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Aktas—an "Ephemeral" Upper Paleolithic Site in North Kazakhstan

This paper presents new findings from field studies at Aktas, an Upper Paleolithic site first excavated in 1982 and 1983. It is located in North Kazakhstan, where Paleolithic sites are quite rare. We describe the stratigraphy, paleontology, archaeology, and chronology of Aktas. Six lithological layers are distinguished, two of which (3 and 4) abound in faunal remains. Chronology was generated from a new series of OSL-ages. The accumulation of layer 2 took place between ca 20–12 ka ago, whereas layers 3 and 4 were formed ca 50–30 ka ago. A side-scraper, made of imported flint, was found. The bulk of the faunal complex relates to large ungulates such as Pleistocene horse (Equus ferus), woolly rhinoceros (Coelodonta antiquitatis), and mountain sheep (Ovis ammon). Some bones bear traces of deliberate fragmentation and dismemberment using stone tools. These facts, along with the taphocenotic indicators (species composition, absence of traces of predator activity, etc.), as well as the location and stratigraphy of the site, allow us to conclude that the faunal assemblages at this location are anthropogenic. Traces of human occupation are scarce, suggesting that Aktas is an "ephemeral" site, attesting to human presence in that territory during the Late Pleistocene, but revealing no cultural indicators. The findings picture Aktas as a kill-site—the place where the prey

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was butchered and consumed. This is the only such site known in the area to date. The number of lithics is too small for cultural attribution. However, the estimated age suggests that North Kazakhstan was peopled as early as the beginning of MIS3, corresponding to the early stages of the Upper Paleolithic.

Keywords: *North Kazakhstan, Upper Paleolithic, Upper Pleistocene, paleontology, traceology, OSL-dating.*

Introduction

The southern portion of the West Siberian Plain, including the northern part of Kazakhstan, for a long time remained *terra incognita* for Paleolithic studies. No more than ten Paleolithic sites were known there (Petrin, 1986; Derevianko et al., 2003a). Almost all of them yielded just scarce artifacts, which can be explained by a shortage of local lithic raw material. Most sites are attributable to the final stages of Upper Paleolithic. They are associated with natural accumulations of mammoth fauna remains (Volchya Griva, Shestakovo, Gari, Shikaevka II) (Petrin, 1986; Derevianko et al., 2003a). The presence of abundant paleofauna remains indicates that archaeological finds occur there in stratigraphic sequence.

In the northern part of Kazakhstan, several sites with stratified Upper Paleolithic industries are known: Batpak-7, Ekibastuz-15, and others. However, the stratigraphic situation at the sites suggests the mixed character of archaeological assemblages, which are scarce and are at the initial stage of study (Merts, 1990; Taimagambetov, Ozhereliev, 2009; Anoikin, 2017).

In the eastern portion of Kazakhstan, stratified Paleolithic sites are rare— Shulbinka, Ushbulak, and Bystrukha-2 (Derevianko et al., 2003b; Taimagambetov, Ozhereliev, 2009; Rybin, Nokhrina, Taimagambetov, 2014; Anoikin et al., 2019, 2020). At most sites (Zaisan-1–3, Bukhtarma-1–5, Kozybai-1–2, Espe-1–3, and others) artifacts were collected from the surface (Derevianko et al., 2003b; Taimagambetov, Ozhereliev, 2009; Rybin, Nokhrina, Taimagambetov, 2014; Anoikin, 2017). A greater occurrence of artifacts on the surface of sites can be explained by a severely continental and arid climate that hampered the accumulation of loose sediments. Under such circumstances, each new stratified Paleolithic locality in this region becomes a source of information that can significantly expand our understanding of the early peopling stages here. Since Paleolithic sites in the region are scarce, it is important to revise earlier findings at the current level of knowledge and analytical techniques, especially with regard to chronology and environmental reconstruction. The resumed study of Shulbinka assemblages from East Kazakhstan made it possible to attribute the industry to the late stages of Paleolithic rather than to the Middle-to-Upper Paleolithic transitional period, as was previously supposed (Anoikin et al., 2020).

This paper presents new findings from field studies at Aktas, an Upper Paleolithic site in North Kazakhstan, first excavated in 1982 and 1983 (Matvienko, Kozhamkulova, 1986; Kozhamkulova, Pak, 1988). As the studies in the previous century were tentative, and the Late Pleistocene attribution was only a speculation, new state-of-the-art research is needed to arrive at an accurate cultural and chronological assessment of Aktas.

Previous studies

Aktas is located in the Akmola Region, Republic of Kazakhstan, 3 km south-west of Zhamantuz village (Fig. 1, *1*). The territory belongs to the isolated northern part of the Kazakh Hummocks, within the Kokshetau Uplands. The site is situated on the flat top of a cone-shaped hillock (ca 420 m above sea level), which is crowned with an exposure of quartzite rocks 15–20 m high (Fig. 1, *2*).

The study of the site began in 1982, after a geological survey conducted by researchers from the Institute of Geology, Academy of Sciences of the Kazakh Soviet Socialist Republic, and headed by V.N. Matvienko. During the survey, a bone-bearing horizon was found near the northern part of the rock-remnant. The horizon contained Late Pleistocene faunal remains, including bones with supposedly anthropogenic impact marks (Matvienko, Kozhamkulova, 1986). In that part of the site, the rock exposure is a nearly vertical wall up to 20 m high. In some places, the angle of the wall's inclination exceeds 90°, thus a small natural rock overhang is formed. Loose sediments form a gentle slope directed east–west at an angle of approximately 3–5°. In 1983, Matvienko and researchers from the Institute of Zoology, Academy of Sciences of the Kazakh Soviet Socialist Republic, continued the studies of the site (Kozhamkulova, Pak, 1988).

