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Research paper

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THE GOBUSTAN NEOLITHIC CULTURE

Abstract. Based on the study of concrete material, the paper proposes to introduce a new Neolithic archaeological culture in the Caucasus – the *Gobustan culture*. As the basis for a detailed typological analysis, the author examined numerous collections of stone tools, uncovered from the cultural layers of the Anazaga site. Although known since 1965, these materials have not been the subject of any monographic publication until now. The proposed study considers these collections in the context of synchronous sites of the region and in more broad terms – in the cultural area, which includes Neolithic industries of the studied type. The main typological basis for the identification of the *Gobustan Neolithic culture* is the type of tools, which is defined by the author as the Uytash point. In functional terms, this item is a peculiar flint arrowhead. The geography of this cultural-defining type includes the area of the Caspian Sea coasts, at least from Gobustan to the place of narrowing of the Caspian lowland on the Dagestan coast in the vicinity of modern Makhachkala. In view of the ambiguity and incompleteness of publications of data on radiocarbon analysis, the chronological framework of the *Gobustan culture* at the moment has to be discussed using only the concepts of relative age. Based on the possibilities of comparative-typological dating, we suggest to consider the time of its functioning in the period of the 6th and probably the beginning of the 5th millennia BC, approximately synchronously with two other Neolithic cultures of the Eastern Caucasus – Shomutepe and Chokh. At the same time, the *Gobustan culture* radically differs from the last two not only in terms of material culture, but also in the life-support strategy, characteristic to its bearers.

Keywords: Azerbaijan Republic; Gobustan; Neolithic; archaeological culture; lithic industry; culture-defining type; Uytash point.

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Исследовательская статья

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ГОБУСТАНСКАЯ НЕОЛИТИЧЕСКАЯ КУЛЬТУРА

Аннотация. На основе изучения конкретных материалов в статье обосновывается выделение новой для Кавказа неолитической археологической культуры, которую предлагается назвать *гобустанской*. В качестве базовых для подробного типологического анализа использованы многочисленные коллекции каменных изделий, которые происходят из культурных слоев наиболее представительной для неолита Гобустана стоянки Аназага. Материалы эти известны с 1965 г., но до настоящего времени они не становились предметом монографического изучения и специальной публикации. В предлагаемой работе указанные коллекции рассматриваются не изолированно, а в контексте синхронных памятников рассматриваемого региона и более широко – в культурном ареале, который включает в себя неолитические индустрии рассматриваемого типа. Главным типологическим основанием для выделения *гобустанской неолитической культуры* является тип изделий, который определен автором, как острие типа *уйташ*. В функциональном отношении этот предмет является специфическим кремневым наконечником стрелы. География данного культуруопределяющего типа включает в себя пространство побережий Каспийского моря, по крайней мере, от Гобустана до места сужения Прикаспийской низменности на дагестанском побережье в районе современной Махачкалы. В виду неопределенности и неполной публикации данных радиоуглеродного анализа, о хронологических рамках *гобустанской неолитической культуры* в настоящий момент приходится рассуждать, оперируя лишь понятиями относительного возраста. Опираясь на возможности сравнительно-типологического датирования, можно говорить о ее функционировании на протяжении 6-го и, вероятно, начала 5-го тысячелетий до н.э., т.е., примерно, синхронно с двумя другими неолитическими культурами Восточного Кавказа – Шомутепинской и Чохской. При этом гобустанская культура радикально отличалась от двух последних не только показателями материальной культуры, но и стратегией жизнеобеспечения, свойственной для ее носителей.

Ключевые слова: Азербайджанская Республика; Гобустан; неолит, археологическая культура, каменная индустрия, культуруопределяющий тип; острие типа *уйташ*

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Introduction

Gobustan is a region in the east of the Republic of Azerbaijan, widely known for its extraordinary objects of primitive rock art [1-5]. Within the context of petroglyphic research, the fact that it is at the same time a place of an unusually dense concentration of archaeological sites, associated, in particular, with the Stone Age, remains unexplored. The Neolithic sites occupy a central place in terms of their abundance and mass of the discovered material.

Among the centers of concentration of Gobustan sites, three isolated mountains can be singled out: Boyukdash, Kichikdash and Dzhingirdag (Fig. 1). All of them are table-hill outliers with flat tops. These mountains rise above the Caspian lowland to the same altitude of several hundred meters. Their tops are composed of an armor layer of limestone with a thickness reaching approx. 15–20 m. Clay and shale susceptible to erosion occur under the limestone. The destruction of these clay deposits led to the collapse of the limestone strata left without support and the accumulation of their fragments on the slopes of the mountains and at the foot in the form of huge blocks. The chaotic accumulation of such rock blocks sometimes creates relatively closed spaces on the slopes, without forming overlaps in the form of a solid ceiling. Sites with preserved cultural layers and rock panels with petroglyphs belonging to different times are usually associated with such objects.

The most distinctive of the described objects, both in natural and cultural-historical terms, is Boyukdash Mountain located 65 km from Baku. All three named mountains are situated relatively close to each other. For example, the distance between Boyukdash and Kichikdash is about 3 km.

