

Pleistocene art in Azerbaijan

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At present, four sites with rock carvings are known on the territory of Azerbaijan (Fig. 1):

- Big Gobustan, covering the territory of the Beyukdash, Kichikdash, Jingirdag, Shaxgaya and Shongar mountains.
- Absheron peninsula;
- Gemigaya Mountain, the highest point of the Small Caucasus – Kapyjyk (Nakhchevan) alpine summer pastures;
- The foot of the Delidag Mountain of Kelbajar, south-eastern slope of the Small Caucasus.



Fig. 1. Area of dissemination of Azerbaijan petroglyphs.

The Pleistocene Art of Azerbaijan is represented only in Gobustan on the Beyukdash and Kichikdash mountains in the Gayaarasi, Jeyranla, Kaniza, Ana-zaga and Okuzler sites. Images of women in profile, early hunters and Upper Pleistocene fauna (aurochs, gazelles and wild horses) are represented on the walls of the caves.

At the period of the first settlement of Gobustan, the present scorched semi desert, was occupied by drought-resisting open woodland with pistachio trees, hawthorn, willow pear, juniper and pomegranate. Natural conditions in the Upper Pleistocene were closer to forests of the *tugai* type in a damper climate (gallery forests). Analyses of fossilized pollen sampled from the remains of a hearth in the Ana-zaga cave of the Beyukdash Mountain in Gobustan showed that oak and pine trees were once growing there (Rustamov 1994). This lets us suppose the existence of areas with oak-pine woods in the nearest vicinities of Gobustan and in the coastal strip of the Caspian Sea. Pine trees are still growing on the Kichikdash Mountain near the Garaatli sanctuary (Fig. 2).



Fig. 2. Gobustan, Kichikdash Mountain: Pine tree.

In the Upper Pleistocene Binagadi bituminous deposits, remains of arborescent juniper (*Juniperus polycarpus*) were found, which indicates widespread juniper woods at that time. Willow pear (*Pirus salisifolia*), shrub cherry (*Prunus microcarpa*), pomegranate (*Prunus microcarpa*), honeysuckle (*Lonicera*), elm tree, vine, found in the Binagadi deposits, have recently grown in Gobustan and some of these types can be seen there even today.

In the Upper Pleistocene a savannah landscape developed. The thick piece of wild vine (*Vitis conf. silvestris*) in Binagadi presupposes the existence of a riparian forest (Petrov 1939).

In the upper Quaternary, the boundaries of the freshwater Khvalin (now Caspian) Sea transgression reached the Mingachevir water storage. Sediments of the sea with freshwater fauna of mollusks were found even near the Urals and Kazan (Vereshagin 1959).

On the slopes of the Gobustan foothills a grass vegetation of Graminae type (Gromov 1952) predominated and today it can be found in some places with a higher degree of dampness in Gobustan. On the Kichikdash Mountain in the Gayaarasi site, even nut trees used to grow until recently. However, a number of deer rock carvings indicate the existence of well-developed *tugai* woods that were probably later destroyed by man (Vereshagin 1959). On the basis of remains of arborous vegetation in the Upper Pleistocene in its mountainous part, a savannah landscape developed but it was formed in a different way from contemporary African savannahs. These north savannahs represented lightwoods, formed by the trees with winter defoliation (Petrov 1939).

Such was a common picture of Upper Pleistocene landscape-geographical flora in Gobustan. General desertification of open landscapes in connection with glacier regression caused the degradation of landscapes of north savannah, the development of semi-steppe and semi-desert plants in its place and the increase of salinity.

Azerbaijan rock art lacks view and volumes. Images are silhouettes, continuous or contour images. Animals and birds are always depicted laterally (Beyukdash Mountain, Ana-zaga cave). The correlation of figures to one another produces a conventional impression - sometimes animals and birds are represented with a reverse orientation to each other: with the head up or down, etc. Characteristic features of animals are vividly expressed. These flat and realistic images sometimes seem to be closer to Aurignacian images, although some coarseness is felt in them (Stones N° 64, 65 upper terrace of the Beyukdash Mountain) (Otte 2004, 2006).