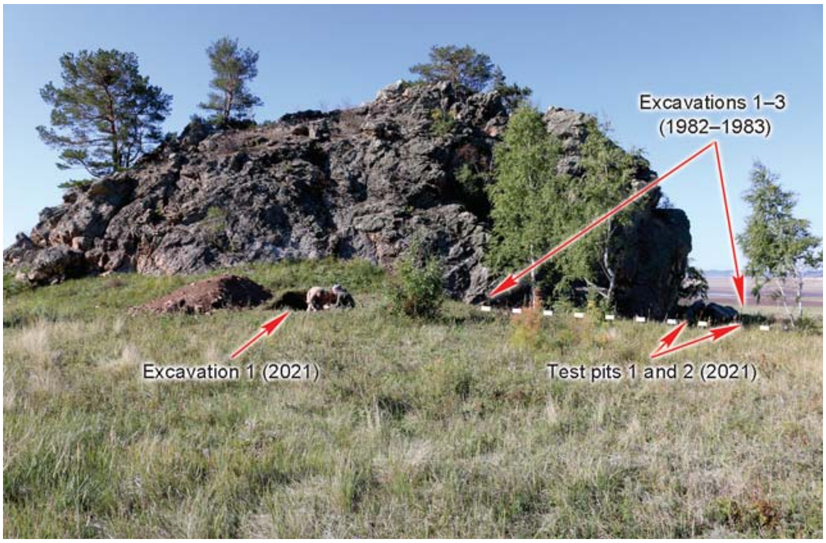
Fig. 1. Aktas site.
1 – map showing the location of the site;
2 – north-eastern view.

In 1982 and 1983, three adjacent excavations measuring approximately 25 m^2 were made near the northern edge of the rock-remnant (Fig. 2). The combined stratigraphic section, up to 4 m thick, included six main units represented by a soil horizon, layers of dense loamy sand and loam, and by materials of weathering crust (Fig. 3, *1*). Faunal assemblage, comprising thousands of bones and bone fragments, was collected from the middle part of the section, at a depth of 1–3 m from the ground surface (Matvienko, Kozhamkulova, 1986; Kozhamkulova, Pak, 1988).

In the collection of identifiable bones (ca 500 spec.), B.S. Kozhamkulova and T.K. Pak (1988) identified 16 species of mammals: cave hyena, cave lion, wooly rhinoceros, aurochs, bison, red deer, koulan, argali, and others.

Pollen analysis of sediments, conducted by L.N. Chupina, allowed identification of four main types of palynospectra. The first (corresponding to layer 5 in test pit 1 of 2021) and the second (corresponding to layer 4 in test pit 1 of 2021) palynospectra are typical of forest-steppe vegetation associated with expansion of swamps under humid and severe climate conditions. The third palynospectrum (corresponding to layer 3 and to the base of layer 2 in test pit 1 of 2021) represents the steppe type characterized by development of xerophilous vegetation in an arid climate; so this part of the section can be attributed to the end of the Late Pleistocene. The fourth spectrum (corresponding to layers 2 and 1 in test pit 1 of 2021) suggests more mesophilic vegetation; it represents Early Holocene pine and birch forest-steppe (Ibid.).

Bone "artifacts" interpreted as polishers and awls/needles evidence the presence of humans at the site. Regrettably, no explicit description or illustrations are given in the publications. The only photograph available (Matvienko, Kozhamkulova, 1986: 68) does not permit its reliable identification as the artifact.



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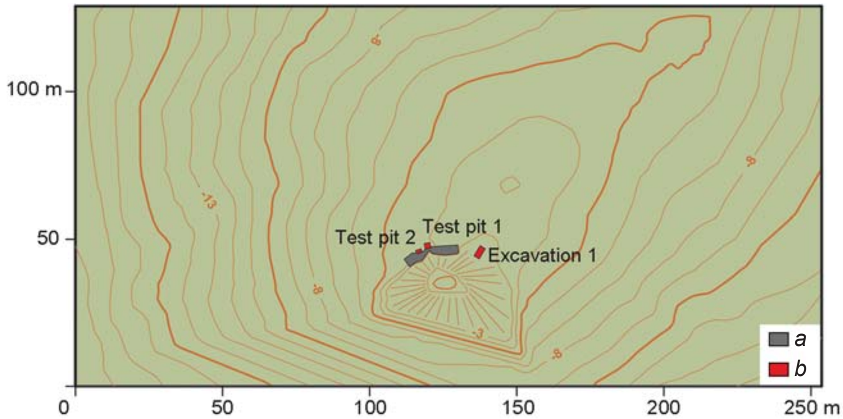

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Fig. 2. Aktas site.
1 – location of the test pits and the excavations, northern view; *2* – topographic plan.
a – excavation 1 of 1982 and 1983; *b* – test pits and excavation of 2021.

Examination of the preserved part of the faunal assemblage collected in 1982 and 1983 and housed at the Institute of Zoology, Republic of Kazakhstan (Almaty), did not confirm the supposition that some bones bore evident marks of anthropogenic impact. The problem of lithic artifacts turned to be even more complicated, as they are mentioned only in one paper as "a few primitive stone tools and tool blanks made of quartzite: adzes, polishers, axe blanks, etc." (Ibid.: 67). No descriptions of the artifacts nor of their figures are given, and their storage location is unknown. Given that the authors are not archaeologists, and the rock ledge is composed of quartzite, the erosion of which results in artifact-like debris of various size, the claim that lithics were present in the assemblage must be looked at with a critical eye.