Such sites as Ovchular, Anazaga, Okyuzlar 1, Okyuzlar 2, Kyaniza are associated with Boyukdash Mountain. All the listed objects correspond to the so-called upper sea terrace of Boyukdash Mountain. The height above sea level at the foot of Boyukdash and Kichikdash is 20 m. This is 7–8 m higher in comparison with the present-day level of the Caspian Sea.

On the slopes of Kichikdash Mountain there are sheltered sites of Gayaarasy (consonant with the name of the Neolithic site of Kaya Arasa in the Crimea), Gayaarasy 2, Firuz 1, Firuz 2, Dzheyranlar. Most of these and the sites mentioned above contain archaeological materials dating back to the Stone Age within the predominantly Early and Middle Holocene.

Information about the sites and their materials has been covered mostly in preliminary [6-11] or generalized forms [12; 13]. The need for a detailed description of the sites' materials and their monographic publication is still relevant.

The scope of our study is the analysis of materials of the key Neolithic site of Gobustan – the Anazaga site, – and the introduction of a new for the Neolithic Caucasus archeological culture, which is proposed to name the Gobustan culture. In addition to the typological argumentation, the issues of the spatial and chronological content of this cultural formation, the general features of its socio-cultural nature and the place of the identified culture on the map of the Neolithic Caucasus are considered.

The Anazaga site¹: general information

The Anazaga site (Azer. – “*Mother of Caves*”) belongs to rockshelters (Fig. 2) and is the most representative site of the Neolithic Gobustan. Its deposits contain cultural layers of the Neolithic, Eneolithic, Bronze ages, as well as heterogeneous finds of later eras. With a high degree of confidence, the collection of Anazaga stone tools contain foreign Mesolithic material and, possibly, artifacts of an earlier, Upper Paleolithic Age. A special place in the stratigraphy of the site is occupied by Layers 2 and 3, containing numerous Neolithic materials in the form of flint artifacts and fragmented remains of animal bones. The lithic industry of these particular layers is the subject of a detailed examination of this work.

The site is located on the southeastern slope of Boyukdash Mountain facing the sea, 65 km southwest of Baku. The altitude at the base of the mountain is +/- 0 m, which is 27 m higher than the modern level of the Caspian Sea. The distance from the site to the Caspian shores does not exceed 5–6 km.

Excavations of the Anazaga site were carried out in 1965-1966 on an area of 25–30 sq.m. Two layers (Layers 2 and 3) were dated to the Neolithic, as noted above. The collected materials of the site are currently stored in the museum at the Gobustan State Historical and Cultural Reserve. The materials are kept in boxes and parcels according to excavation years with partial grouping by categories of finds. In the course of a complete analysis of the collection carried out by the author of this paper, the method of storing materials is preserved in its original form.

The explorer of the site, D.N. Rustamov, did not have enough time to systematize and publish the materials of the Anazaga site in a special monograph. Archaeological material from all layers of the site (including faunal remains) accounts for a total of 30,000 artifacts according to the inventory of the museum at the Gobustan Reserve. The vast majority of them fall on Layers 2 and 3, containing mainly Neolithic material.

Detailed data on the stratigraphy, planigraphy of the site, as well as detailed characteristics of archaeological finds and an inventory of faunal materials, remain unpublished to date. The

1. Anazaga is a disyllabic word. Some publications provide a separate spelling – Ana Zaga. The author uses the spelling variant proposed by D.N. Rustamov when he introduced the site into scientific circulation.

author has not yet had a chance to get acquainted with the field excavation documentation, where this information could be contained. Thus, the information available to the author in this part is limited to the abovementioned publications.

The collection of Layers 2 and 3 of the Anazaga rockshelter studied by the author in 2022 includes cores together with their fragments and blanks, as well as secondary processed tools. Although we considered these categories of finds fully, the quantitative indicators given in the tables below reflect values that are not absolute, but close to reality. This is due to the fact that some of the site's artifacts (especially geometric microliths) were taken away and used to organize the exposition of the museum at the Gobustan Reserve. This does not change the overall picture of the inventory in any way, and statistical calculations correctly reflect the essence and typological structure of the corresponding collections of the Anazaga site. Therefore, in most cases, the numerical indicators given in typological lists should be considered as values "no less" than the given number. When analyzing the materials, the author excluded blanks. The nature and quantitative proportions of various types of blanks are well represented by a set of secondary processed tools, examined in detail when working with the collection. Production waste is also not considered in this work.

The stone inventory of Layers 2 and 3 of the Anazaga site is the part of the excavated material that can be considered as a complete source for technical and typological analysis and interpretations based on it.

