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RECONSTRUCTION OF THE ARCHAEOLOGICAL LANDSCAPE of the Western Shore of the Caspian Sea at the end of Upper Pleistocene and Holocene

INTRODUCTION

Archaeological findings support an assertion that, in the late Pleistocene, the southern and western shores of the Caspian Sea were inhabited by people. Until now, settlements of late Upper Paleolithic-Mesolithic periods have mostly been found in Gobustan (Azerbaijan), in the plain of Mazandaran (Iran), and in the mountainous part of Dagestan (the North Caucasus). Artefacts of the Upper Paleolithic-Mesolithic periods from the southern and western shores of the Caspian Sea have revealed a connection between them. The Mesolithic artefacts from the south-west shore of the Caspian Sea can be identified as a common culture from the Mesolithic period. As likely as not, the emergence of archaeological sites as a common culture on the shore of the Caspian Sea was influenced by environmental factors during the late Pleistocene-early Holocene.

METHODOLOGY

A comparative analysis has been made on the basis of archaeological artefacts from the Upper Paleolithic-Mesolithic and Neolithic found in the southern and western shores of the Caspian Sea. By using AMS-dating method, the age of the remains of flora and fauna from the archaeological sites of Gobustan was determined. Comparing the results with similar data from other places,

features of the landscape in the region of the late Pleistocene-early Holocene have been identified.

The study of faunal remains is one of the most effective methods to reconstruct the archaic landscape. This method was used for analyzing faunal remains found in archaeological sites on the territory of Gobustan and in the plain of Mazandaran.

As is known, the artistic creativity of humanity began in the Upper Paleolithic. Examples of the art—i.e. rock drawings—may be seen in sites dating to the Upper Paleolithic and Mesolithic in the territory of the western shore of the Caspian Sea, especially Gobustan. The role of these representations for reconstructing the archaeological landscape of the late Pleistocene-early Holocene is indispensable.

RESULTS

In Azerbaijan, Mesolithic sites were first discovered in the Damjili rock cave of the Avey Mountain, in the Dashsalahli village of Gazakh region, by M.Huseynov in the 1950s.[1)]

With hills and highlands covered with big boulders and almost no greenery, Gobustan is an outstanding rock art landscape, where over 6000 rock engravings were found and registered, since the end of Upper Paleolithic up to the Middle Ages. In the reserve territory 20 shelters (caves) and 40 burial mounds were also found. (Fig.1,2,3).[2)]

Since the beginning of 1960's, artefacts of the Mesolithic material culture were revealed in Gobustan during archaeological excavations at the sites of 'Ana Zaga', 'Kaniza', 'Ovchular', 'Okuzler', 'Okuzler-2', 'Maral', 'Dashalti', 'Jeyranlar' 'Gaya Arasy' 'Gaya Arasy-2', 'Firuz'. These sites consisted of rock caves which were used as dwellings for a long time. [3)]

Located in the eastern part of the Republic of Azerbaijan and on the western shore of the Caspian Sea Gobustan National Reserve was inscribed into the World Heritage List in 2007 as the Gobustan Rock Art Cultural Landscape.

The Gobustan Rock Art Cultural Landscape consists of the following cultural features:

[1)] Huseynov (1975).

[2)] Farajova (2011: 41).

[3)] Azerbaijan Archeology (2008: 322–323).

- more than 6,000 petroglyphs
- shelters, ancient settlements, burial sites
- sacred sites
- evidence of a very long cultural continuity in a number of rock shelters.

Despite the fact that Gobustan territory has been frequented by the passage of different people during the past (see the case of the Roman Inscription), the rock art and the archaeology of Gobustan were only known by the general public and scientists from 1939, thanks to the work of I. Jafarsade. After initial discoveries in 1939–40, systematic explorations were conducted by I. M. Djafarsade from 1947 onwards; he registered and analyzed more than 3,500 images and signs on about 750 rocks. This inventory was taken over and expanded by J.Rustamov and F.Muradova, who made new discoveries of engraved rocks with more than 1,500 images and carried out archaeological excavations.

Judging by brightly expressed stylistic features and rich subjects, groups of people differing in their economic way of life, participated in the creation of the analyzed petroglyphs. In Gobustan, in Upper Pleistocene and early Holocene, in the development of the rock art of Azerbaijan VI stylistic-thematic tendencies are observed. On Paleolithic images, a man and Pleistocene fauna are presented: aurochs, wild horses. Animals are depicted on rocks one by one and in groups and are rendered in a realistic manner. In turn, the end of Upper Paleolithic art according to its stylistic features is divided into 2 phases Adhering to A. Leroi-Gouran's styles[4], one must first of all take into account 'the necessity' of 'correction' of his chronological frames and 'linearity' in periodization Sher Y.A.[5] Moreover, the individual style of a concrete site should also be taken into account. Stratigraphic analysis of images also plays an important role in the classification of styles. [6]

In early Holocene, in connection with changes in the hunted fauna, climate fluctuations, with the last transgression of the Caspian Sea, changes in the subject matter of rock drawings also take place. On rocks, domesticated oxen, wild horses, deer and goats appear, which were the major object of totem and hunting of that period. (Fig.4, 5.) Human imagery is presented less frequently. In that period, images of birds there appear, zoomorphic and anthropomorphic creatures. In terms of their presentation, they feature a more schematic

[4] Leroi-Gouran (1965, 1967).

[5] Sher (2004).

[6] Bahn, Vertut, (1997).

view compared with the drawings of Upper Paleolithic and Mesolithic epochs. In the petroglyphs of Neolith and Bronze Age, the rock carvings are divided into 2 groups, according to their stylistic features.

The first group includes pictures of animals, rendered in a more realistic way (Gobustan—Jingirdag Mountain, Kichikdash and lower terrace of Beyukdash Mounatin)(Fig.6, 7). The second group comprises petroglyphs of images of animals in Kelbajar, on Gemigaya and in Apsheron. In terms of style of depiction and content, the petroglyphs of the second group are closer to late images of Gobustan. In this group of pictures, new tendencies can be precisely traced. There are new images—ones of goats with horns curtailed into a circle.