Results of 2021

Stratigraphy

Examination of Aktas was resumed in 2021, with the aim of assessing the chronology of the site and finding the evidence of human presence there. In the northeastern portion of the site, an area measuring 4 × 2 m and up to 3 m deep was excavated on a flat platform close to the edge of the rock-remnant. Near the northwestern part of the rock, two test pits were made. Test pit 1 (2 × 2 m) and test pit 2 (2 × 1 m) adjoined the northern wall of the best preserved excavation 3 of 1983 (see Fig. 2). The maximum depth of excavation there reached 2.8 m.

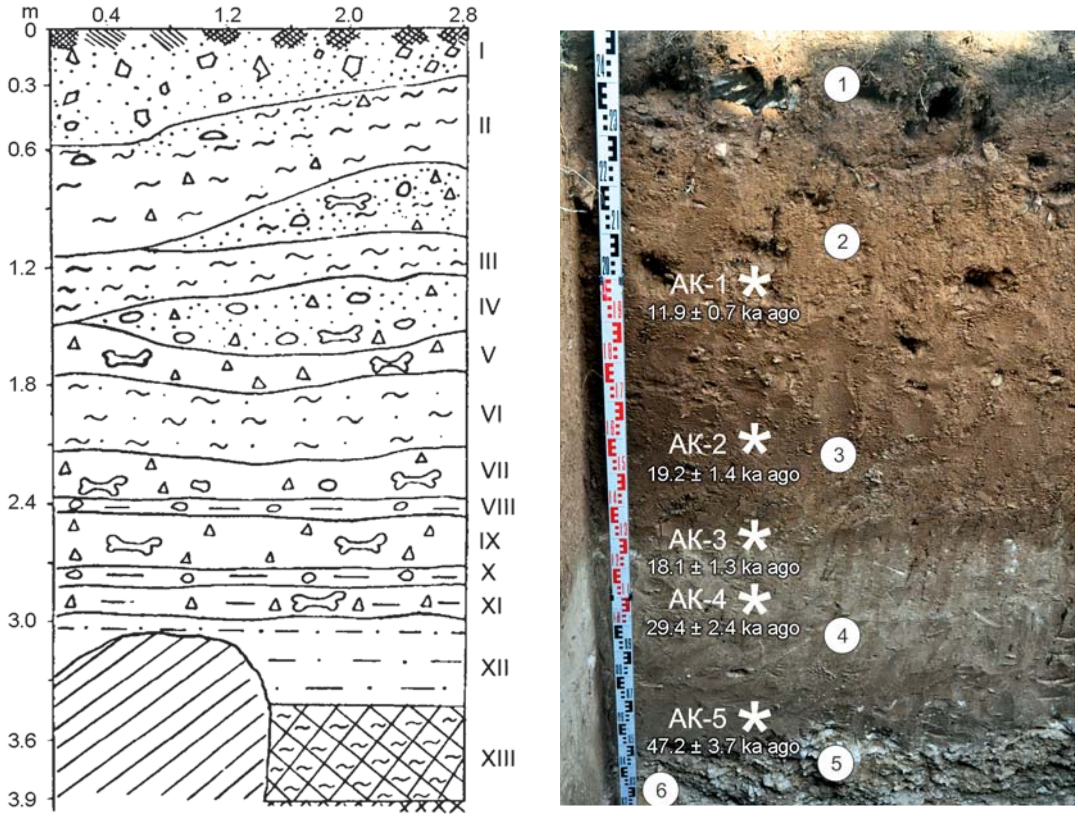

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Fig. 3. Aktas site.
1 – stratigraphic profile of the western wall in excavation 2 (1982 and 1983) (Kozhamkulova, Pak, 1988: 124);
2 – northern wall of test pit 1 (2021), with indicated places where samples for OSL-dating were taken.

The most representative stratigraphic profile was revealed in test pit 1. It was correlated with the final section obtained during the excavations of 1982 and 1983 (Matvienko, Kozhamkulova, 1986). The following lithological units (from the top down) were recorded (see Fig. 3, *2*).

Layer 1. Modern soil horizon. Thickness 0.05–0.15 m (layer I in the section of 1982–1983).

Layer 2. Light, reddish-brown-gray loam including slightly weathered clasts varying in size. Thickness 1.0–1.2 m. Rare faunal remains were found in the zone of contact with underlying sediments (layer II).

Layer 3. Heavy, brownish-gray, dense sandy loam including small, slightly weathered clasts and calcareous concretions. Thickness 0.6–0.7 m. The layer contains well-preserved faunal remains (layers III–VI).

Layer 4. Detritus horizon filled with gray sandy loam. Clasts are slightly weathered, varying in size, some are large. Thickness 0.2–0.4 m. The layer contains poorly preserved faunal remains (layer VII).

Layer 5. Heavy, dense, gray and greenish-gray loam containing large number of small, slightly weathered clasts. Thickness up to 0.3 m. No faunal remains were found (layers VIII–XI).

Layer 6. Products of weathering crust of quartz-sericite and quartz-chlorite shale: heavy, loose, reddish-brown sandy loam. Visible thickness up to 0.1 m (layer XII).

The stratigraphic situation in the excavation differed from that recorded in the test pits. This can be explained by their differing locations. The excavation was located in the area with the thickest loose sediments. At the same time, main lithological units (including those containing paleontological materials) recorded in the test pits were also traced in the excavation (see Fig. 2). The differences were observed in the lower part of the section: between the bone-bearing sediments (the base of layer 4, analogous to layer 4 in the test pits) and the weathering crust (layer 8), the excavation, as compared to the test pits, comprised more lithological units, including a lens of heavily carbonized dark loams (layer 5), a broken paleosol horizon (layer 6), and a stratum of loose, rusty ocherous sandy loam (layer 7).

Paleontological material

Paleontological finds (241 spec.) were recorded in all excavated areas, though almost all of them came from the test pits (layers 3 and 4) (Table 1). In the excavation, only two large identifiable bone fragments were found, in the base of layer 4.

