC; 95.4% – 1689–1518 cal BC (93.5%) and 1731–1721 cal BC (1.9%). The obtained interval confidently places the complex in the middle of the 2nd millennium BC and is consistent with the archaeological features of the object.

Kurgan-fence No. 4. The site was partially visible before excavation due to large stone blocks that protruded to the surface of the ground. After removing the turf layer, a rectangular fence measuring 3.5×4 m was cleared. The stone blocks located along the perimeter of the fence were

irregular in shape and of varying sizes; they were laid tightly to mark the boundaries of the structure. The outer stones used to build the fence were on the surface and partially sunken into the ground. Some stones were placed horizontally, forming a continuous contour, while others were laid vertically or at an angle, which gave the texture of the fence additional variety.

Inside the fence there were small stones, which were chaotically arranged and were not organized into a single structure. The outer contours of the fence were relatively well preserved, despite partial destruction and the absence of individual stones in some areas. The inner part, on the contrary, was a mixture of large and small stones without a clear structural organization.

The stones of the inner part of the fence were removed after they were sketched and fixed. As a result of the clearing, several large stone blocks were exposed, tightly dug into the ground. On the same plane, it was possible to discover a grave spot, which allowed to continue excavation over its area. The object was plundered in ancient times, the inventory is missing.

The architecture of both structures demonstrates planning techniques that are stable for the Bronze Age of Eastern Kazakhstan and the Upper Irtysh region: the presence of a stone fence with a clearly marked central zone and a burial pit along the west-east axis. The regional tradition is characterized by the construction of soil pits with ceilings: the soil taken from the pit was laid out inside the fenced area, then wooden planks (sometimes slabs) were laid on the ledges, and a low embankment was formed on top; robberies led to subsidence of the ceiling inward (Tkachev, Tkacheva, 2008: 121-133). Close analogies are observed in the Kyzyltas cemenry ground, where rectangular and oval fences with central soil pits with ledges and double ceilings (at the level of the ledges and the mainland) were studied; collapsed fragments of ceilings are recorded in the backfills. This scheme is comparable with that observed in kurgan No. 3, including the orientation of the burials and the scenario of post-deformations (Tkachev, Tkacheva, 2008: 172).

The closest geographical analogue of the sites studied by archaeologists can be considered the Botpai cemenry (Ayagoz district, Abay region). Here, in the central part of the fences, stone cists were found, sometimes covered with slabs, and radiocarbon AMS dating dates the complex to the 20th century BC. Kurgans No. 3 and No. 4 are comparable to the Botpai small fences in external

architecture (circular or rectangular outline, central spot, local accumulations of stone), but they differ fundamentally in the absence of stone boxes: in the center, a ground burial pit is recorded without a cist frame (Omarov et al., 2023: 9). For kurgan-fence No. 3, an additional difference is the presence of wooden elements, interpreted as a ceiling or flooring.

Excavations of the settlement Ushbulak 1. Before the work began, stone outcrops were recorded on the site, interpreted as the remains of capital masonry. Fragments of ceramics were noted in the emissions from marmot burrows, indicating the presence of a cultural horizon nearby and secondary redistribution of material by bioturbation. The excavation was laid 3 m to the south of the burrow, the reference point is two parallel rows of large stones stretching along the northwest – southeast line. The excavation grid is marked with Latin letters (A, B) from east to west; five squares are divided into two rows diagonally northeast – southwest. Within the grid, loci of ash inclusions, spots of compacted yellow soil and areas of loose gray soil were noted already at the exploration stage; the sod horizon on the site is on average 10-11 cm. Below is a description of the excavation by squares:

A1. The thickness of the surveyed layer from the modern surface is 1.3 m. Sod (11 cm) and a layer of manure (12–20 cm) were recorded above the cultural layer, indicating late economic use of the site as a camp zone/sheepfold. In the north-eastern sector, within the manure horizon, traces of burnt household remains were revealed; a fire pit with an area of about 1.5 m², the thickness of the ash-carbonaceous package is 5–10 cm. Under it, there is an intermittent bedding of small sandstones, probably an under-stove/under-grate, stabilizing the heating unit. In the southern wall, below the sandstone level, a round pit with a diameter of 30 cm and a depth of 12 cm was uncovered; according to its configuration and position, it is interpreted as an economic (pillar/accumulative) pit associated with the use of a hearth or interior. The overall picture indicates a stable domestic hearth with a prepared foundation and subsequent episodes of piles/clogging.