Raw materials. In terms of primary raw lithic material, the industry of the Neolithic Layers 2 and 3 can be characterized as mono-raw, based on flint of grayish color. The particular source of raw materials is yet unknown. It was most likely located somewhere near the Gobustan sites in the Karadag spurs of the eastern tip of the Greater Caucasus. In the thousands of collections of each of the two Neolithic layers, no more than 3–4 obsidian tools were found. Interestingly, among the 470 cores of the collection of both layers there is not a single one made of obsidian. Among the available single obsidian flakes, there are no flakes that would correspond to the pressure flakes of the Anazaga site. This might be due to the fact that in this collection, the objects in question are manuports, picked up and brought to the site by its inhabitants at one time from the destroyed layers of numerous surrounding sites belonging to different times. These sites do not necessarily belong to the Neolithic.

Varieties of some other, non-flint raw materials, which could be purposefully used for knapping in the materials under consideration, were not observed. A large variety of tools made of limestone pebbles were identified here. They are accompanied by pebble flakes, which are waste products, but not the products of splitting in order to obtain blanks. It is no coincidence, therefore, that no nuclei from such raw materials were found in the inventory.

Flintknapping. As noted above, flint was used as the raw material for the cores. In most cases, it is opaque, grayish in hue. Occasionally there are cores of wax-colored flint and jasper-shaped flint of various shades from honey to black.

Lithic reduction technique in Layers 2 and 3 is identical and is based on pressuring the blanks in a perfect form. It is important to note that among the large number of cores in collections of Layers 2 and 3, there are almost none that belong to varieties other than pressured ones (Fig. 3, 15–23). Technological unification is reflected in the fact that, typologically, the cores do not show great heterogeneity.

A significant feature in the characteristics of the described category of items is their size. According to this indicator, the cores of the Anazaga site are divided into ordinary and microcores. The conditional boundary between them is an indicator of 2 cm of the height of the core's working surface. Objects smaller than this value are classified as microcores. This classification cannot be considered purely conditional. The issue lies not just in the presence of a large number of the latter in the collections. Micro-points (less than 2 cm in length) in quantitative terms are predominant in the inventory over the points of ordinary sizes, i.e. exceeding this indicator. The height of ordinary cores, from which the blanks were flaked for the production of the corresponding subtype of points, is in the range of 2–3.5 cm.

Although the boundary between cores and microcores is drawn here at around 2 cm, the height of the working surface of the microcores usually does not exceed 1.5 cm. This indicator does not depend on the degree of wear of the core. It remains almost unchanged at different stages of microlithic reduction.

Morphologically, the cores are divided into five varieties. It is clear that some of them at various stages of reduction were transformed from one shape to another, for example, prismatic and conical to bullet-shaped (pencil-shaped), or prismatic to conical. In any case, fractional division in classifications is preferable to the generalized one, since it still reflects the technological nuances of a particular inventory. In this case, it is noteworthy that the microcores fall into the same morphological groups as the cores of ordinary sizes. At the same time, prismatic pressure cores quantitatively predominate in both groups.

Tools and cores: typology. In general, the layered typological composition of the material is reflected in Table 1 below. The list did not include blanks, production waste, part of the tools on pebbles and pebble flakes. They will likely be included in the monographic publication of the materials of this site in the future. Their absence in the table does not impede the achievement of tasks set in this work and does not affect the validity of the proposed conclusions.

Table 1. Typological composition of tools from layers of the Anazaga site.

Таблица 1. Послойный типологический состав орудий стоянки Аназага.

№№	Name of items	Number of items	
		layer 3 (1965)	layer 2 (1966)
Pressure cores			
1	Prismatic	59	104
2	Conical	26	34
3	Pencil-like	16	33
4	Flat	24	12
5	End face	28	65
Pressure micro cores			
1	Prismatic	3	6
2	Conical	-	25
3	Pencil-like	4	-
4	Flat	1	4
5	End face	1	7
Core fragments and preforms			
6	Core fragments	14	-
7	Core preforms	4	-
Cores total:		180	290
Geometric microliths			
8	Long segments* 2	1	-
9	Short segments	3	3
10	Low trapezes with unretouched narrow base	2	3
11	Low trapezes with retouched narrow base	1	-
12	Narrow blade trapezes*	-	2
Geometric microliths total 3:		7	8
Scrapers			
13	Scraper on large blade*	1	-
14	Endscrapers with a nose*	1	-
15	Thick endscrapers	4	
Scrapers total:		6	-
16	Burins on a breakage	2	-
17	Burin-scraper*	1	-

2. Items marked with * fall out from the Neolithic of Eastern Caucasus.

3. The table gives the number of artefacts without ones taken for museum exhibition. In reality the number of items if this category is at least 2,3 times more.