AMS dating of the cultural layers of Gobustan has singled out the following chronological stages in the rock art. It should be noted that approximately 50 samples from different sites and cultural layers of Gobustan were dated by C14 and AMS dating. More than 100 separate stones with petroglyphs were discovered from these layers. These petroglyphs are in the same style and technique as the images on the walls of the caves.

The most ancient period (the end of Upper Paleolithic). This period is conditionally divided into two periods called 'phases'. The chronological phases were first defined by A. Leroi-Gourhan for the parietal art of Upper Paleolithic in Western Europe.[7] Indeed the definitions of three 'phases' are based on the characteristics of Gobustan petroglyphs, which are quite different from the European Cave art.

'Phase I'. (XII–X millennium B.C.) Images of aurochs heads, aurochs in natural size, deeply carved silhouettes of headless pregnant women at the Gaya arasi site on Kichikdash Mountain and in life size in the Ana zaga cave in Beyukdash Mountain .

'Phase II'. (X–VIII millennium B.C.) Images of aurochs in life size, images of aurochs in combination with profiles of headless pregnant women (stones №65, №29 of the upper terrace of Beyukdash Mountain).

Epi Paleolithic -Mesolithic (VIII-VII millennium B.C.) Deeply carved silhouettes of male hunters, as well as men with bows and arrows; petroglyphs on separate stones from the cultural layers of such settlements as Okuzler 2 and Kaniza of the upper terrace of Beyukdash, Gaya arasi and Firuz 1, Firuz 2 of Kichikdash and Shongar Mountains. There are mainly images of women, hunters, boats and aurochs here .

[7] Leroi-Gourhan (1965, 1967); Bahn, Vertut (1997); Sher (2004).

Neolithic (VII–VI millennium B.C.) Scenes of wild boars and onagers hunting in the Ovchular cave on the upper terrace of Beyukdash Mountain, stone №45, realistic images of domesticated aurochs (in the same place), petroglyphs presenting ritual magic (round dances, scenes of sacrifice and so on, the upper terrace of Beyukdash mountain, stone №67) and Kichikdash mountain, stone 19. Here the style of the pervious period is preserved: small images of women, hunters and boats.

Eneolithic (VI–IV millennium B.C.) 1) Numerous life-size zoomorphic images : deer, goats, wild boars and domesticated animals (Jingirdag mountain, Yazili hill, stones №4, №9, №92, №33, №54; Beyukdash Mountain, the upper terrace, stone №46; the lower terrace, stone №10). 2). Stylized images of people in hunting scenes and ritual magic (Beyukdash Mountain, upper terrace, stone №59) .

The Bronze Age (IV–III millennium B.C.) Images of deer and goats on Kichikdash and Jingirdag Mountains (stones №13, №33, №36, №63, №54), Beyukdash, the upper terrace, stone №42 (southern side).

Early Iron Age (II–I millennium B.C.) A scene of a deer on Yazili hill, stones №38, №40, №92, №136; Beyukadsh, the upper terrace, stone №103), scenes of sacrifice (Yazili hill, stones №24, №25), images of anthropomorphous armless figures and images of goats on Kichikdash mountain, stone 96.

Middle Ages (I–II millennium A.D.) *Modern and Contemporary periods*. Images of caravans of camels (Beyukdash Mountain, the low terrace, stone №155) horsemen, armed with spears, signs and tamgas, Roman inscription, inscriptions and images with a religious Islamic theme (an arch-mekhrab on the low terrace of Beyukdash mountain, inscriptions in the Arabian and Persian languages). Petroglyphs similar to those found in Gobustan were depicted in the caravanserai of the XV century and Gara atli sanctuary-pir.

The settlements of the end of the Upper Paleolith and Mesolith are mainly located on the top terraces of the mountains. For the hunters of that time the position of caves located at such a height was favourable in terms of safety and observation of the surrounding land. In the Neolithic period, with the rise of the level of the Caspian Sea, caves preserved their status as the main places of residence. With the lowering of the level of the sea in the Bronze Age, the middle and low terraces were also settled. In that period, Gobustan cattle farmers depicted bezoar goats with big curved horns on the rocks.

Round-shaped settlements as well as a tradition of burial in barrows emerged at the foot of the mountains.

Archaeological excavations have been conducted in different cave-shelters, settlements and kurgans, throwing light on more than 105,000 finds that now constitute the archaeological collections of the Gobustan Museum. The material includes: flints, pebbles and work tools, arrow heads and various weapons like axes, clay vessels and bones. It was also possible to find the tools used to make the petroglyphs—pebbles in rocky material harder than the limestone where the figures are engraved. This material helps to understand the prehistory of the area and to link the rock art to its correct archaeological context (fig.9,10,11).

Environmental and geographical conditions, in which first human settlers lived in Gobustan, emerged in the Upper Paleolithic around 14 BC. The inhabitants of Gobustan in the Mesolithic period lived on the shore of the Caspian Sea, fishing and hunting seals and gazelles.

98 percent of the faunal remains excavated in the cave 'Gaya arasy', which is located in the mountain of Kichikdash in Gobustan and contains stone artefacts, consist of large gazelle bones.[8)] Therefore, the Mesolithic of Gobustan has been called 'the Gazelle Mesolithic'. Apparently, as the 'Gaya arasy' cave was inhabited, the environment of Gobustan resembled a savannah where a large number of gazelles and kulans grazed. The Mesolithic of Gobustan differs with its own rock art from other known sites of the Mesolithic.