A2. Within the square, stone structures-oriented northeast – southwest, built of large blocks are documented; in the northern part – their destructive remains, indicating the dismantling of a section of the wall. In the gap, a separator stone is traced, marking the boundary of the room or an internal pier. Individual blocks of sizes 70 × 45 × 15 cm and 90 × 55 × 25 cm are noted – a typical set for face

masonry. The length of the recorded internal space (the central room) is about 2.5 m. The thickness of the surveyed layer from the modern surface is 1.3 m. Sod (11 cm) and a layer of manure (12–20 cm) are recorded above the cultural layer – a sign of late economic use of the site as a camp zone / sheepfold. In the north-eastern sector, within the manure horizon, traces of burnt household remains were found; a fire pit with an area of about 1.5 m², the thickness of the ash-coal package is 5–10 cm. Under it, there is an intermittent bedding of small sandstones, probably a stove/grate stabilizing the heating unit. In the southern wall, below the sandstone level, a round pit with a diameter of 30 cm and a depth of 12 cm was opened; according to its configuration and position, it is interpreted as a household (pillar/accumulation) pit associated with the use of the hearth or interior. The overall picture indicates a stable domestic hearth with a prepared foundation and subsequent episodes of piles/clogging; a two-shaft scheme is likely for the laying actor: external and internal versts of large stones with presumable backfilling with small stones and soil (partially lost).

A3. The central part of the building. Below the turf, sampling for 15 cm of the cultural layer did not yield: no cultural inclusions were noted within the square. The wall is folded more densely and “on the edge”, transversely; large stones predominate in the south, probably the supporting part of the pier. The absence of cultural inclusions with massive masonry allows for interpretation as a foundation/retaining area, brought out higher in neighboring squares, or as a zone of late disassembly-shift, with the removal of cultural material into adjacent cells.

A4. The most powerful wall of the complex begins from the northern part of the square; the thickness of the masonry is 70–80 cm, clay layers/bond are locally recorded, which strengthened the adhesion of the stone. Under the wall there is a light yellow dense platform about 3 cm thick – interpreted as a prepared adobe floor (rolled bedding). The presence of bonded masonry and floor in one section indicates a stationary, non-seasonal phase of the functioning of the room.

A5. A series of multi-colored horizons can be read along the northern and eastern walls of the square. After fixing the floor, the stratigraphic edge between A4 and A5 was removed, which made it possible to reconstruct the sequence of surfaces: directly above the light yellow floor lies a manure layer, above it is a soft yellow loamy horizon covered by a layer of garbage inclusions. This sequence reflects a change

in operating modes: from a residential phase with regular cleaning and maintenance of the floor to a commercial (camp) phase with the accumulation of manure and non-separated garbage.

B1–B5. The squares cover the outer western wall of the structure. The masonry is made using a single technique from stones of the same fraction; the variability of the landmarks is minimal, which, together with the straightened front, indicates the primary enclosing function of the wall. No additional architectural elements (buttresses, openings) were found within the cells; the structure is uniform.

L5–M5. After removing the turf, a 10 cm sample revealed the outer walls of the southern room, about 1 m thick. The structure is in two parallel rows, the cavity between the walls is ~0.4 m; probably, backfilling was originally intended (partially lost due to the blowing out of small filler). This two-verst scheme increased the stability of the wall and provided thermal insulation, which is typical for stone dwellings in continental climates.