Burins total:		3	-
Points			
18	Uitash points	73	92
19	Uitash micro points	42	193
20	Points on flakes with narrow bases*	1	-
21	Points on flakes with flat ventral retouch of the end*	1	-
Points total:		117	285
Barbed-notched tools			
22	Saws	3	-
23	Tools with denticulate side and a retouched protrusion	4	11
24	Tools with denticulate edge retouch	8	2
25	Notched tools	9	2
26	Double notched tools	12	10
Barbed-notched tools total:		36	25
Other tools			
27	Microblades with fine denticulate edge retouch	6	-
28	Bladelets with continuous semi-abrupt retouch along both lateral sides	2	-
29	Tools with symmetric narrowed body	4	4
30	Gouge-like tools	1	-
31	Hammerstones	4	3
32	Choppers	3	2
33	Sinkers	5	2
34	Calibrators	7	-
35	Perforators with a short point	-	4
36	Fragments of bladelets and microblades with transversally truncated end	-	10
37	Fragments of tanged tools	5	-
Other tools total:		37	25
Tools total:		206	343
Cores and tools total:		386	633

When considering the Anazaga's flint inventory, it is clear that some tools differ significantly from the total number of the material in their typological, technological characteristics, and sometimes external features. The author considers them as foreign admixture to the collections of the Neolithic layers of the site. The number of such foreign items is not that great. Within itself, this assemblage of items is also not homogeneous and is divided into three groups. The first of them (Group A) is likely dated to the Bronze Age. This is evidenced by the combination of such features as the not very consistent blade (not to mention microblade)

nature of the workpiece with the presence of elements of flat retouch. For instance, a feather of an arrowhead was subjected to such retouch. The morphology of this arrowhead itself differs sharply from both the Neolithic points of Layers 2 and 3 of the Anazaga site, and tools of a similar function of typically Eneolithic sites of the Caucasus.

The second group of tools (Group B), which can be considered as foreign to the main inventory of Layers 2 and 3 of the Anazaga site, are geometric microliths of Mesolithic appearance in the form of one segment and several trapezoids. These tools are made on blanks in the form of narrow blades (and not blades or microblades). The blanks were obtained by percussion, not by pressure technique, which is consistent with the Neolithic of this region. Typologically, such forms (elongated segments and short high trapezoids) are common for the Mesolithic of the entire East Caucasus. In contrast, small segments and trapezoids on blades and microblades are typical for the Neolithic. Such a picture is especially indicative in those sites whose materials do not raise doubts about their technical and typological uniformity. And this is fully reflected in the materials of Gobustan with relatively homogeneous collections.

The third group (Group C) includes two tools: an end scraper on a blade and a combined tool – burin-scraper. The non-Neolithic nature of the blanks is noteworthy. It is also important that the combined tools on the blade of such an obviously non-accidental morphological type are not consistent with the Neolithic sites of Gobustan. Should we look at the end scraper on a large blade, then it differs from the bulk of the Anazaga material in terms of raw materials and the nature of preservation. The tool is made of high-quality translucent flint, which, as a type of raw material, is not typical for the inventory of Neolithic Layers 2 and 3. The object also has an external feature – its surface bears traces of noticeable deflation. Such a wind treatment of the surface could occur if the object was exposed outside the rockshelter for a long period of time. It was probably brought there as a manuport at one of the stages of the formation of the cultural deposits of the site.

The composition of the collections of the Neolithic layers of Anazaga site indicates that the inventory belongs to basic sites. At the same time, we note a clear emphasis on the production of hunting weapons in the form of arrowheads (in the morphological sense – points). The presence of scrapers and burins (or even their absence) in such numerous collections is an indication of the limited household activities in the site. The fact that the points in their finished and ready-to-use form make up at least 57% of the total number of secondary processed tools in Layer 3 and at least 83% in Layer 2 suggests that the site at certain stages of its functioning was used as a workshop for the production of equipment elements for hunting weapons. Although, it might have been an episode in the history of the site's functioning.

The site's stone inventory falls into categories of various functional purposes. We see here groups of items that were intended for the production of finished tools and their blanks,

were used as elements of hunting weapons, as accessories of fishing equipment (sinkers for fishing nets), served as household production tools (scrapers, pestles, choppers, anvils, abrasives, hammerstones).

The Anazaga scrapers (Fig. 4, 14-16) are noteworthy in such a feature as a significant thickening of the tool's body, while the blank size remains small. The primary blank was obviously specially selected for the manufacture of an appropriate tool.

A large number of tools in the collection are made of pebbles. These tools functionally belong to various groups: choppers (Fig. 5, 4, 6), tools, used for rigging fishing nets (sinkers) (Fig. 5, 2-3), used in knapping and, possibly, retouching of stone tools (hammerstones (Fig. 5, 1, 5) and retouchers).

Under the given tools here we obviously mean objects modified by secondary processing using retouch or lithic reduction and suitable for morphological analysis. One should bear in mind that the number of items actually used as tools was much larger. For example, knives are not mentioned among the listed tools, although it is clear that a certain group of flakes without secondary processing (including pebble flakes) could be used as cutting tools.

Bone tools are not represented in the collection. At the same time there are grooved abrasives. The presence of the latter can appropriately be considered as an indication of the manufacture of bone tools at one time in the territory of the site.

Representative in quantitative terms and noteworthy from the point of morphological diversity is the category barbed-notched tools. One can only guess about the functional purpose of this group without special research. It is possible that this group of items is associated with tools related to fishing. The most significant variety of this category are the items indicated in the typological table above as "tools with denticulate side and a retouched protrusion." These functionally obscure items (Fig. 4, 17) can be considered as one of the types that add a certain peculiarity to this inventory. It is also important to note that such forms are found in large numbers in the collections of Gobustan sites of the Mesolithic.

