



## Karakuduk Stone Workshop in Ustyurt Is Under New Research

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### ABSTRACT

The Karakuduk flint workshop is located on the northern slopes of the Barsa-Kelmes depression in the Ustyurt plateau, 1.5-2 km north of the well of the same name. The workshop was opened by E.B. Bijanov in 1978. Surface finds were scattered over an area of 200x100 sq. m. The collection consists of more than 900 copies. artifacts. Some of them are heavily silicified slabs of siliceous limestone, and the other half are chips split from them. The tiles are small in size - in some cases their length exceeds 10 cm (mostly 5-10 cm), the average thickness is 1.5-2 cm. The length of most chips is 2-3 cm, and some specimens reach 5 cm. The workshop also revealed a series of bifacial worked tools. Different degrees of preservation of the surfaces collected at the Karakuduk workshop were noted. But these materials were not singled out for cultural-chronological complexes and according to the degree of preservation, and also were not studied technically and typologically properly. All the materials collected here by E. Bijanov were classified as Acheulean.

### Keywords:

Ustyurt, workshop, Karakuduk, biface, deflation, patina, Barsa-Kelmes, Levallois, flake, heavy stone hammer.

The Karakuduk well site is located on the northern slopes of the Barsa-Kelmes basin, 1.5-2 km north of the well of the same name. It was discovered by E. Bijanov in 1978 [2]. Findings 200x100 sq. scattered on the square. There are more than 900 items in the collection. Half of them are composed of strongly silicified limestone slabs with some negatives, and the other half are formed of igneous rocks. The tiles are small in size, in rare cases their height exceeds 10 cm (mostly 5-10 cm), the thickness is on average 1.5-2 cm. The height of most of the fuel is 2-3 cm, some copies reach up to 5 cm. A series of bifacial weapons was also found in the workshop. It was noted that the surfaces of the objects collected from Karakud were not uniform [2].

Karakoguduk is undoubtedly a workshop. Opinions that raw materials were brought here from Esen-2 [2] are erroneous [3]. Although the level of preservation of the surface

of the stone objects found in the monument is different, E. Bijanov dated all of them to the Acheulean period [2]. E. Bijanov combined the Karakuduk, Esen-1 and 2 sites into a single culture. According to V.L. Vishnyatsky Karakuduk seems to have embodied materials from various periods not ancient since the Middle Paleolithic [5].

Thus, the most interesting and, without a doubt, the oldest find of the region - the Karakuduk workshop materials have not been studied enough, despite the fact that 45 years have passed since the discovery of the materials. Based on this, dividing the materials of the Karakuduk workshop into cultural-periodic complexes according to the level of preservation and processing techniques, as well as determining the place of the industrial technocomplexes here in the Paleolithic of Uzbekistan are the main goals and tasks of this research:

Technical and typological research was carried out on the stone objects collected from the Karakuduk site, which was found in the same cave as the Esen-2 workshop (distance is 60 km). Stone objects are small in size, in rare cases their height exceeds 10 cm (mostly 5-10 cm), and they are made of highly silicified tiles with an average thickness of 1.5-2 cm. In addition, materials were divided into complexes according to the level of preservation, and in this A.P. The method of "deflation rate" developed by Derevyanko and his staff was used. As a result, first of all, according to the level of preservation of materials, it was divided into cultural-periodic complexes for the first time. It was found that there are three such complexes.

The first complex of the Karakuduk workshop included artifacts with strongly deflated surfaces, but typologically legible (86 artifacts). The stonework of this complex is as smooth as the natural broken tiles of highly silicified limestone scattered in the workshop. The set includes (13) one-double-beat, perpendicular and orthogonal types of nuclei.

Among the stone weapons of the first complex, scrapers (15 pieces) take the main place. They are formed using retouches and, in most cases, unifacial minor directions. The shape of the edges is convex, straight and S-shaped. A small number of serrated (5) and serrated (6) weapons were also found in the complex. They are processed using small directions. Ankoshs are clectone type.

The second complex (703 artefacts) of the Karakoguduk workshop included stone objects with a sunburned exterior.

Since the Karakuduk stone workshop is divided into three chronological complexes, it can be said that primitive people visited this place at least three times in different phases of the Old Stone Age. As a result, they reworked the stone objects left by their ancestors, in particular the nuclei. It is interesting that the objects that previously served as nuclei were also reshaped and used as cores. As a result, fuel negatives with two types of patination were created on the working surfaces of the nuclei.

At first glance, the stone objects of the Karakuduk-2 complex seem to be distinguished

from other complexes only by the degree of preservation, i.e. by the fact that they were burnt in the sun. But the industry of this complex is also technically and typologically different. First of all, it was determined that the technique of bifacial processing of stones is unique to the industry of the 2nd complex of Karakuduk. Among the ordinary weapons of the complex, as in the first complex, scrapers and toothed elements predominate, but in most cases these weapons were bifacially processed. Also, it was found that all existing bifas in the workshop belong to the 2nd complex.

44 artifacts were included in the 3rd complex of the Karakuduk stone-working workshop industry. Although this complex is small in number, its level of preservation is relatively new and less corroded, consisting only of bright patinized stoneware.