The excavations revealed a capital stone structure of complex composition, including several rooms and a system of internal/external walls. The internal contour is traced by a wall up to 1 m wide; the length of the north-western wall is about 5 m, the south-western one is 6 m. The internal space measures 2.8 × 3.7 m (≈ 10.4 m²), the height of the surviving masonry is up to 0.7 m. The masonry is predominantly dry from large slabs and boulders, locally with a clay binder (A4), with a probable two-shaft technique and inter-wall backfilling (L5–M5). Signs of functional zoning are recorded: a home hearth with a prepared foundation (A1), a dividing/marker wall and piers (A2–A3), an area with a floor surface (A4) and a subsequent camp phase (A5). The western line (B1–B5) served as a fence and simultaneously as an anti-erosion/retaining wall (Fig. 3). The complex of stratigraphic observations (floor – manure – soft yellow horizon – garbage) reflects at least two operational phases: the initial residential phase with a habitable interior and the late economic phase, probably associated with the corralling of cattle and secondary littering of the space. The ceramic fragments found in bioturbation emissions confirm the presence of a cultural layer, but their information content is reduced by secondary transfer; the micromorphology of the floor (thin sections), the search for fecal spherules, phytoliths/starches from the ash packets of the hearth are shown to clarify the chronology and functions of the premises. Without introducing additional

dating materials, the chronological assessment of the structure remains at a preliminary level; the construction techniques (double-verst walls, adobe floor, hearth with sandstone base) and the observed

sequence of phases correspond to a stationary dwelling with subsequent economic re-exploitation within the framework of the local stone construction tradition of the region.