Beyukdash Mountain, Kaniza site

Images of aurochs heads, early hunters and aurochs. It should be noted that there are separate stones with petroglyphs. Besides, a great number of artifacts made of bone were found there (Fig. 3).

Beyukdash Mountain, Ana-zaga site

Images of aurochs, women and early hunters predominate (Fig. 4).

Beyukdash Mountain, Okuzler site

Mating themes chiefly predominate: two aurochs, men and woman holding each other by hands, images of two goats (Fig. 5).



Fig. 3. Gobustan, Kaniza site: bone artifact.



Fig. 4. Gobustan, Beyukdash Mountain, Ana-zaga site.



Fig. 5. Gobustan, Beyukdash Mountain, Okuzler site.



Fig. 6. Kichikdash Mountain, stone 5.

Kichikdash Mountain, Gayaarasi site

Of special interest is the image of a big fish, 4m. long and 23cm. wide, on stone N° 5 of the Kichikdash Mountain (Fig. 6). Judging from approximate data this is an image of a dolphin, an extinct animal in that region. The existence of dolphins in the Caspian Sea is dated to the Upper Quaternary period. That depiction of a dolphin in its turn is crossed with depictions of oxen. In confirmation of what was said above, this picture was executed on the wall of an early hunters' cave, at the foot of which a cultural layer with Upper Paleolithic industry was revealed. From that cultural layer nucleuses, trapezes, denticulate bladelets and bone borers of an Upper Paleolithic style were found. In this site approximately 3,5m. deep, a separate stone with claviform images of women in profile was found (Fig. 7). So, the picture can be attributed to the end of the Upper Pleistocene, when the last big transgression of the Caspian basin-Khvalin Sea took place. At that period the waters of the Mediterranean Sea reached the Caspian Sea through the Black Sea, i.e. via the Manych Strait.



Fig. 7. Gobustan, Kichikdash Mountain, Gayaarasi site: images of pregnant women in profile.

Kichikdash Mountain, Jeyranlar site

Various themes are represented on the walls of this site: images of gazelles, aurochs and women (Fig. 8).



Fig. 8. Kichikdash Mountain, Jeyranlar site: Images of gazelles.

These data, based on further research and excavations in rock caves and at the foot of some complex painted rocks, allow us to reconsider the chronology of Gobustan. Until recently, the question about the more ancient origin of the early monuments of Gobustan had been mainly a side, and not a principal issue.

Preliminary publication on problems of chronology had already been made, but now the problem is more carefully studied. As a result, totally new data on the dating of images were obtained. Today we possess some opportunities to give a full and rather concrete answer to the question of dating Azerbaijan rock art.

The first work on the periodization of Azerbaijan rock carvings was carried out by archaeologist I. Jafarzadeh in the 70s of the last century (Jafarzadeh 1999: 133-137).

Gobustan petroglyphs, investigated by him according to their style, content and dating, were divided into 6 historical-chronological groups, since the most ancient times until the Middle Ages:

1. The most ancient, early period is the Neolithic period (VIII millennia BC) – Silhouette figures of men and women full face and in profile with a bow on their shoulders are represented in this period.

2. Late Neolithic period (VII-IV millenina BC) – Images of aurochs, boats and small images of archers.
3. Later, Eneolithic period (IV-III millenina BC) – Big figures of deer, goats and lions in profile.
4. Bronze Age period (III-II millenina BC) – Images of gazelles, horses, pigs, dogs and wild animals.
5. Iron Age period (II-I millenina BC) – Images of man, goats and deer, small sized, and a Roman inscription.
6. The Middle Ages (VIII-IX centuries and later) – Images of caravans of camels, riders armed with spears. Signs, symbols, engraved inscriptions in Arabic and Farsi alphabets.

His follower Dj. Rustamov (Rustamov 2006: 86-87) later published that the first settlers–early hunters appeared in Gobustan 15,000-20,000 years before and the most ancient petroglyphs are dated to the end of the Upper Paleolithic period–beginning of the Mesolithic period.