Some of the stone artefacts found among the archaeological materials in the Damjili cave located at western part of Azerbaijan Republic relates to the Mesolithic period at the very least. Stone artefacts from the Damjili cave relating to different periods support an assumption that it was settled continuously for a long time. [9)]

Of particular interest are the Mesolithic sites of Iran. They were discovered at the foot of Alburz mountain and in the Mazandaran plain. In the area, three cave shelters called Ghar-I Kamarband, Hotu and Ali Tappeh were revealed. Three limestone caves in this region near Beh Shahr represent the earliest sites of human occupation; this period began about 10,500 B.C. and was excavated by Coon in 1949 and 1951, and Ali Tappeh 1 investigated in 1962 and 1964.

[8)] Rustamov, Muradova (2008: 75).

[9)] Azerbaijan Archeology (2008: 323).

All three sites contained deep stratified deposits overlain by disturbed, later prehistoric and historical materials. Recently, as part of a national renewal of archaeological research in Iran, another rock shelter, Qari-Komishan, which contains Mesolithic deposits as well as some Neolithic potsherds has been found near the Hotu cave. Preliminary investigation suggests that the Mesolithic assemblage represents a sequence similar to those recorded at Hotu and Ghar-i Kamarband. Both the implements and the animal bones from the lowest deposits of Hotu could have come from the Seal Mesolithic of Ghar-i Kamarband which has the same C 14 date.[10)]

At Ali Tappeh McBurney recognized 23 stratigraphic layers from the Mesolithic age which he correlated with series of radiocarbon dates that spanned the period c. 12.400–11.800 BC, later corrected by dating new charcoal samples to c. 11.300–10.200 BC. The remains of large and small mammals and mollusks were recovered throughout the sequence and changes in their relative abundance suggested a division of the occupation into five main stages that McBurney tentatively correlated with part of the north-European Late glacial/early Postglacial climatic sequence. The correlation suggested by McBurney now appears too direct and oversimplified, the changes in abundance of gazelles and seals recorded at Ali Tappeh probably reflect contemporaneous Late glacial/early Postglacial changes in local forest/steppe vegetation and Caspian Sea levels. Other large mammals represented in the sequence with varying frequencies include wild sheep, aurochs, onager, wild pig and deer.[11)]

The first remains of human presence in this region date back to 10,500 B.C at Ali Tappeh 1 when the weather got warmer. The only evidence of art or ritual is a painted pebble which was from Ali Tappeh 1.

The stone tools from this cave were microlithic type and they used some worked tools such as netting hooks, and spear and dart heads as well.

According to the latest data, another cave, Qari-Komishan, located near the Hotu Cave, was discovered, in which the Mesolithic cultural layer and fragments of crockery of the Neolithic period were revealed. Mesolithic artefacts are very similar to items found out in the caves of Hotu and Ghar-i Kamarband.[12)]

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10) Fisher (1968: 804).

11) Harris (2011: 58).

12) Sunderland (1968: 403).

Another site from the Mesolithic period is Ali Tappeh. It dates back to 11,300–10,200 B.C., based on C 14 dating.[13] The abundance of bones of gazelles and seals in the site of Ali Tappeh indicates changes in the forest-steppe vegetation and the level of Caspian Sea in the Late Glacial and Post-Glacial periods. The site also contained remains of the following species: wild sheep, aurochs, onager, wild boar and deer.[14] There, a coloured river rock was discovered that apparently was used for ritual purposes.

Six Mesolithic sites are known in the Northern Caucasus: Chokh, Mekegi, Kozma-Noho, Shau-Leget, Sosruko, Medovaya Cave-2. According to reports, most of the currently known Mesolithic sites are located in the midland of the mountains. Thus, we can assume that post-glacial natural and geographical conditions do not prevent people from settling in vast mountainous and lowland parts of the territory, as well as along river valleys and the shore of the Caspian Sea.

As for the sites of Mesolithic art in the Northern Caucasus, bezoar goats, bisons, and solar images were painted on walls in the caves Chuval-Khvarabnokho and Chiyana-Khit in Dagestan.[15]

Chronologically the specified monuments overlap with the early mesolithic (Mehkegi, the lower layers of Sosruko, Shahu-leget) and the monuments from the developed Mesolithic overlap the early mesolytic (Mekegi, the lower layers of Sosruko, Shau-leget) and monuments of the developed Mesolithic (layers 2 and 1 Chokh, the top layers of Sosruko).

New research on the Chokhsky settlement, which followed in 1974, 1980–1982 under the leadership of H. A. Amirkhanov led to review of a periodization and dating of the Chokhsky settlement. As a result, three layers of which two refer to the Mesolithic (the VIII-VII millennium BC) and one to the Neolithic were allocated to them (VI thousand BC).

From the materials at the Chokhsky settlement it has been discovered that local Mesolithic finds are very similar to the Mesolithic artefacts of the southern and south-eastern part of the Caspian Sea. This has led researchers to categorize them in the cultural community called South Caspian and to define the most probable territory of this culture's formation as between the Elbrus Mountains and the Caspian Sea in the north of modern Iran where there are the earliest monuments of this community (the Hotu and

[13] McBurney (1969).

[14] Harris (2011: 58).

[15] Narochnitskiy (1988: 22–23).

Gary-Kamarband caves). Thus, people with a culture similar to the mesolytic culture of the southern Caspian Sea, occupied the Dagestan mountains about 10 thousand years ago.

CONCLUSION

On the basis of the dated artefacts, it is possible to suggest that approximately 12,000–8,000 B.C., Mesolithic settlers inhabited the cave-shelters of Ghar-I Kamarband, Hotu, Qari-Komishan, and Ali Tappeh in northern Iran; the site of Damjili in the Gazakh region and the cave-shelters of 'Ana Zaga', 'Kaniza', 'Ovchular', 'Okuzler', 'Okuzler-2', 'Maral', 'Dashalty', 'Jeyranlar', 'Gaya arasy, 'Gaya arasy-2', and 'Firuz' on the upper terraces of Beyukdash and Kichikdash mountains in Gobustan, Azerbaijan; Chokh, Mekegi, Kozma-Noho, Shau-Leget, Sosruko, and Medovaya Cave-2 in the northern Caucasus. As for paleofaunal remains, numerous rock drawings of deer, as well as the availability of paleofaunal artefacts from cultural layers indicate the existence of thick Tugay forests at that time. Wild fauna is clearly divided into two groups. The first includes inhabitants of Tugay and shrub thickets (deer, wild boar). The second group comprises inhabitants of the steppes or desert landscapes and foothills. These include the bull, camel, wild ass, wild sheep and gazelle. Bones of these animals are represented in all of main collections of Gobustan (Azerbaijan), Dagestan and northern Iran.