The bones are highly fragmented. Identifiable remains approximate 22 %. However, percentages differ significantly across the strata: ca 6 % in layer 4, and ca 26 % in layer 3. Layer 3 contained more bones than layer 4, and their preservation was better. In layer 4, most faunal remains were destroyed and "packed" into a bone-bearing breccia.

The bulk of the faunal complex relates to ungulates, whose species identification is impossible. Only the bones of Pleistocene horse (*Equus ferus*), woolly rhinoceros (*Coelodonta antiquitatis*), and mountain sheep (*Ovis ammon*) were reliably identified. Fragments of ribs, including those suitable for species identification, form a fairly high percentage. In taphocenoses associated with activity of carnivores, articular parts of ribs are normally absent.

Indicators of the anthropogenic origin of taphocenosis include the following (Klementiev, 2011; Pickering, 2002; Turner, Ovodov, Pavlova, 2013): small proportion of identifiable bones (1/4 of total number); absence of intense carnivore gnawing marks on bones (especially on epiphyses of ribs and tubular bones); and presence of a heavily abraded, "rolled" articular part of a horse's scapula, found *in situ*. In natural taphocenoses, a worn-off surface indicates significant transfer of the bone. No such condition is seen on the faunal remains of this site; hence, the articular part was either subjected to intentional anthropogenic effect or to trampling on the surface (Blasco et al., 2008). The almost complete absence of carnivore bones also serves as indirect evidence.

It is difficult to characterize statistically the state of bone surface preservation, since the number of finds is small and they came from the periphery of the site. Our experience and that of specialists in tapohonomy (Behrensmeyer, 1978) suggest that deposition was rapid: the surface of the cortical layer is well preserved, revealing no cracking or desquamation, in contrast to what is observed on bones that had been exposed for a long time. No statistical data on separate skeletal parts can be presented, owing to the scarcity of identifiable bones.

As to the chronological attribution of the paleofaunal assemblage in question, it should be noted that fossilization of the bones is typical of the period corresponding to MIS3, within the distribution zone of loess-like sediments in the moderate climatic belt of Eurasia. During the Late Pleistocene, in the north of Kazakhstan, wild horse, whose remains are most numerous at Aktas, was a wide-spread common species (Kozhamkulova, 1969; Gaiduchenko, 1998). The presence of *C. antiquitatis* and *O. ammon* remains is typical of the Late Pleistocene faunal complex in this region (Kozhamkulova, 1969).

Chronological assessment

During the field studies, five samples were taken for luminescence dating from the northern wall of test pit 1 (layers 2–4) (see Fig. 3, *2*). Preliminary treatment of the samples was conducted in OSL-dating laboratories of the Lomonosov Moscow State University and the Institute of Geography RAS, according to procedure elaborated at Aarhus University (Denmark)

Table 1. **Paleontological materials collected at Aktas in 2021, spec.**

Taxon / category	Test pit 1		Test pit 2	Excavation	Total
	Layer 3	Layer 4	Layer 3	Layer 5	
Coelodonta antiquitatis	2	3	28	1	34
Equus ferus	2	–	16	–	18
Equidae gen.	5	2	–	–	7
Ovis ammon	–	1	–	–	1
Large ungulate	16	15	96	1	128
Middle ungulate	2	2	–	–	4
Unidentifiable fragment	19	30	–	–	49
Total	46	53	140	2	241

(Kurbanov et al., 2019). OSL dating was performed at Risø Laboratory, Aarhus University.

Dating was carried out according to the modern methodology of parallel measurements on quartz and potassium feldspars, including the analysis of the distribution of doses and final ages (OSL, IR_{50} and $pIRIR_{290}$) (Murray et al., 2012). The results are given in Table 2. The most reliable results, based on the analysis of quartz samples, are printed in boldface. The data obtained show good correlation between estimations based on quartz and potassium-rich feldspar, which points to a high-precision for the obtained chronology. Thus, the series of OSL-dates has shown that the accumulation of layer 2 took place during the period corresponding to the second half of MIS2, between 20 and 12 ka ago; whereas bone-bearing layers 3 and 4 were formed during the period corresponding to MIS3, between 50 and 30 ka ago. These estimates do not contradict the composition of paleofauna, palynological spectra (Matvienko, Kozhamkulova, 1986), and the presence of paleosol underlying these sediments in excavation 1. This paleosol was probably formed during the initial stages of the Karga (Valdai) interstadial (early MIS3).

Table 2. **Results of luminescence dating obtained for Aktas**

No.	Laboratory No.	Sample code	Sampling depth, cm	Water content, %	Equivalent dose (D_e)									Dose rate, Gray/thousand years		Age, thousand years			Age correlations	
					Fk, IR_{50}			Fk, $pIRIR_{290}$			Quartz			Fk	Quartz	IR_{50}	$pIRIR_{290}$	OSL	IR_{50}/OSL	$pIRIR_{290}$/OSL
					Gray	n_r	n_a	Gray	n_r	n_a	Gray	n_r	n_a							
1	218486	AK-1	72	10	32 ± 3	0	8	51 ± 4	0	8	41.8 ± 1.0	1	17	4.45 ± 0.19	3.51 ± 0.18	7.3 ± 0.6	11.4 ± 1.1	**11.9 ± 0.7**	0.61 ± 0.07	0.96 ± 0.11
2	218487	AK-2	107	10	42 ± 2	0	8	80 ± 6	0	8	54.5 ± 2.3	0	18	3.77 ± 0.16	2.84 ± 0.15	11.1 ± 0.8	21.3 ± 1.9	**19.2 ± 1.4**	0.58 ± 0.06	1.11 ± 0.12
3	218488	AK-3	138	10	65 ± 9	0	8	82 ± 7	1	7	62.6 ± 3.0	0	18	4.39 ± 0.19	3.45 ± 0.18	14.7 ± 2.2	18.6 ± 1.8	**18.1 ± 1.3**	0.81 ± 0.14	1.02 ± 0.12
4	218489	AK-4	164	10	107 ± 10	0	8	124 ± 14	0	8	92.6 ± 5.8	3	20	4.17 ± 0.18	3.23 ± 0.17	25.6 ± 2.6	29.7 ± 3.7	**29.4 ± 2.4**	0.89 ± 0.12	1.04 ± 0.15
5	218490	AK-5	193	10	120 ± 7	0	8	240 ± 13	0	8	148.3 ± 8.2	1	19	4.08 ± 0.18	3.14 ± 0.17	29.4 ± 2.1	58.9 ± 4.2	**47.2 ± 3.7**	0.62 ± 0.07	1.25 ± 0.13