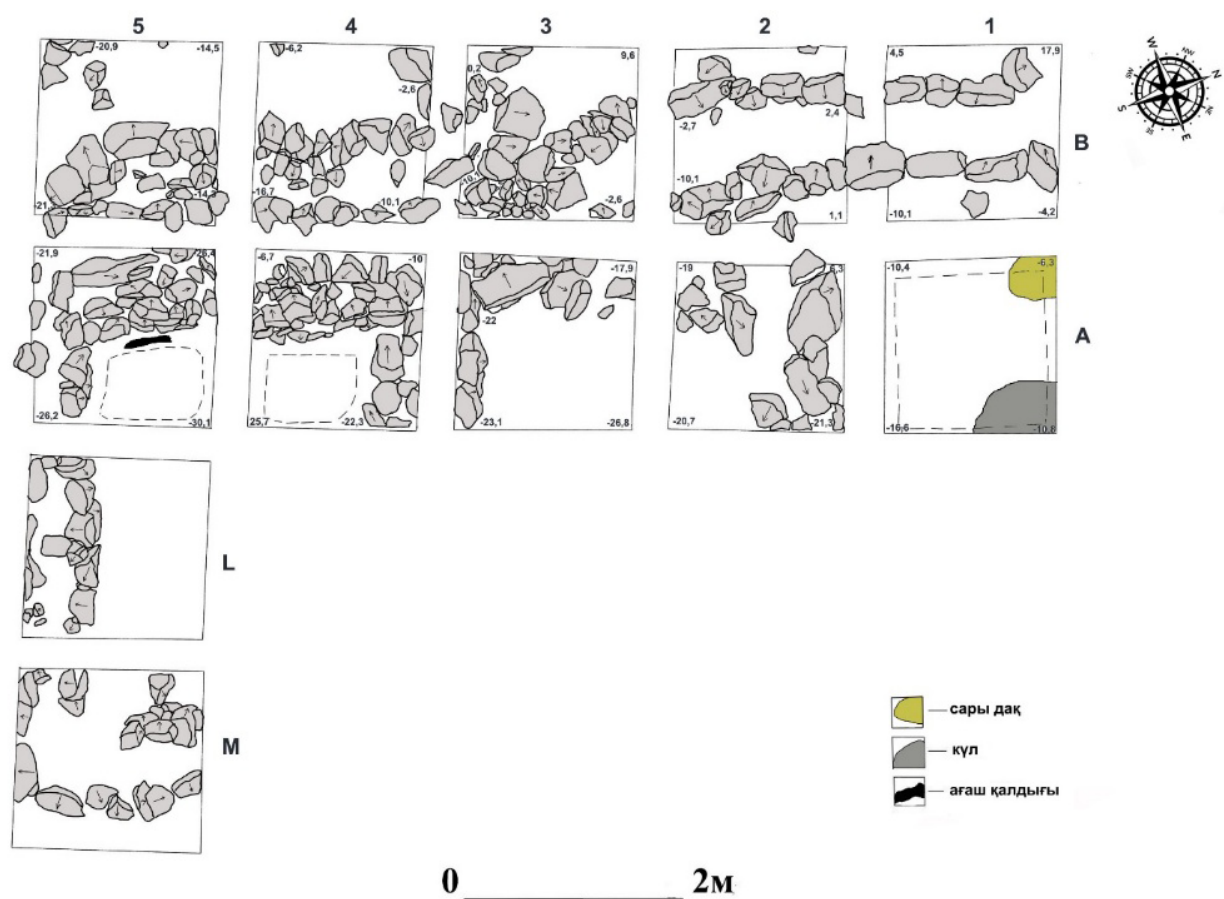


Figure 3 – Ushbulak settlement plan

Pottery from the settlement. As a result of field work at the Ushbulak-1 settlement, 32 fragments of ceramics were discovered. This ceramic material can be divided into two conventional groups: a) surface – these are shards of vessels collected from nearby territories (8 fr.); b) complex – these are fragments of clay dishes found in the turf layer of the Ushbulak-1 settlement (24 fr.). Of these, 4 fragments belong to the rims of different vessels. In addition, the ceramics and surface material discovered at the settlement are scattered material belonging to different historical periods (Fig. 4). Most of the fragments of the vessel

walls have no ornamentation, only one of them has traces of notches (the motive is unclear). The thickness varies from 0.6 to 1.1 cm. The diameter is from 9 to 19 cm (Table 1.).

Vessel 1. Ush1.24.A4.SL.C2. Fragment of the rim of a ceramic jar-shaped vessel. The rim is slightly profiled, pointed. Traces of paint on the outer surface (reddish-brick color). The diameter of the mouth of the vessel is 11 cm, the thickness of the walls is 0.6 cm. The surface of the vessel is well smoothed, without ornamentation. The firing is uniform, restorative. The dough is dense.