However, new data on the dating of petroglyphs, recently obtained, require some specification and modification in the chronology and periodization made by I. Jafarzadeh.

An archaeological inventory of the Gobustan sites and caves is valuable to solve some of the problems in dating petroglyphs. Let us consider one of them, based on the division between western and Russian historians.

Ana-zaga cave

The Ana-zaga cave is situated on the upper terrace of the Beyukdash Mountain in Gobustan. Since 1966, archaeological excavations have been carried out there. With the aim of establishing the absolute dating of Gobustan monuments, samples from the cultural layer at a depth of 1.85m. were taken for radiocarbon dating. From that layer, archaeologists J. Rustamov and F. Muradova recovered choppers, cone-shaped, pencil-shaped and cylindric nucleuses in 1977. The inventory of the site also consists of chisels, micro-edges, knifelike plaits, segments, flint trapeziums, micro-plates, percussion tools made out of pebbles and weight stones. Fragments of separate stones with anthropomorphic images were also found (Fig. 9).

As we see petroglyphs are to a lesser or greater degree connected with archaeological layers. In such cases the establishment of age must be absolutely precise. Consequently, these petroglyphs are older or of the same age as the formation of the layer. The petroglyphs on the walls of the Ana-zaga cave (stones N° 29, 32, 39) are fully identical both in their style and techniques of execution with separate stones with images, revealed from the archaeological layer.



Fig. 9. Gobustan, Beyukdash Mountain: separate slab, Ana zaga site.

In 2009 the research we led allowed us to reconsider the question of dating Gobustan petroglyphs.

The cultural layer in the cave is roughly 4m deep.

Samples taken from the bones and soil with ash at a depth of 1.85m were AMS dated in New Zealand. If the petroglyphs on separate stones had earlier been dated by archaeologists back to the VIII-VII mill. BC, primary calibrated data showed 9029 BC. It should be noted that lower than the dated level there are cultural layers 15cm, 95cm, 1.60-1.65m, 1.75m, 2.15m. This, in its turn, led us to date the lowest level of the site of to the end of Upper Paleolithic or the early stage of the Mesolithic. Consequently, petroglyphs with analogous style and techniques of execution on separate stones may be dated back to that age (Fig. 10-11).



Fig. 10. Gobustan: separate stone with anthropomorphic image.