The main feature of the stone inventory of the Anazaga site is the presence of the Uytash points⁴ in it, which, in a functional sense, are flint arrowheads. In the collection of Layer 2, these tools account for 57% of all items with secondary processing, and in Layer 3 – 83%, respectively.

The type of points in question does not appear in the existing type-lists to date and has not previously been cited in the literature when characterizing specific materials⁵. For the first time, it was identified by the author in the materials of an open-type site Uytash 2 with

4. The Uytash point is a tool on a pressured microblade (rarely on a blade) with a pointed tip formed by partial retouching along one or both edges in the end part of the item; the lower end of the tool is thus straight, obliquely or in a slightly bent form truncated by an abrupt retouch.

5. According to the oral report of M.G. Zhilin, when he reviewed the collection of the Kukrek site, one object was discovered, which, judging by the photo, looks like an Uytash point. However, firstly, this site is dated to the Mesolithic and not its late stage; secondly, the item in question is not mentioned in the publications of the Kukrek materials of G.A. Bonch-Osmolovsky and E.A. Vekilova, which is why it is not present in any way in the substantiation of the specifics of the Kukrek Mesolithic culture. And, thirdly, this item is present in the entire collection of Kukrek in a single specimen.

a disturbed cultural layer. The site is located in the middle part of the Dagestan coastline of the Caspian Sea, 22 km south of Makhachkala. In his publication of the Uytash materials V.I. Markovin, who discovered this site in 1965, focused mainly on petroglyphic rock art [14]. The flint inventory of this and its neighboring locations is currently being investigated and is being prepared for publication by the author of this work.

Thus, the type of flint tools, called the Uytash point, exists and has a clearly defined framework of its spatial and temporal existence. Therefore, it can claim its name from the eponymous site and be perceived as a specific, culture-defining form of tools.

From the above definition, it follows that the ideal type of the Uytash points is characterized by the following features: a) a blank in the form of a microblade or blade; b) the upper end is sharpened by an abrupt retouch on both edges; c) the base truncation by direct or oblique retouch. For culture-defining types, it is normal to have variations of insignificant features within themselves. Variations in the described case may include sharpening the end with retouch on only one edge. In addition, the base can be truncated by retouching not only straight, but obliquely or slightly bent. As for the last feature, it is rather difficult to imagine the base of the Uytash point being concave, since mainly a microplate serves as a blank for it, and the width of the base of this type of blanks is measured only in millimeters.

Faunal remains

Differentiated layer-by-layer determinations and corresponding statistical analysis of the faunal remains of the Anazaga site have not yet been carried out or published. The materials for such studies do exist, and their study in the general archaeological context can play a role in solving the issues of the evolution of culture in the Mesolithic and Neolithic of Gobustan as a whole.

Should we rely only on the species composition of the animals depicted in rock art when characterizing the fauna of the territory under consideration, then the most indicative is the combination of animal species of the steppe and coastal-marine biotopes. This seemingly natural fact, taking into account the peculiarities of the region, is especially important when considering it in combination with the presence of fishing equipment (sinkers for nets), as well as seal bones, fish in the layers of some sites. This indicator alone can testify to the fact that the coastline of the sea was in close proximity to the location of the Neolithic sites of Gobustan at the time of their functioning. This, in turn, can be considered as an indirect, but reliable basis for clarifying, albeit in a general way, the issue of dating the Gobustan sites, including the Anazaga site.

Dating

The first radiocarbon dates for the Anazaga site were obtained only half a century after the start of field research of the site. This was done by the efforts of a new generation of researchers. Nowadays, the work on dating the archaeological sites of Gobustan is intensifying, and we hope to obtain in the near future a series of radiocarbon dates for various sites of the region.

Currently, there are two known radiocarbon dates on Anazaga that have been published [15]. They are not linked to the archaeological layers and are identified only by the depth marks of the samples that served as the material for dating. These marks show that the obtained dates correspond to Layers 2 and 3⁶.

One date (median probabilistic) – 13480 cal BP (Beta 305145) – was obtained from a bone sample taken at a depth of 350 cm from the daytime surface. Its value is a value fixed at the intersection of the calibration curve with the value of the conventional radiocarbon date.

The second, being both median probabilistic date and obtained from a bone, is 10270 cal BP (Beta 305140). The sample was taken at a depth of 270-290 cm [15].

Both dates belong to the basal part of the cultural deposits of the site and, with a high degree of probability, correspond to the lower cultural layer. The dates fit well into the chronological range of Mesolithic cultures of both the Eastern [16; 17] and Western [18; 19] Caucasus. They confirm the author's conclusion proposed in this paper that the collections of Layers 2 and 3 are not homogeneous, and they contain, in particular, an essential element of a typically Mesolithic (as applied to the Caucasus) inventory.