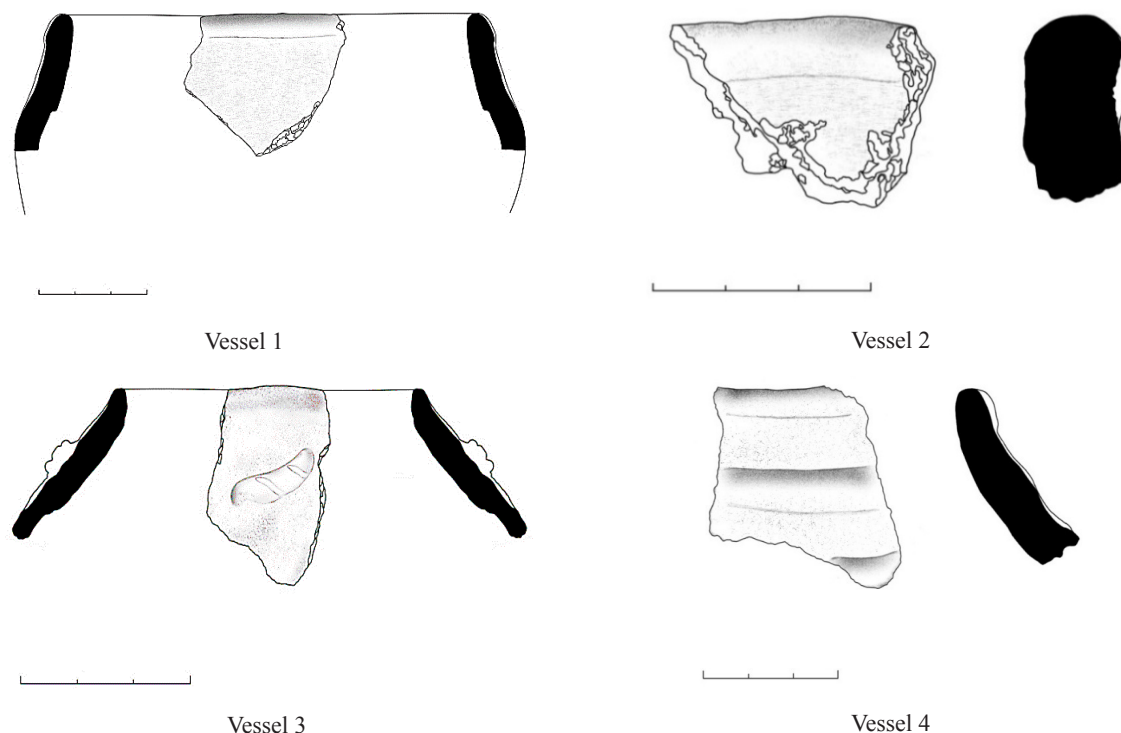


Figure 4 – Vessels

Similar ornamented vessels were found in settlements of Gorny Altai (Gorny Kordon-1 settlement) and were mostly decorated with rounded (oval) indentations located under the rim in one horizontal row. Such ornamentation is widely used in Irmen and transitional ceramics from the Bronze Age to the Early Iron Age. (Beisenov, 2017: 79-80).

Vessel 2. Ush.1.24.A3.SL.C.1. Fragment of the rim. Low-profile, rounded. The diameter of the mouth of the vessel is 19 cm, the thickness of the walls is 1.1 cm. Color: Inside there are traces of burning. External: Color is grayish-brown. The fracture is dark gray. The manufacturing method is patchwork. Firing is uniform, restorative. The dough is dense.

Vessel 3. Ush.1.24.A5.SL.C5. Fragment of a rim. It has a jar shape with a rim that is rounded in section, slightly curved outward. The diameter of the mouth of the vessel is 13 cm, the thickness of the walls is 0.7 cm. It is decorated with a horizontal slightly curved roller. There are rows of vertical notches along the roller. Traces of soot on the outer

and inner surfaces. Color: black, fracture black. Reduction firing. The dough is coarse.

Similar jar-shaped vessels with an applied roller were found in the Altai Mountains (Kurotinsky Log-1 and Khemchik-2). Settlements with roller ceramics in the Altai Mountains were associated by P.I. Shulga with the population that left burials of the Pazyryk type, since she knows of analogies only in the ceramics of the Late Bronze Age of Kazakhstan (including Dongal) and the adjacent part of the Altai Territory (Shulga, 1990: 83-87). Similar ceramics were found in the Gorely Kordon settlement (south of Kulunda, near the border with Kazakhstan), which researchers attribute to the transitional period from the Late Bronze Age to the Early Iron Age (Frolov et al., 1999: 66-69; Frolov et al., 2002: 135-139; Beisenov, Loman, 2009: 238).

Vessel 4. Ush1.24.A5.SL.C1. The fragment of the rim is rounded, slightly curved outward, weakly profiled. It has a short neck, emphasized by a groove 0.9 cm wide. The diameter of the mouth of the vessel is 9 cm, the thickness of the walls is 0.7 cm. The firing is uniform, restorative.

Table 1 – Morphological analysis of corollas from the Ushbulak-1 settlement

№	Sector/Layer	Diameter	Thickness	Burning	Morphology
Ushbulak 1					
1	Ush1.24.A4.SL.C2	11	0,6	restorative	jar
2	Ush1.24.A5.SL.C1	9	0,7	restorative	jar
3	Ush1.24.A5.SL.C5	13	0,7	restorative	jar
4	Ush1.24.A3.SL.C1	19	1,1	restorative	jar

Ceramic fragments of the studied settlement have the following features: vessels – closed jars are distinguished by the shape of the rim and body. The ornament consists of rounded depressions, a roller, a comb and a smooth stamp (plant motif). Restorative firing predominates. Comparison of data with materials from adjacent territories allows us to say that the ornamentation technique and forms recorded at the settlement of Ushbulak-1 and 2 (pit) are generally characteristic of the Dongal-early Sak collections of Northern Kazakhstan, Altai and Zhetysay, and date back to the 8th-7th centuries BC (Beisenov, Loman, 2009: 239). It should also be noted that the presence of vessels decorated with one row of pearls along the edge of the rim is a characteristic feature of the ceramic complexes of settlements and burial grounds of the early Iron Age of the Upper Ob region and the northern foothills of Altai, the southern taiga regions of Western Siberia and a number of other adjacent regions (Frolov et al. 1999: 67).