One of the common features of these sites in addition to the archaeological closeness is that they are located on the shore of the Caspian Sea. The changes of fauna and flora of the Caspian Sea and coastal areas was possibly influential.

The settlements from the end of the Upper Paleolithic, Mesolithic and Neolithic periods in Gobustan, as well as the archaeological materials and rock carvings found there, prove particularly helpful in terms of the restoration of the archaeological landscape of this area from the later Pleistocene-early Holocene period (Fig.12–18).

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Fig. 1–2–3. 1 – Gobustan museum; 2 – Areas of dissemination of petroglyphs of Gobustan; 3 – Borders of of the Gobustan UNESCO World Heritage Site.

Fig. 4. Map of Gobustan Rock Art Cultural Landscape.

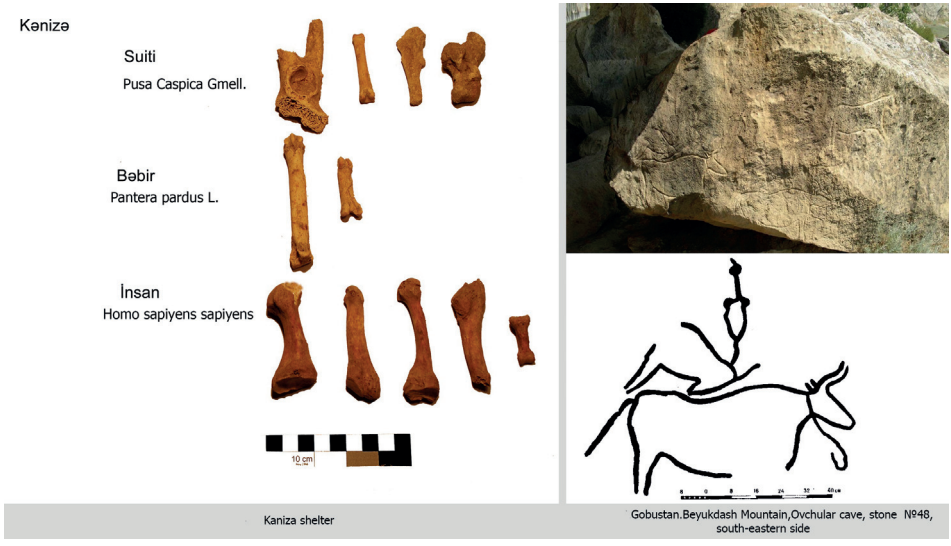

Fig. 5. Discovered bones from Kaniza shelter and image of aurochs on the stone 48 of Ovchular cave.

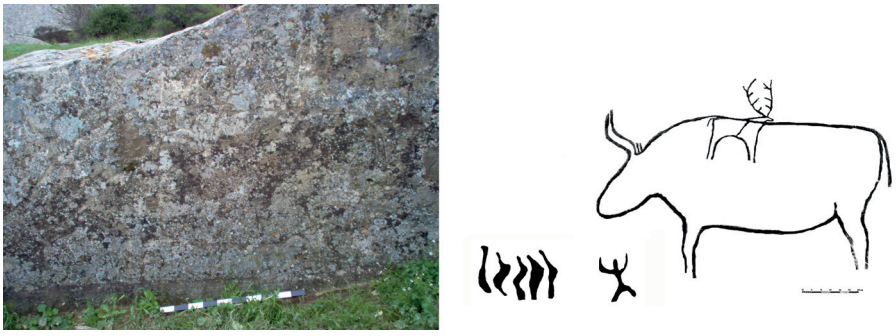

Fig. 6. Gobustan. Beyukdash mountain upper terrace stone 65.

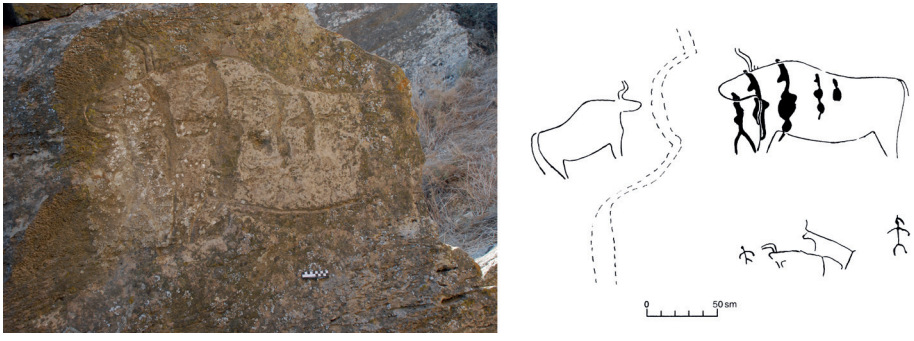

Fig. 7. Kichikdash mountain, stone 5.

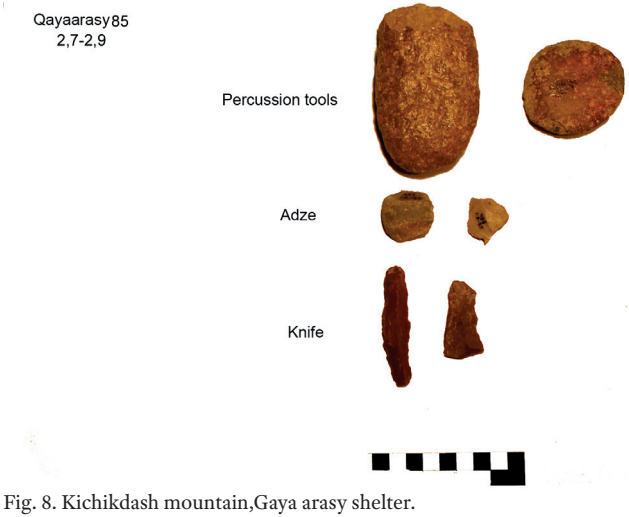

Fig. 8. Kichikdash mountain,Gaya arasy shelter.