Note: n_r – number of rejected aliquots; n_a – number of accepted aliquots; Fk – potassium rich feldspar.

Archaeological materials

In the field season of 2021, no lithic artifacts were found *in situ*. However, when the spoil heaps from trenches of the 1980s were scanned, deposits similar in structure to layer 4 revealed an artifact made of spotted tawny-gray flint (Fig. 4). This was a longitudinal straight side-scraper fashioned on a core-like fragment of subrectangular shape and trapezoidal in cross-section. The dorsal face of one of the straight longitudinal edges shows large and medium, abrupt and vertical, stepped retouch forming a scraping element. On the opposite edge, a small area in the distal part was modified by irregular retouch on the dorsal face. The character of retouching and morphotypological features of this artifact correspond to the Upper Paleolithic.

Traceological analysis

Examination of the paleontological materials collected in 2021 revealed three items bearing marks of anthropogenic impact: the first phalanx of a horse,

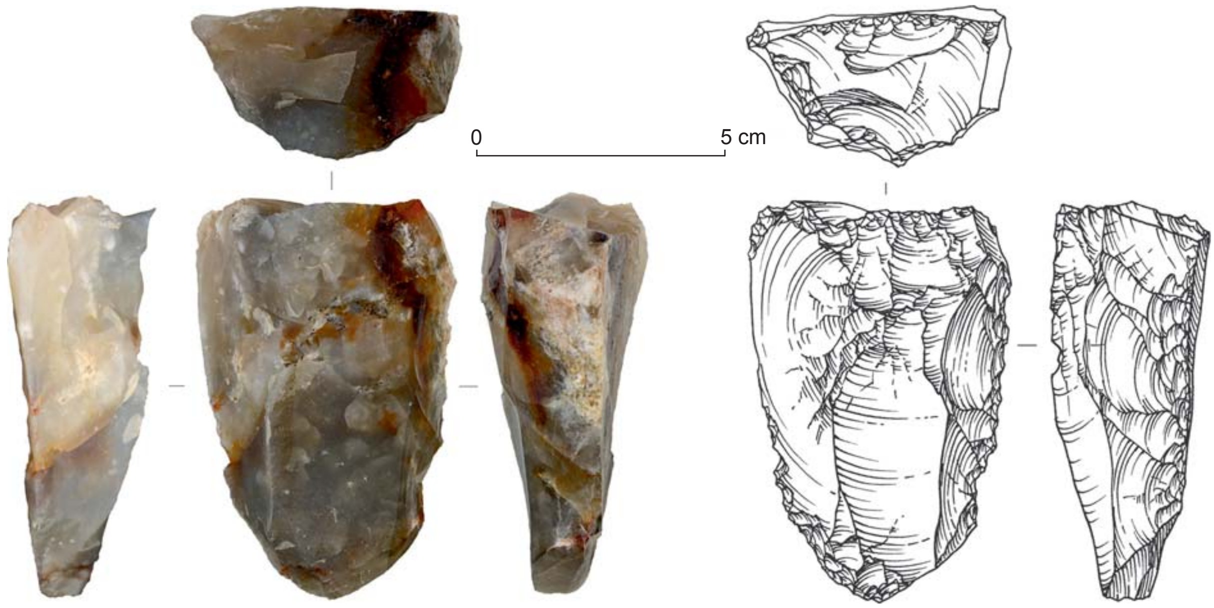

Fig. 4. Photograph and trace-drawing of the side-scraper from Aktas.