Complex of rock paintings. We have very little information about the petroglyphs in the Tarbagatai foothills. There are several scientific papers on certain complexes (Samashev, 2018; Rogozhinsky, 2011; Sala et al. 2016). Therefore, the study of the Tarbagatai rock paintings is of great importance. As a result of the work carried out, 17 small panels with drawings were identified, related to different historical periods. During the research, it was revealed that some panels are single, and we cannot classify them into groups. That is why we have one group consisting of 17 panels (Fig. 5).

Panel 1. The surface is vertical with a south-eastern orientation. The panel is the largest in group 1 with a multi-figure composition. It has a fairly large number of images. The preservation of these images is satisfactory. In the upper right corner there is an image of a deer, next to which there are waves. At the bottom of these waves there is a tamga, as well as a horse. On the surface there are a large number

of mountain goats, argali. Among the images, presumably, a scene of a battle between two people and a single figure of a person is depicted. Also, the image of a snake in the center attracts attention. The lower part is made entirely of mountain goats and argali. Mostly, the heads of these animals are turned to the right. Among the images there is also a dog.

Panel 2. The surface is vertical with a southwest orientation. The panel itself is located perpendicular to plane 1. There are images of mountain goats. There are no images in the center of the panel.

Panel 3. The surface is vertical with a south-east orientation. Small in size. There are clear images of 3 horsemen, an archer, a camel and a single human figure in the lower right corner. The panel is 2-3 m from panel 1.

Panel 4. Vertical panel with south-eastern orientation. There are images of people, as well as a mountain goat.

Panel 5. Vertical panel with south-eastern orientation. Identification of the image is difficult. Presumably a dwelling was knocked out(?).

Panel 6. The panel is vertical with a south-eastern orientation. The panel itself is damaged by modern inscriptions in the center. At the bottom of the left side there is a single image of a man, next to it there is presumably a dog. On the right side there are mountain goats. At the top of the right side of the surface there is an unidentified animal.

Panel 7. Vertical panel. Single image of a mountain goat.

Panel 8. The surface is vertical with a south-eastern orientation. There are images of a mountain goat, a deer and presumably a dog.

Panel 9. Vertical panel with south-eastern orientation. The plane depicts a deer with branched antlers. There are images of unidentified animals.

Panel 10. Vertical surface with southern orientation. Mountain goats are depicted in thin lines. Presumably by scratching. There is also an image of a deer.



Panel 1



Panel 15

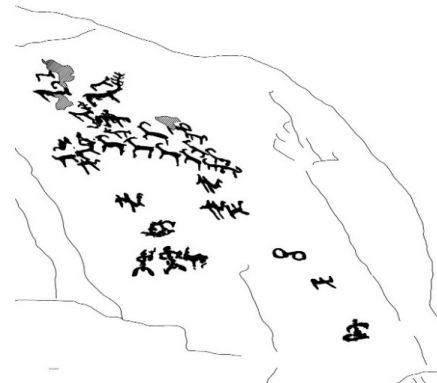


Figure 4 – Petroglyphs

Panel 11. The panel is vertical with a south-eastern orientation. It is damaged by modern inscriptions. In this connection, it is difficult to determine what kind of images are underneath them. There are images of camels on the panel. An unidentified animal is above the surface.

Panel 12. A vertical panel with a southern orientation. The preservation of this panel is unsatisfactory, which makes it difficult to identify some images. Presumably, there is an image of a mountain goat (?) on the panel, and an unidentified animal below the panel. Above there is an image of a deer, the antlers of which are not visible due to sunburn, but there is a trace.

Panel 13. Vertical panel with southwest orientation. Single image of a deer.

Panel 14. The panel is vertical with a south-eastern orientation. A single image of a deer. An image of an unidentified animal is carved nearby.