The possibility of mixing of cultural remains of different layers in Anazaga site should come as no surprise, given that the process of accumulation of sediments here was not isolated from sedimentation processes that occurred on the slope of Boyukdash Mountain. The accumulation of sediments in the rock shelter was not constant and continuous. Since the site is located on a slope, accumulation inevitably had to alternate with erosion of previously accumulated layers. At certain periods of time, cultural deposits were washed away by slope deluvial flows until they were almost completely washed out of the rock shelter. A reflection of this, apparently, is a clear continuous horizontal line on the rock wall inside the shelter at a height exceeding human height. This line divides areas with varying degrees of patinization of rock walls and marks the level of filling of the shelter cavity with loose sediments at some point in the formation of the site's layers.

According to the archaeological, i.e. comparative-typological dating, the main (Neolithic) material of the site should approximately be dated to the 6th millennium BC (on a calibrated scale). The basis for determining the lower bound of the dating range is that the Neolithic material of the site is characterized by pressure flaking. The author already discussed the

6. According to the labels on the packages of the Anazaga archaeological material stored in the Gobustan Reserve, Layer 3 was excavated in 1965, and Layer 2 – in 1966. Therefore, the number of layers should go from bottom to top, which seemingly contradicts logic.

technique of obtaining blanks in the pressure flaking as being one of the distinctive features that allow distinguishing the Mesolithic of the southern part of the Circum-Caspian region and almost the entire Eastern Caucasus from the Neolithic [17]. Gobustan is surrounded by sites in which the emergence of pressure technique is recorded no earlier than the boundary of the 7th–6th mil. BC (on a calibrated scale). In the south, these are cave sites of the Southern Caspian region (Hotu, Ghar-i-Kamarband, etc.); in the Northwest, these are sites of the Chokh culture. To the west of Gobustan in the Kura-Araxes interfluvium, the pressure technique emerges at the stated time. However, in typological terms it is different than in the two regions mentioned above – here, the pressure technique is implemented using a lever device. However, even here the pressure technique did not emerge earlier than the beginning of the 6th millennium BC. Considering all the above, we can logically conclude that within the Gobustan Neolithic culture, lithic reduction did not emerge earlier than that time. And in relation to it, as well as in other similar cases, it is fair to use the sign of the presence of pressure technique as one of the local, actually archaeological, indicators of the change of the Mesolithic by the Neolithic. In any case, relying on the above two dates marked by the depth of cultural deposits, and not “tied” to specific cultural layers, and dating the Neolithic of Gobustan to the 12th or even 9th millennia BC, will lead to the complete deviation of the materials under study from the general trends in the development of the culture of the Caucasus in the Mesolithic and Neolithic. We are not saying that the dates in question are irrelevant. They may well belong to the unexplored during excavations and stratigraphically undifferentiated Mesolithic horizons of the site. The presence of a foreign Mesolithic material in the Neolithic layers of Anazaga has already been mentioned in the paper.

The upper chronological boundary of the Gobustan Neolithic is a more complicated issue. In addition, it cannot be ruled out that the later phases of the Neolithic are most likely not represented here. This, in particular, is evidenced by the absence in Neolithic collections of stone inventory of trapezoids with a planed back. These forms are represented, on the one hand, not in the earliest horizons of the Shomutepe culture [20], and, on the other hand, on one of those very Uytash sites (Uytash 3), which are located hundreds of kilometers north along the Caspian Sea and belong to the Gobustan culture.

Gobustan archaeological culture in the context of the Neolithic of the Eastern Caucasus

The cultural identity of the Gobustan Neolithic and the description of this specificity in the categories of archaeological analysis could not be the subject of special consideration until now. After D.N. Rustamov, no one studied the stone inventory of Gobustan sites in any detail. A.A. Formozov, who touched upon the Gobustan subject and visited the sites in

question, did not show much interest in the flint industry and focused on the petroglyph aspect [21; 2]. The materials in question caught the attention of V.V. Bzhaniya in connection with his preparation of the section “Neolithic of the Caucasus” for the multi-volume edition “Archeology of the USSR” [22]. As a specialist interested, in particular, in the Neolithic of the Western Caspian, he could not help but notice the uniqueness of the Neolithic Gobustan sites. This subject was regarded as promising in the context of studying the cultural geography of the region in the Neolithic era. He even proposed the name “Caspian culture” for the Neolithic sites of Gobustan. However, the idea of identifying such a culture, its description and typological foundation remained unfulfilled. The name “Caspian culture” itself, meanwhile, was used to designate one of the local formations in the Northern Caspian and the Lower Volga regions, dated first to the Early Eneolithic [23], and then to the late Neolithic [24].

In establishing the Gobustan culture, as in all other similar cases, the author suggests to comply with certain methodological requirements: a) the presence of a culture-defining type (or types); b) the presence of more than one site with the characteristics of the defined culture; c) the spatial and temporal dispersion of sites of the defined culture.