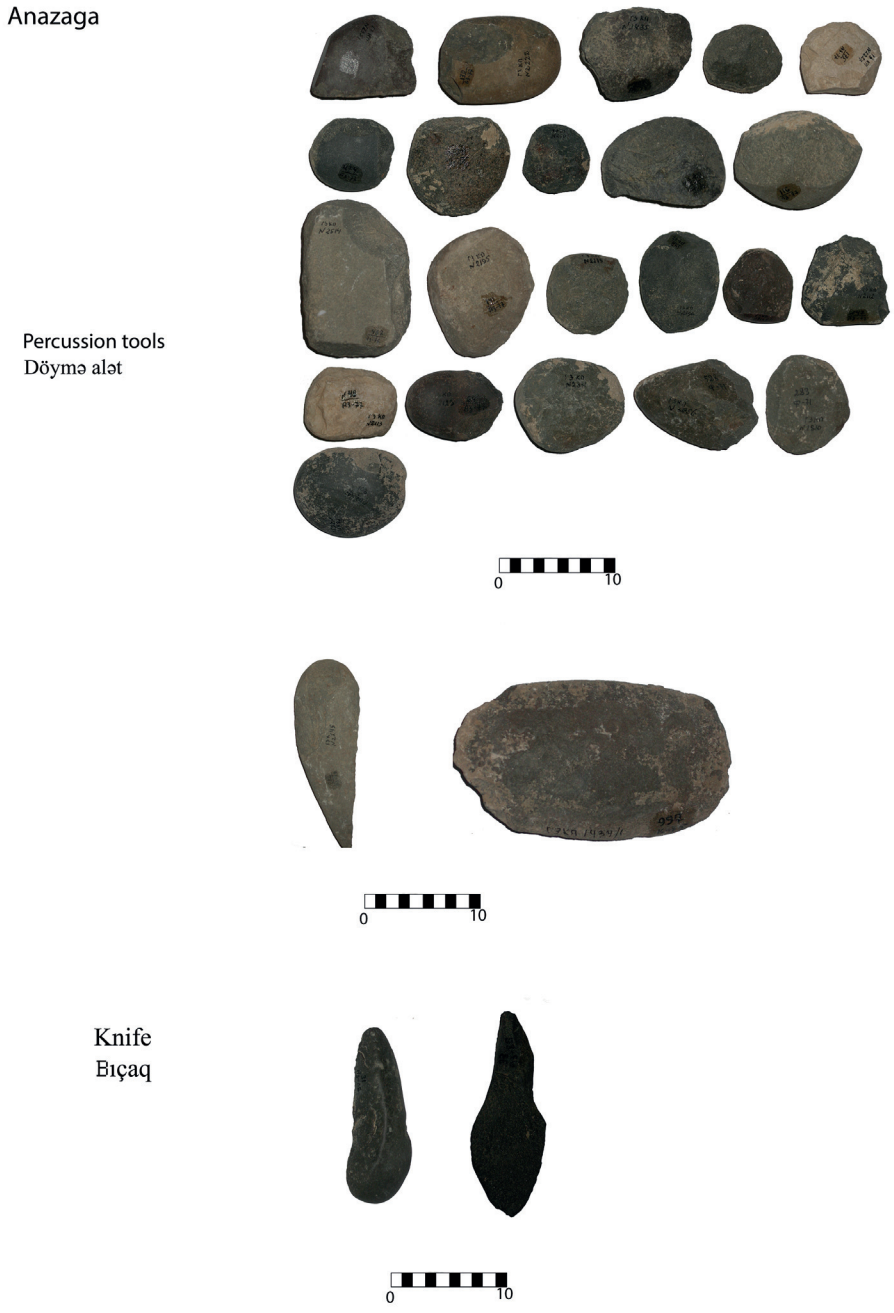

Fig. 9. Kichikdash mountain,Gaya arasy shelter.