The following characteristic features of the Karakuduk industry, located on the northern edge of the Borsa-Kelmes basin, were identified:

1. The Karakuduk stone processing workshop was divided into three chronological complexes according to the level of preservation of materials and processing techniques: early - middle - late Paleolithic complexes. The artifacts of the Early Paleolithic complex are distinguished by their surface lustration, the objects of the Middle Paleolithic complex are sunburned, and the stone industry of the Third Complex is characterized by a fresh and bright appearance.

2. Since bifas formed the basis of the Middle Paleolithic complex of the Karakuduk workshop, it was determined that the collection was a workshop specializing in the production of bifas. It was also proved that bifacial technologies were widely used in the production of other ordinary stone weapons in this complex of Karakuduk.

3. Despite its small number, the third complex of the Karakuduk workshop was found to belong to the Late Paleolithic according to the level of preservation.

4. In all three complexes of Karakuduk, a deficit of raw materials was found in stone processing according to the dimensions, and this was observed in the fact that the masters of

the second and third complexes picked up and reprocessed the earlier or older stone objects. This situation led to the appearance of double and triple patinized stone artifacts.

An important factor in ranking the industries in question is their appearance. Geomorphological condition of the materials and paleogeographic data The upper part of the Karakuduk workshop was never covered with deposits of later periods. Such findings are very characteristic for the desert zones of Central Asia and Kazakhstan. In this case, the exceptional smoothing and patinization of the surface of the materials belonging to the Muste and earlier periods is considered one of their distinguishing features. Strong polishing and deep patinization are also characteristic of the Acheulean and Musta collections of Central Kazakhstan, but the Late Paleolithic materials are distinguished by the fact that the surface is relatively fresh [4]. The smoothness of the surfaces of stone objects is also characteristic of Karatov Early Paleolithic materials [1].

Thus, it can be said that Complex 1 of the Karakuduk Workshop can be dated to the Early Paleolithic, Complex 2 to the Middle Paleolithic, and Complex 3 to the Late Paleolithic. So, the Karakuduk stone workshop is chronologically a monument of different stages of the Paleolithic period.

According to the available materials, it can be said that the site of Karakuduk was first occupied by early Paleolithic hominids. During this period, the strongly silicified limestone rocks on the shores of Karakuduk were completely disintegrated and broken into small pieces. But by this time, the limestone fragments of the cave had broken into such small pieces that, in most cases, they were limited in their ability to be polished and retouched in the usual way. However, due to the lack of other deposits of better quality raw materials in the vicinity, it becomes a vital necessity to use the processing methods based on the parameters of the raw materials in Karakuduk, and not the technical traditions of the primitive craftsmen who visited the site. In the early Paleolithic period, Karakuduk was literally a workshop. The hominids who visited the site did not visit the workshop to take away the fuel for making

stone weapons and the finished weapons made from them, not the nuclei. As with other literal workshops, there was no way to take the nuclei or their pods from here. After all, it was only possible to extract one or two pieces of fuel from the available raw materials in the area. It was not possible to retouch the edges of tiles with an average thickness of 2-3 cm. In the conditions where it was impossible to break and retouch the thin tiles in Karakuduk, the homo erectus who visited this place were able to find a solution to the problem. The edges of these silicified limestone tiles were sharpened using small chisels. Therefore, the working edges of the stone tools present in the complexes were processed using unifacial and later bifacial directions. But the early Paleolithic people who first visited the workshop did not know how to make bifaces and bifacial processing. Therefore, in the ancient complex of Karakuduk, stone tools were made using unifacial directions. Scrapers, serrated weapons, ankosh, choppi, etc., were made from strongly silicified limestone tiles in the workshop. they made weapons and took them to their places. However, it can be said that the hominins wandering around the workshop area were constantly searching for the largest and thickest among the thousands of small tiles for lightning.

Thousands of years later, Karakuduk is visited by a completely different physical type of primitive man (probably Neanderthals).

Thus, the new interpretation of the Esen-2 and Karakuduk finds located in the Borsa-Kelmes basin opened new pages in the history of Uzbekistan. The Karakuduk (Complex 2) and Esen-2 sites have enriched the history of Central Asia with completely new specialized workshops. Esen-2 and Karaquduq (Complex 2) workshops, specializing in the production of bifaces, were added to the Stone Age stone-working workshops of Central Asia. But this specialization is not for commodity exchange as in the Neolithic period, but workshops limited to the needs of the manufacturing community.

Research has proven that the site of Karakuduk in the Borsa-Kelmes swamp has unique materials. According to the dimensions of the raw materials in the monument, the shortage conditions were determined and this

material found its proof. It was proved on the basis of materials that the primitive communities who visited Karakuduk found stone objects of their predecessors and reworked them, and this was called the "Karakuduk phenomenon". In fact, the reworking of worked stones abandoned during the Early Paleolithic in the Middle and Late Paleolithic is a rare phenomenon in paleolithic studies.

According to the modern study of the Borsa-Kelmes basin finds, these finds have enriched the history not only of Uzbekistan and Karakalpakstan, but also of Central Asia with new monuments related to different stages of the Paleolithic era.

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