The specified methodological requirements for the identification of the Gobustan Neolithic culture here are fully observed. Firstly, the lithic industry of Neolithic Gobustan has a culture-defining type in the form of an Uytash arrow point. This artifact bears the features of the technology and typological tradition of the Neolithic of the region in question. This is the second type of items for the Neolithic of the Caucasus after the Chokh arrow point, which, due to its morphological uniqueness, can appear in type-lists under its own typological name and serve as an unmistakable marker of a certain (in our case, Gobustan) archaeological culture.

Secondly, the Anazaga site is culturally not alone in Gobustan. The study of materials has revealed that all the Neolithic materials of this region form a single archaeological culture. The study of the collections of Gobustan sites of the Stone Age in some cases requires preliminary isolation of materials from them that relate specifically to the Neolithic. Nevertheless, based on the detailed study of specific materials carried out by the author, it can be argued that in addition to Anazaga, the sites of Kyaniz (Neolithic layer), Okyuzlar (Neolithic layer), Firuz 1 and Firuz 2 can definitely be attributed to the identified culture. The key (but not the only) indicator of their cultural identification is the presence in their collections of a culture-defining type – the Uytash point and its variants (Fig. 6).

From the point of spatial characteristics, the Gobustan archaeological culture has a fairly wide area. It covers the space of the Caspian Sea coasts, at least from Gobustan to the place of the next narrowing of the Caspian lowland on the Dagestan coast of the Caspian Sea, approximately in the vicinity of modern Makhachkala. The northern border of this culture

is fixed by the the Uytash 2 site by the presence (in particular) of an eponymous culture-defining type of tools in its inventory.

The Gobustan Neolithic culture has a seemingly wide chronological framework. This is evidenced by the presence of more than one cultural layer with Neolithic materials in the sites of this culture, and, above all, the Anazaga site. A detailed stratigraphic study of the sites of this region in the future and obtaining a series of radiocarbon dates will provide a clearer picture in this regard. This will also be facilitated by obtaining new radiocarbon dating, which will allow us to talk about the absolute bounds of the culture.

If we consider the Gobustan archaeological culture in terms of comparative chronology, then we can state its coexistence during the 6th and probably the beginning of the 5th millennia BC with two other Neolithic cultures of the Eastern Caucasus – the Shomutepe and Chokh. This is despite the fact that the last two radically differed from the first in terms of their material culture and life-support strategy.

Each of these three cultures occupies three different geological-geomorphological and geographical zones (Fig. 7). Chokh culture is confined to the middle mountains of Central Dagestan, Shomutepe (Shulaveri-Shomu, Shomutepe-Shulaveri-Aratashen) occupies a relatively elevated part of the Kura Depression and the foothills of the South Caucasus, and Gobustan – the coastal strip of the western coast of the Caspian Sea, as well as the foothills of the Northeast Caucasus. The first has a pastoral-agricultural orientation with more or less limited agricultural opportunities; the second belongs to pastoral-agricultural cultures with a relatively large economic potential. The Gobustan culture, unlike the first two, lacks features of a productive economy and is based on hunting and fishing and, most likely, gathering in different combinations. The latter is confirmed by the absence of domestic animals in the bone remains unearthed in the cultural layers of sites of this culture. This is also clearly evidenced by the stone inventory, composed mainly of tools for hunting with the use of a bow (arrowheads) and fishing with the use of a net (sinkers) in the complete absence of inventory characteristic of agricultural settlements.

Despite the considerable distances separating them, radical differences in the economic structure, life-support strategies, a set of household and industrial tools, there were no impenetrable barriers between the Neolithic cultures of the Caucasus. The mutual penetration of culturally diagnostic categories of stone tools and technological techniques peculiar to the Western and Eastern Caucasus with their extremely contrasting Neolithic cultures has already been discussed [25; 26].

Should we turn to the materials of the eastern part of the South Caucasus, it is hard to overlook the presence of geometric microliths in the Holocene deposits of the Damjili cave in the form of short high trapezoids and small short segments [27]. We believe that these items are more similar to forms of the Mesolithic (late?) and the Neolithic of Gobustan than the set of tools of the same time in the sites of the Trialetian Mesolithic culture in its traditional

sense [28]. Here we mean not just the presence, but the mutual combination of these types of trapezoids and segments. Nevertheless, the analysis of archaeological materials has shown that the lithic industry of the agricultural Neolithic culture of Azerbaijan of the Shomutepe type, as well as its analogues – Shulaveri and Aratashen – Aknashen, unlike Gobustan, do not reveal typological or technological roots in any of the variants of the Caucasian Mesolithic substrate itself. This is almost the only conclusion on the genesis of the Neolithic of the Eastern Caucasus, with which researchers concur [27; 29]. Assuming there is a certain similarity between the materials of the Mesolithic of Gobustan and Western Azerbaijan, we should note that the comparison of the Neolithic inventory of these regions yields a radically different picture. This is reflected not only in general socio-cultural manifestations (the presence or absence of agriculture, cattle breeding, stationary settlements, etc.), but also in the typological features of diagnostic categories of stone tools.