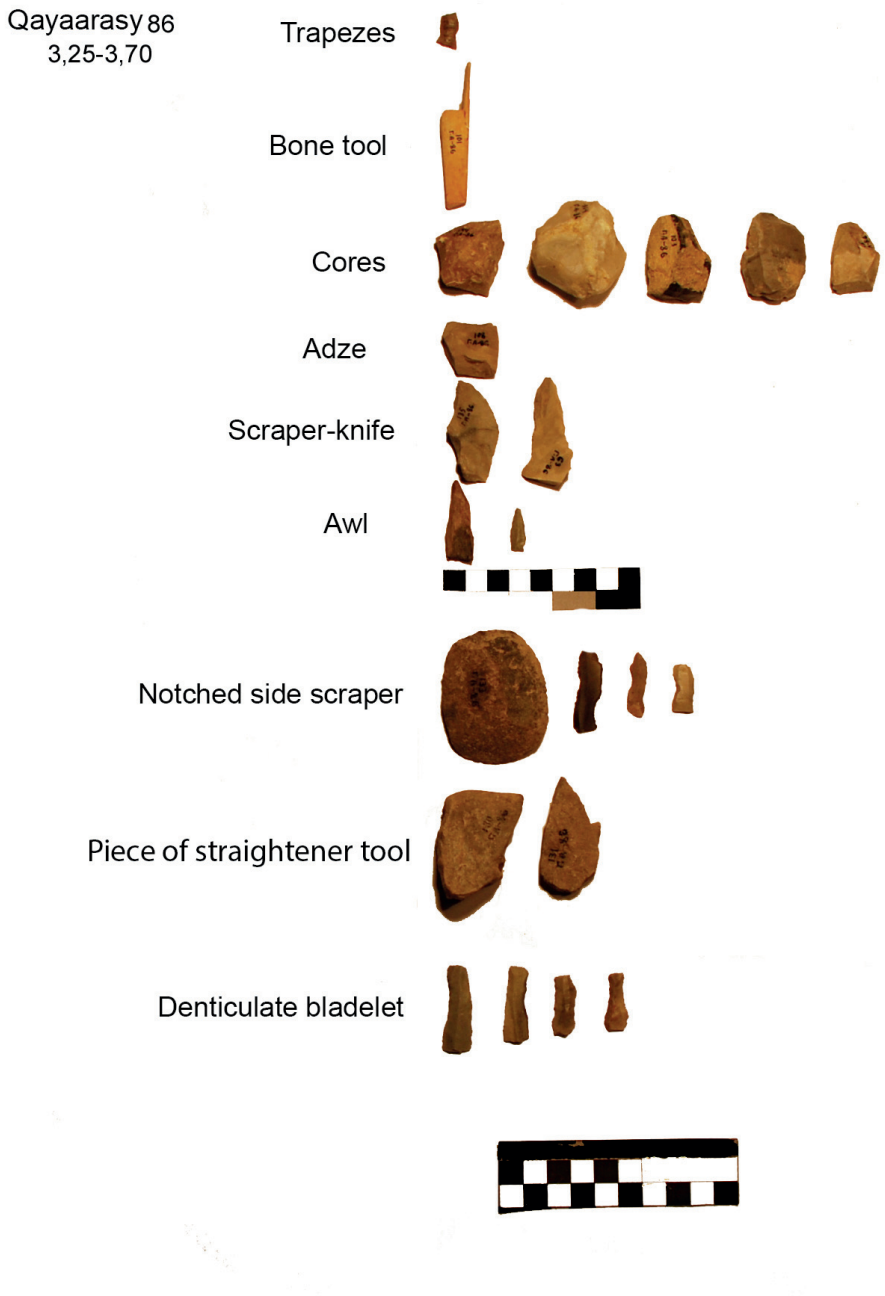

Fig. 10. Artifacts from Anazaga cave.

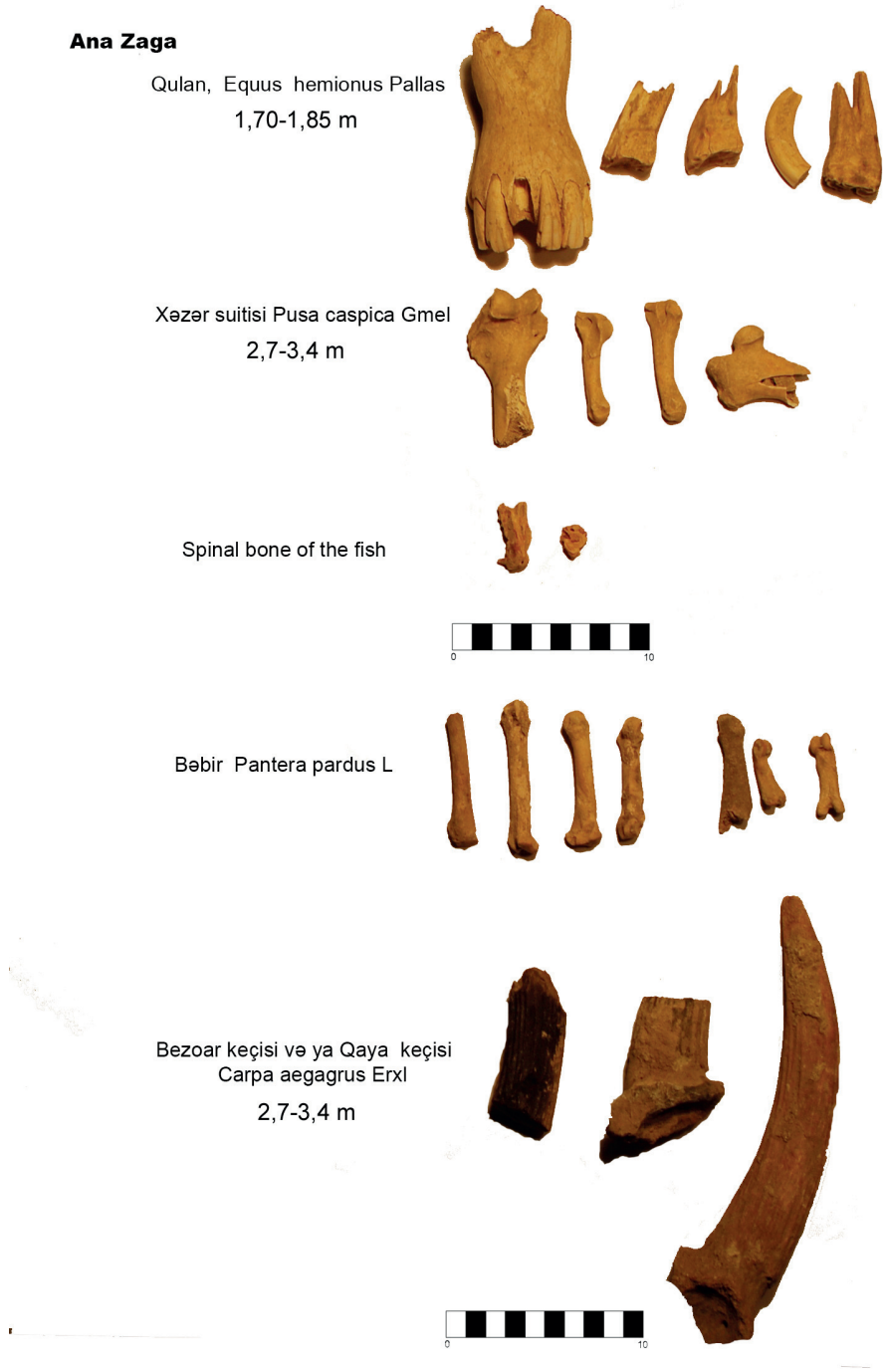

Fig. 11. Bones of extinct animals from Ana zaga cave.