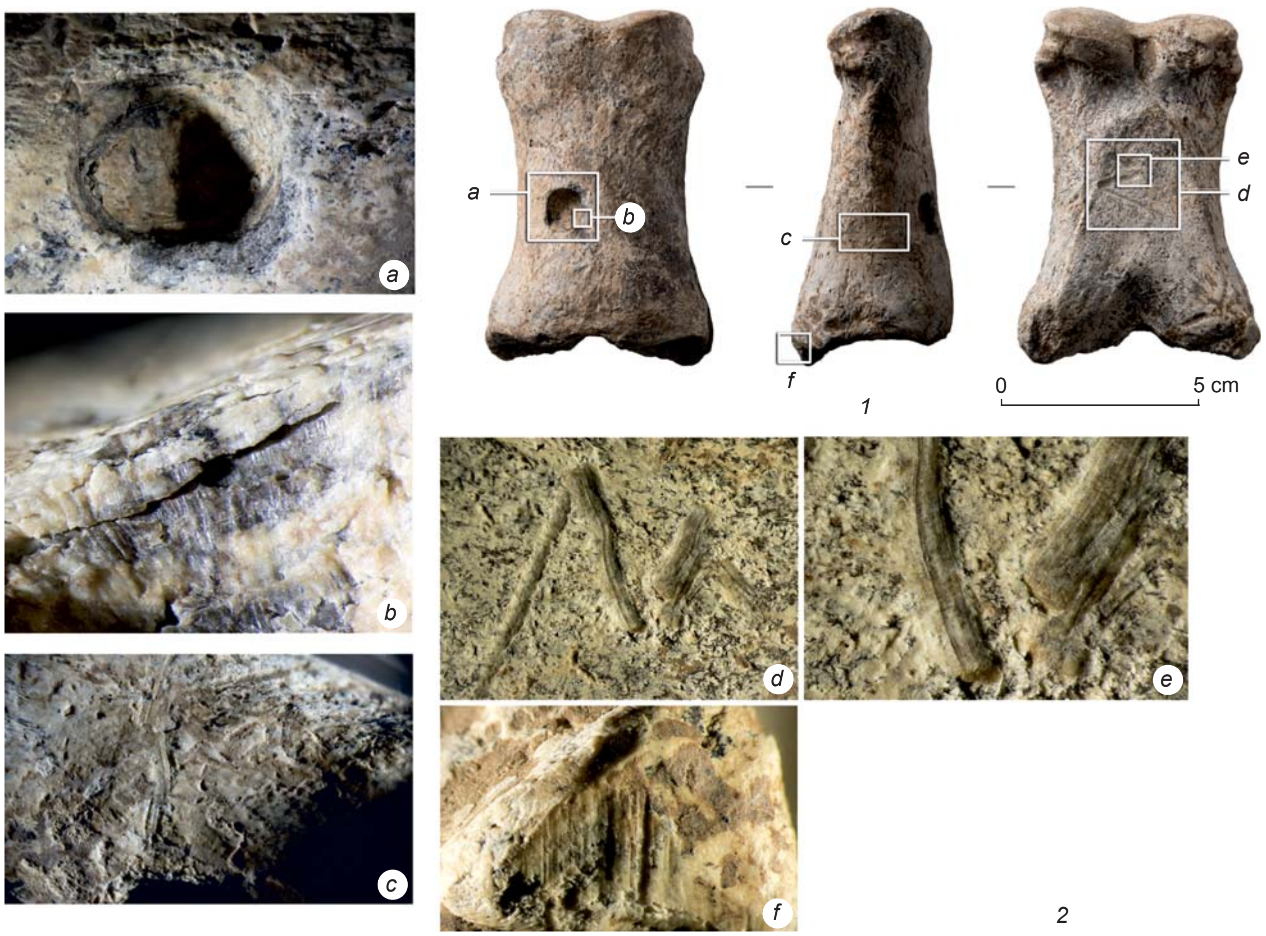

Fig. 5. Horse phalanx from Aktas in three projections (*1*), and traces of artificial modification on its surface (*2*).
a – lune in the medial part on the dorsal face (×12.5 magnification); *b* – linear marks located vertically on the lune's wall (×32 magnification); *c* – series of grooves with a typically ribbed bottom, located close to the lune on the dorsal face (×12.5 magnification); *d*, *e* – series of identical grooves on the plantar face (×8, 25 magnification); *f* – linear marks along the proximal edge (×25 magnification).

fragments of a rib, and fragments of a tubular bone of a large ungulate.

First phalanx of an ancient horse (Fig. 5). The bone is well preserved. Damages to the compact bone surface are rare; they are visible on protruding parts only. Traces of soil saprotoph activity (plant roots) are present.

The medial part of the dorsal face has a damaged area shaped as a heavy patinated deep lune (Fig. 5, *a*). Close to it, there are distinct wide grooves with a typically ribbed bottom (Fig. 5, *c*, *d*), indicating tool use (Fritz et al., 1993). On the plantar side, identical grooves are present (Fig. 5, *e*). These were likely caused by the removal of soft tissues with a stone tool. A series of similar linear marks (Fig. 5, *f*) serves as another evidence of artificial modification. Judging by the location, they probably appeared during detachment of the phalanx from the joint, or during abrasion of this area. Noteworthy is the lune on the dorsal surface of the phalanx (Fig. 5, *a*). In profile, it is V-shaped, with a small inclination. In plan view, its bottom is subround and edges are subsquare. Fragments of compact bone on the bottom of the lune suggest pressure rather than blow. Even at small magnification (ca ×30), parallel linear marks located vertically are clearly seen (Fig. 5, *b*). Judging by their shape, the object that brought about the damage was not too sharp, and penetrated into the surface at a small angle. The shape of the cavity and the absence of any marks on the opposite side of the phalanx exclude the possibility of the lune's appearing under the impact of the teeth of a large predator.

Similar artificial lunes, though larger and less distinct, were observed on large bones of mammoth and wooly rhinoceros found at the Paleolithic sites of Gari, Evalga, and Neftebaza in the Sverdlovsk Region (Russia) (Serikov, 2020) and at Mezhirichi (Ukraine) (Pidoplichko, 1976: 116–199). Cavities on the bone from Mezhirichi were interpreted as appliances for fastening elements of dwellings (guides, clamps for hides) (Ibid.).

It is hardly possible that the phalanx from Aktas served as a constructive element of a dwelling, taking into consideration the size of the bone and that of the cavity in it. However, it cannot be excluded that it was used as a rest or a handle in some utilitarian operations (handle of an awl or a punch, etc.).