Panel 15. A vertical panel with a southwestern orientation. Situated quite high and is one of the large panels in group 1. Multi-figure composition. Excellent preservation of the images. There is a

composition of a horseman hunting with a dog for 9 mountain goats, whose heads are turned to the left. Opposite, there are mountain goats depicted with their heads turned to the right. At the top of the panel, images of two deer of different sizes are carved out. Next to them, a single mountain argali (mountain sheep) is depicted. There are about 5 images of two-humped camels. What is interesting about this panel is that there is an inverted image of what is presumably a dog (?). There is a composition consisting of two men and a woman facing each other. One of the people is depicted holding a club. Along one line of this composition, there is an image of a tamga. A single image of a person is carved out.

Panel 16. Vertical panel with southwest orientation. Situated slightly perpendicular to panel 15 group 1. The image of two mountain goats is knocked out.

Panel 17. A vertical panel with a southwestern orientation. The panel itself is damaged by modern inscriptions. In the center, a single image of a mountain argali is carved, its head facing left. At

the top of the plane there is an image of what is presumably a man.

Thus, 17 panels with petroglyphs were preliminarily recorded and described at the sites in the 2024 field season. The oldest rock art images date back to the Bronze Age and the early Iron Age. The images were made on the most convenient and spacious panels. The species composition of the petroglyphs is typical for Eastern Kazakhstan. The repertoire of plots mainly consists of images of animals; horses, mountain goats, deer and camels, archers and standing people for the Bronze Age; goats, rams, archers and horsemen for subsequent periods. The preservation of these images is satisfactory. Mostly, the images were made on vertical panels, and some images were also made on horizontal single slabs. We associate the composition of the animal images with the animal world of this territory, as well as with their vital activity.

In the course of these studies it was found that the rock paintings are not compactly located on rock outcrops. The panels themselves are mostly small in size. They have a southern and south-eastern orientation, some of them have a south-western orientation. They are covered with a crust of desert "tan" of dark brown color. Some panels with rock paintings and the petroglyphs themselves are covered with modern inscriptions. In the course of the studies it was found that some panels are single, and we cannot classify them into groups.

Technically, the Ushbulak rock carvings are characterized by two techniques: knocking out (dotted) and drawing. Each of them has a number of variants. In a few cases, it is possible to trace a sketch made with finely drawn lines for dotted engravings.

Conclusion

The results of field research in 2024 showed that the Tarbagatai foothills were the scene of complex interethnic and intercultural ties in the ancient and medieval periods. The era of the final Bronze

Age and the early Iron Age is of great importance in studying the distant past of modern peoples. It was at this time, as a result of complex processes of ethnogenesis, that the foundation for the design of the modern ethnocultural map of Eurasia was laid. In this regard, the archaeological complex is of great scientific importance, as it is represented by different types of sites of the indicated periods. The kurgan-fences are the first studied burial sites of the Bronze Age in the territory of southern Tarbagatai, as well as the settlement. To date, this is the third studied settlement in Tarbagatai, the first two being the settlements of Karashoky in the Zaisan district of the East Kazakhstan region and Eleke sazy in the Aksuat district of the Abay region. The last Ushbulak differs from them in its multi-layered nature, in particular, in the rich ceramic material of the transition period from the Bronze Age to the Early Iron Age.

The discovery of a nearby rock complex increases the scientific significance of the Ushbulak archaeological complex. Systematization and detailed analysis of the rock paintings of the complex made it possible to identify various stylistic groups that appeared within the framework of a single pictorial tradition, trace the dynamics of development, clarify the dating and their cultural attribution. At the moment, the problem of preserving these sites is acute.

Future research in this complex serves as a starting point for a detailed reconstruction of historical events in the Bronze and Early Iron Ages in Tarbagatai. In addition, it provides an opportunity to compare archaeological data from this region with data from adjacent areas, which will eventually allow for broader conclusions to be drawn.

The paper was prepared with the financial support of the grant funding of the Committee of Science the MSHE of the Republic of Kazakhstan. IRN: AP19576316 "Archaeological complexes of the Early Iron Age in the southern slopes of Tarbagatai: an interdisciplinary study".

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Келін түсті: 04.08.2025

Қабылданды: 28.08.2025