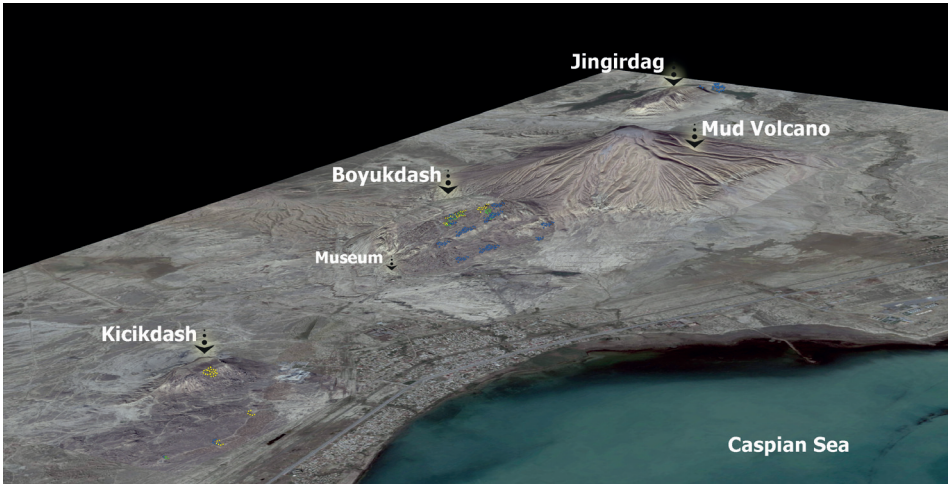

Fig. 12. Landscape of Gobustan Reseve.

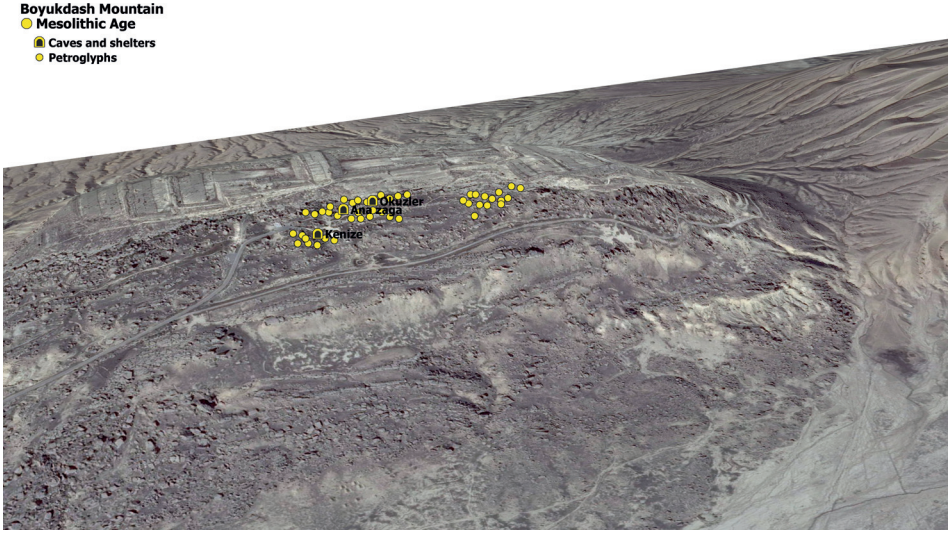

Fig.13. Beyukdash Mountain. Mesolithic Age.

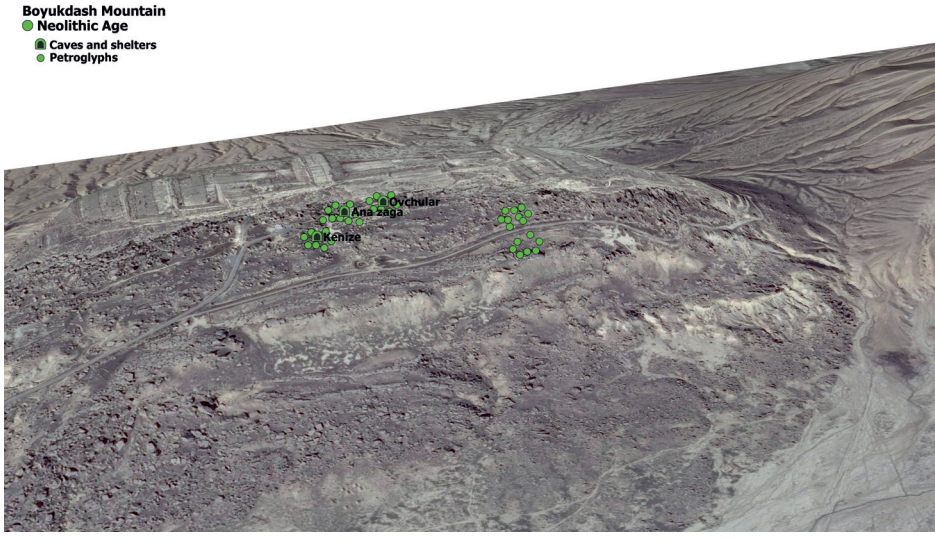

Fig. 14. Beyukdash Mountain. Neolithic Age.