Fragment of rib of a large ungulate (Fig. 6). The surface of the bone is exfoliated; small pieces of the

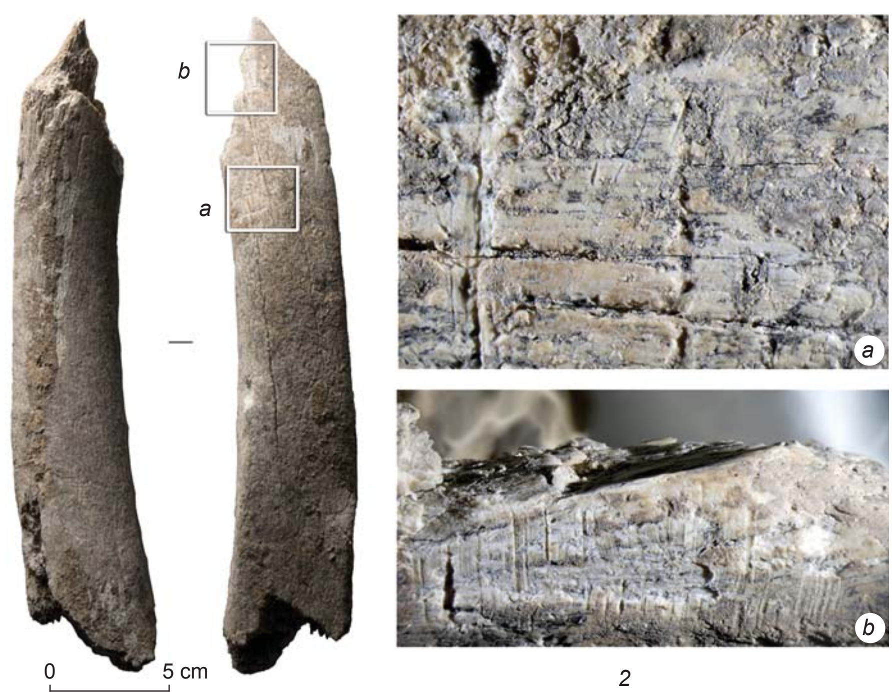

Fig. 6. Fragment of a rib of a large ungulate from Aktas in two projections (*1*), and traces of modification on its surface (*2*).
a – the first group of scratches located transversely to the bone (×10 magnification); *b* – the second group of linear marks of varying depth located transversely to the bone (×10 magnification).

upper covering continue crumbling. The outer layer of the compact bone is heavily damaged. Preliminary traceological analysis revealed two groups of linear traces on the outer side of the rib. The first group consists of several rather deep scratches located transversely, at different angles (Fig. 6, *a*). The second group is a series of unidirectional straight linear marks: some of them are deep, others are shallow. The first group likely attests to successive cutting operations, possibly the removal of soft tissues; while the second indicates simultaneous emergence of the entire group of marks, resulting from a contact of the rib surface with the working edge of a tool, possibly during scraping (Fig. 6, *b*).

The shape of the rib fragment at breached areas corresponds to green fracture. With regard to the poor state of preservation; it can only be supposed that the rib was split by a human.

Fragment of tubular bone of a large ungulate (Fig. 7). The bone is in a good state of preservation. Its surface reveals no signs of scaling or cracking, the trabecular bone is excellently preserved, and the edges of broken-off parts of the fragment are smooth and undeformed. Visible defects include traces of soil biota activity.

The morphology of the fragment points to the green fracture: edges are smooth and fracture surfaces have regular shape (Fig. 7, *a*, *b*).

It can be tentatively concluded that the fragment resulted from splitting the animal's tubular bone in fresh state. Since no similar artifacts are present, one cannot speak with certainty about intentional processing; the marks described above are only weakly suggestive of anthropogenic effect.

Discussion

Excavations conducted at Aktas in 1982, 1983, and 2021 revealed a large accumulation of Late Pleistocene faunal remains consisting of several thousand bones; approximately 700 of these can be identified as to species. Most faunal remains were concentrated near the foot of the northern edge of the rock remnant, which forms there a vertical wall with a negative angle of inclination at some places. Judging by the excavation data, the spot of bone concentration extended for 15–20 m lengthwise and for 4–5 m crosswise. Outside the spot, only solitary bones were found. Actually, all faunal materials were unearthed in 1982 and 1983.

Analysis of species composition shows that most bones belonged to ungulates, primarily to horse and to a lesser degree to wooly rhinoceros. Remains of koulan and bison also occur. Other species, chiefly predators, are represented by solitary finds.

The features of the site, as well as the composition and preservation of the faunal sample, indicate a high probability of an anthropogenic origin of that taphocenosis. The site is located on a rise, so it is unlikely that the bone-bearing horizon could have been formed as a result of natural geological