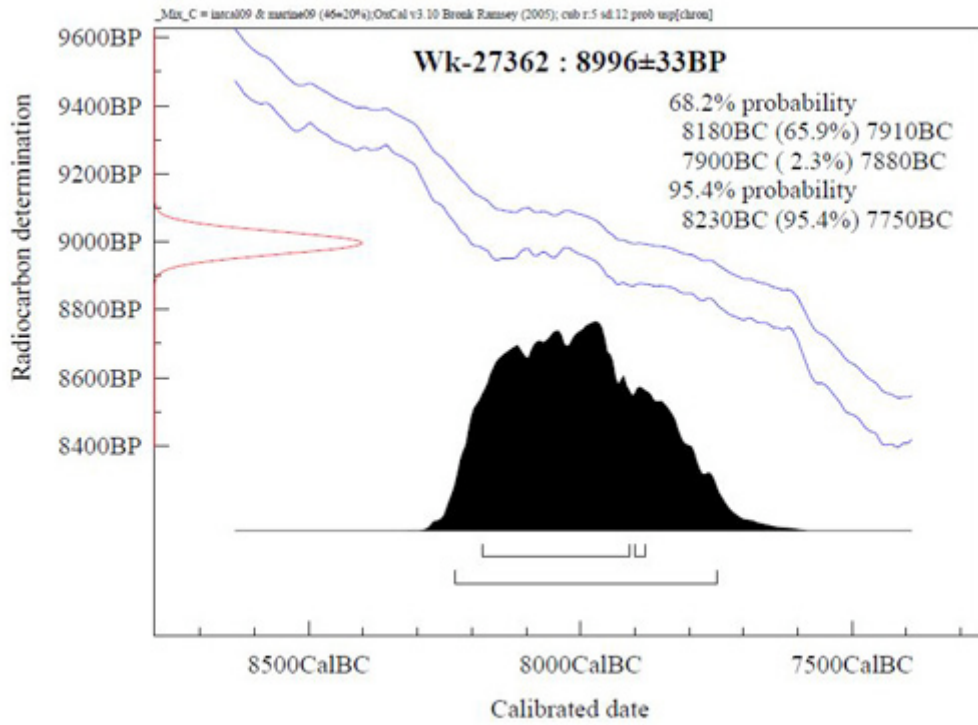


Fig. 11. Gobustan, Beyukdash Mountain, Ana-zaga cave: sample taken from the cultural layer at the depth of 1.85m.



Fig. 12. Gobustan, Beyukdash Mountain: the small engraved river stones from Ana-zaga cave, from the level of 2.85-3m.

A subject of special interest is small pebbles with engraved zigzags, at 2.85-3m (Fig. 12). The Ana-zaga cave is not the only place where archaeological excavations have taken place. In Gobustan archaeologists studied such ancient sites as Firuz-1, Gayaarasi-1, Gayaarasi-2, Kaniza and so on. In Kaniza, the thickness of the cultural layer reached 5m. Work on testing and dating these cultural layers has been going on.

Conclusion

The results of the research on the chronology of Upper Paleolithic rock carvings allow us to consider it in a little different way. On the whole, it looks like this: **the most ancient, early stage** is the period of the **Late Pleistocene and early Holocene**: the period of aurochs.

This period, in its turn, is subdivided into four style groups:

- **I style**: image of an ox head, an ox in natural size and combination of the image of ox with the images of women in profile without head at the Gayaarasi site of the Kichikdash Mountain, and also the image of the ox head on separate stones at Okuzler-2, Kaniza sites of the upper terrace of the Beyukdash Mountain, stone N° 33 (45) of the upper terrace of the Beyukdash Mountain.
- **II style**: Images of oxen in full size, reverse bas-relief images of women (stone N° 65, 29 of the upper terrace of the Beyukdash Mountain).
- **III style**: Images of oxen with short legs and stretched bodies, claviform signs, such as on the upper terrace of the Beyukdash Mountain, stones N° 29, 65.
- **IV style (X-VIII mln. BC)**: 1) Reverse bas-relief images of men –hunters and images of hunters with bows and arrows; 2) images on separate stones that were found from cultural layers of such settlements, as Okuzler-2 and Kaniza on the upper terrace of the Beyukdash Mountain, the Gayaarasi site of the Kichikdash and Shongar Mountains. Here, mainly, petroglyphs of hunters, women, oxen and boats are represented.

So, for the first time Gobustan petroglyphs are dated on the basis of dated archaeological material. These findings characterize stages at the end of the Upper Paleolithic of Gobustan. They give us some notions about the development of culture in the ancient Stone Age in the course of several millennia. If previously artifacts of the cultural layer in Ana-zaga cave (found 1.85m deep) had been dated to the VIII-VII mln. BC, now with the help of AMS dating, new results were obtained: 9029 BC. This also offers more ancient dating for the earliest rock carvings of Gobustan. It should be especially noted that from that cultural layer separate stones with images of hunters with bows and arrows were found but not images of oxen.

Of great interest is the Gayaarasi site-shelter (Fig. 7). There, the image of an ox was discovered on the wall covered with a cultural layer. The lowest part of the image is 1.50m deep. So, one can come to the following conclusion: the given image was executed far earlier than the cultural layer. And if we imagine that an ancient artist executed the image standing and if we subtract an average human stature (at least 1.50m), we conclude that the image of the ox relates to the cultural layer at a depth of 1.85-2m. Another important fact is that a separate stone, seen in the cultural layer at 3.5m, served as a floor for the cultural layer of 1.85-2m and images of anthropomorphic figures were carved on it, particularly, claviform images of pregnant women in profile. So, one can approximately date the images of oxen in the

Gayaarasi site to the end of the Upper Paleolithic, but the claviform images on a separate stone are accordingly dated to an earlier period (Fig. 13).