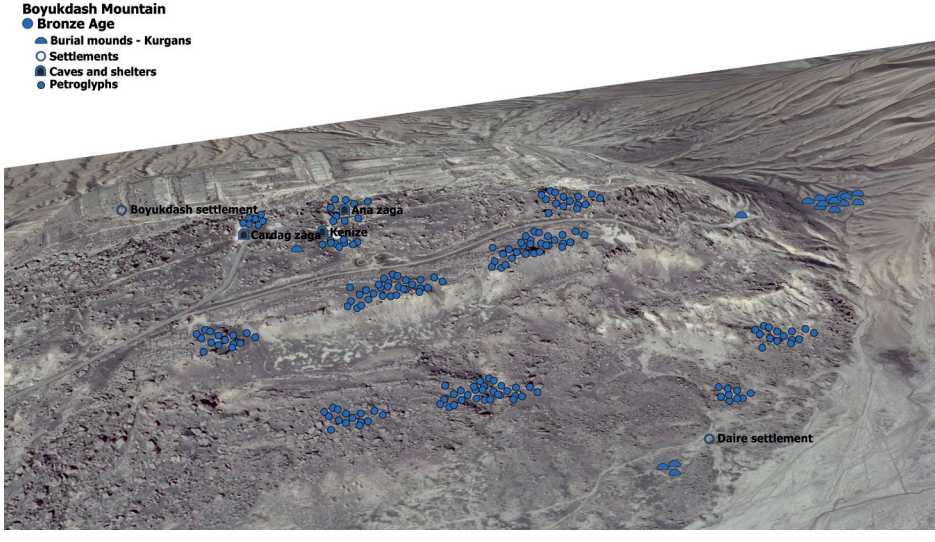

Fig. 15. Beyukdash Mountain.Bronze Age.

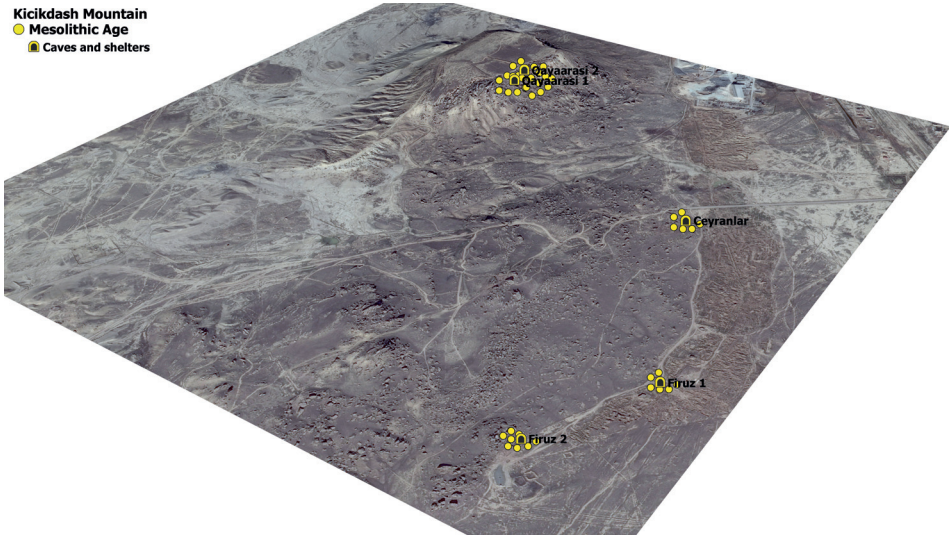

Fig. 16. Kichikdash Mountain. Mesolithic Age.

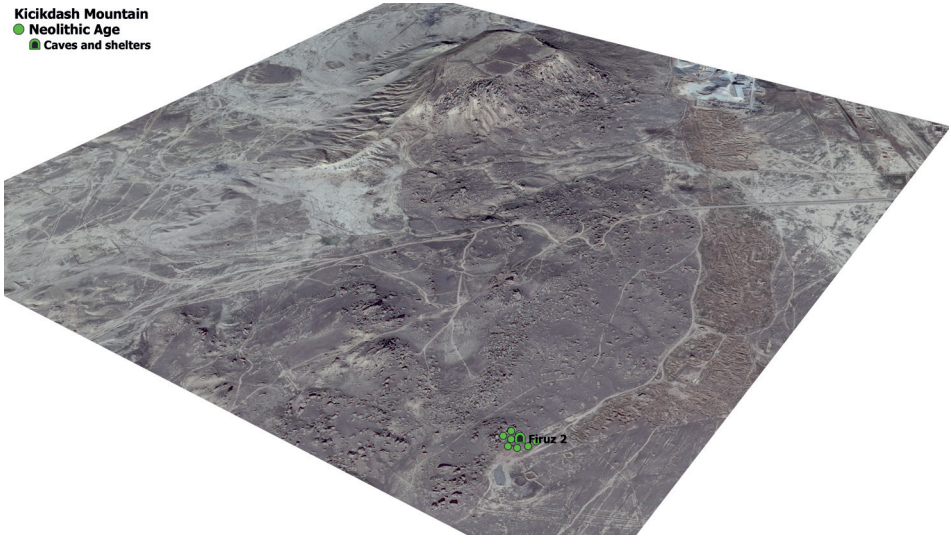

Fig. 17. Kichikdash Mountain. Neolithic Age.

УСЛОВНЫЕ ОБОЗНАЧЕНИЯ

- **Период I**- Конец верхнего палеолита - ранний мезолит -13 700 – 10 500 BP
- **Период II** – мезолит 10 500 - 9 700 BP - I этап мезолита -Гобустан
- **Период II** - 9 700 – 9 000 BP – II этап мезолита -Гобустан
- **Период III** - 9 000 – 7 800 BP – Неолит
- **Период IV** - 7 800 – 6 000 BP– Энеолит
- **Период V** - 4 000- 3 000 BC – Эпоха бронзы
- **Период VI** - 2 000 – 1 000 BC– Эпоха раннего железа
- **Период VII** - 1 000 – 2 000 AD– Средневековье

Fig. 18. Archaeological Landscape of the Western Shore of the Caspian Sea at the End of Upper Paleolithique-Early Mesolithic, Neolithic, Eneolithic, Bronze age, Early Iron age and medieval time.