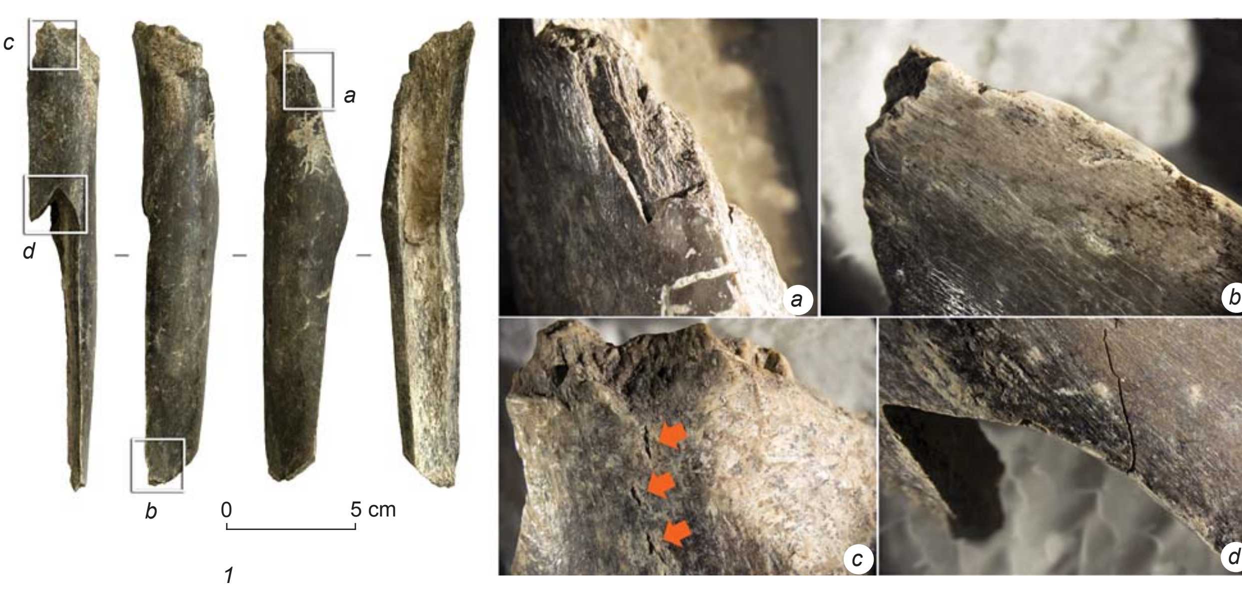

Fig. 7. Fragment of the bone from Aktas in two projections (*1*), and areas with green fractures (*2*).

processes, such as colluvial and deluvial transport, or as a result of accumulation in alluvium. Noteworthy is the predominance of bones of ungulate game-animals, mainly horses, among identifiable faunal remains. No bones in anatomical order were found. Almost all large bones are fractured, though articular parts of ribs are often preserved, which is atypical for activity of carnivores. Analysis of bone surfaces has not revealed a statistically meaningful number of marks left by predators or scavengers (gnaw marks, tooth marks, traces of gastric juice, etc.). At the same time, the collection contains solitary bones with clear marks of anthropogenic manipulations (splitting, scraping, cutting).

The convenient location of the site serves as another indirect evidence of human presence there. The site is located near a natural rock-shelter, at an elevated place from which humans could control an area of several square kilometers, with freshwater lakes.

The absence of lithic artifacts lying *in situ* can possibly be explained by the fact that no sources of raw material suitable for regular knapping were available in proximity to the site. Scarcity of lithics suggests parsimonious use, whereby debris from primary reduction was minimized, and/or a maximal amount of lithic artifacts was carried away from the site.

The only artifact found at the site was made of flint whose possible sources are located 30–40 km apart: alluvium of the Shagalaly (Chaglinka) River, washing out sediments of the Chalysh suite near the town of Kokshetau (Kokchetav). This suite contains diabases and porphyrites, as well as jasperoids, siliceous shells, and silicified sandstones (Geologiya SSSR…, 1972: 56–57). Elaborated modification of the artifact on a core-like piece also might indicate that it was transported as a raw material reserve and/or as an element of a portable toolkit.

The data obtained allow for the conclusion that Aktas is a specific archaeological object representing an “ephemeral” site. It contains evidence of human presence in the form of a single artifact, and traces of anthropogenic effect on several bones. The location of the site, the state of its preservation, and the composition of the faunal assemblage also attest to a presumably artificial origin for the bone-bearing horizon. Clearly, however, these data do not suffice to indicate prolonged residence at the site. Nor do they enable us to assess those people’s subsistence strategy or their association with a certain industry. However, the presence of anthropogenic marks on bones from different layers suggests that occupation episodes were short but numerous.

It should be noted that Aktas is one of the rare sites in the region where taphocenoses was associated with human activity. Most sites in the southern part of Western Siberia attest that humans used large natural graveyards of the “mammoth” fauna (Derevianko et al., 2003). According to the OSL-dates, Aktas is one of the earliest Upper Paleolithic sites in the region. It is attributed to the second half of MIS3, while all sites at “mammoth graveyards” belong to a later period, within MIS2. Dwellers at the site most likely followed the subsistence and behavioral strategy that possibly corresponded to more favorable paleoenvironmental conditions. This enabled human populations to be independent of natural factors causing accumulations of bones (density of forest, abundance of prey, etc.). Traces of manipulations with fresh bones and absence of evidence of a long-term occupation suggest that Aktas might have been a kill-site, where animals were hunted and butchered. In this part of the continent, the only known locality of this type is the much younger Tomskaya site, situated approximately one thousand kilometers north-west of Aktas (Abramova, Matyushchenko, 1973; Tseitlin, 1983). Importantly, in distinction from Aktas, only one mammoth carcass was butchered at Tomskaya, while lithic artifacts are numerous there (ca 200 spec.). Since archaeological finds are very scarce at Aktas, likely because of a deficit of raw material for knapping and the remoteness of its sources, whereas faunal remains evidence butchery, the site itself must have been located elsewhere. At a short distance from the site, several long rock exposures forming convenient natural shelters are available. Regrettably, loose sediments are extremely thin there, providing no opportunities for successful archaeological investigation.

Conclusions

To date, Aktas is best regarded as a butchering camp with multiple short-term occupation episodes. The scarcity of archaeological finds does not allow reliable integration of the findings into the Paleolithic picture of the region. However, the estimated age suggests that the site can be attributed to the early stages of the Upper Paleolithic. Thus, Aktas is the only stratified Early Upper Paleolithic kill-site currently known not only in North Kazakhstan, but in the southern part of the West Siberian Plain in general. Moreover, Aktas and Ushbulak are the only sites representing the early stages of Upper Paleolithic occupation of North Kazakhstan outside the Altai mountain system. Further studies of the site are hardly warranted, because the area of maximal concentration of faunal remains has been completely excavated, whereas the location of the site itself is very hard to determine. Possibly, it has not been preserved, since outside the examined sector the thickness of loose sediments is very low.

Aktas, then, evidences intense human presence in the southern West Siberian Plain as early as MIS3. This is supported not only by solitary sites in northeastern Kazakhstan, but also by largely contemporaneous remains of the "Ishim Man" (Fu et al., 2014).

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