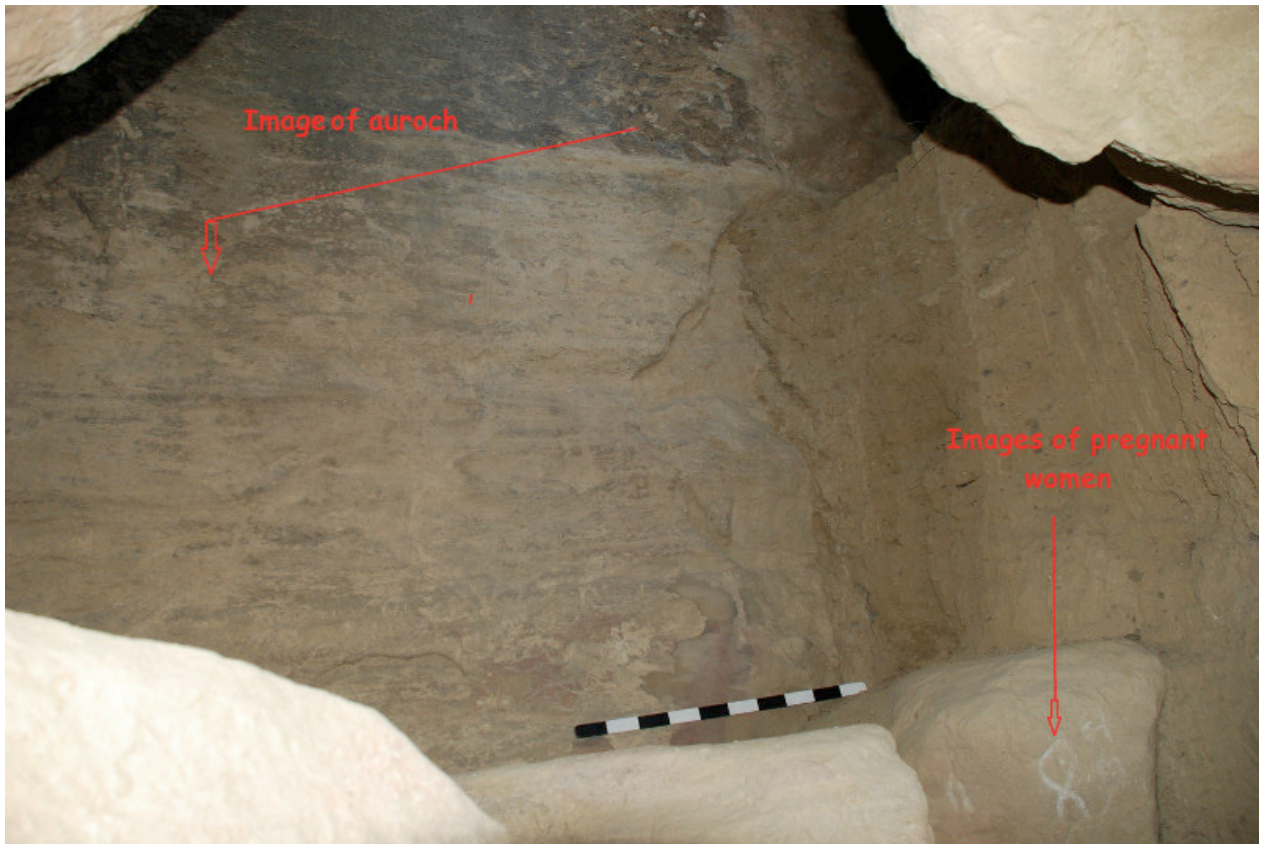


Fig. 13. Gobustan, Kichikdash Mountain, Gayaarasi shelter.

Studied materials are also helpful in estimating the place of Paleolithic art in the context of the history of Central Europe and Asia in a new way and reveal its importance. Though difficulties are met in research and an incomplete study and publication of the obtained material leave a number of considerable gaps, yet Gobustan is not only the most ancient centre of rock art but also *sui generis*, a single monument in Azerbaijan and in the whole Caucasus. In its turn, some datings require additional substantiation.

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