This does not mean that with the onset of the Neolithic in the interfluvium of the Kura and Araxes, one population is completely replaced by another. This issue has not yet been sufficiently explored. With regard to the Gobustan archaeological culture, one can argue that along with Central Dagestan, the Western Caucasus and the Black Sea region, it can be placed in a number of Caucasian regions that demonstrate a type of evolution that presupposes the continuity of local cultural traditions when the Mesolithic is replaced by the Neolithic. The validity of this conclusion is undoubtful in relation to the North-Eastern Caucasus and the central regions of the South Caucasus. This is also true for the Gobustan culture, but it requires special argumentation with a detailed typological analysis of the Mesolithic materials of the studied region.

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Fig. 1. Schematic map of the Gobustan neolithic sites

Рис. 1. Карта-схема расположения гобустанских неолитических памятников



Fig. 2. Entrance to the Anazaga Rockshelter. View from west. (Author's photo)

Рис. 2. Вход в скальное убежище Аназага. Вид с З. (Фото автора)

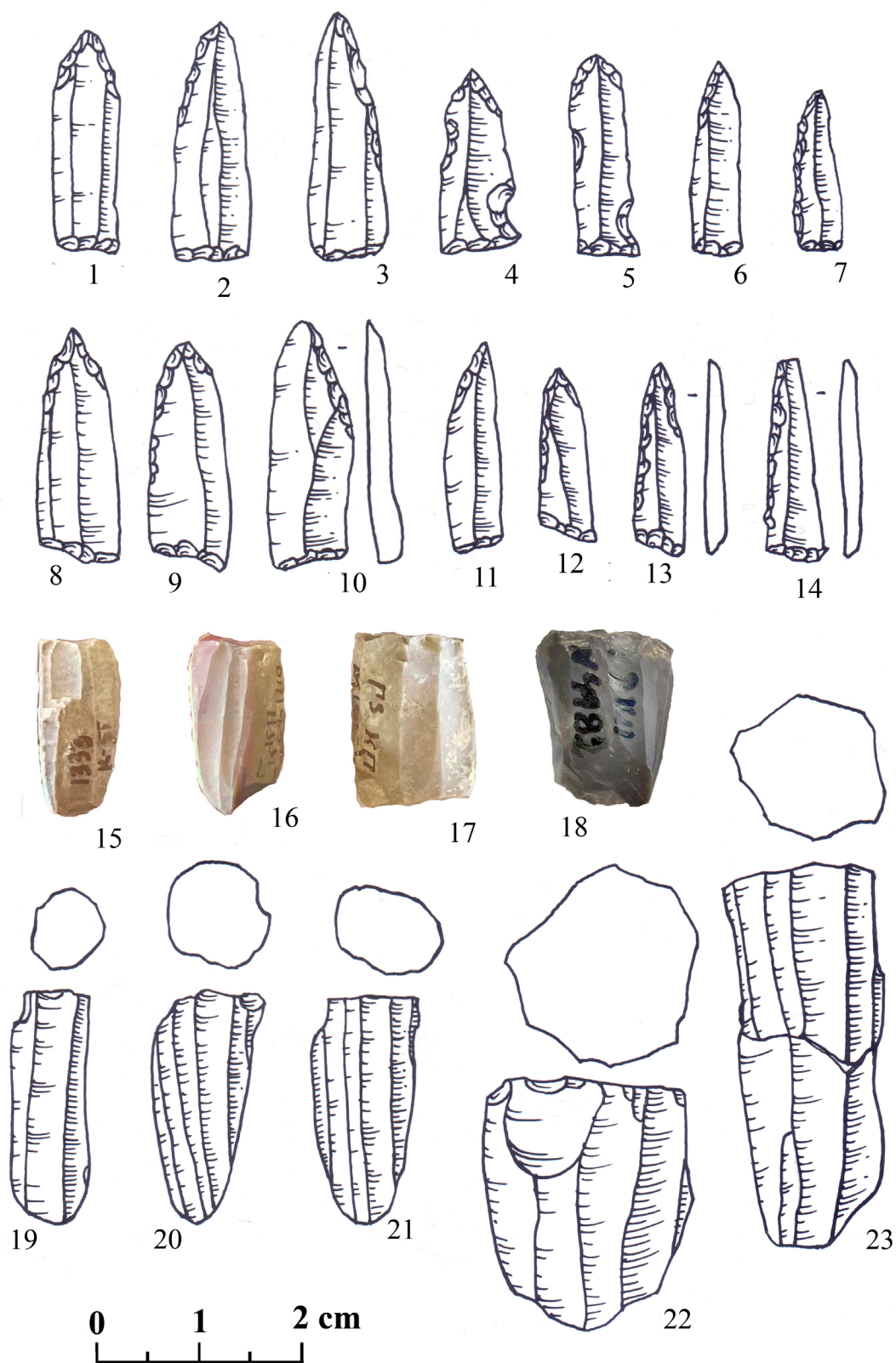


Fig. 3. Anazaga Rockshelter (Layers 2, 3). Flint tools. 1-14 – Uytash points; 15-21 – cores. (Author’s drawings)

Рис. 3. Убежище Аназага (слои 2, 3). Образцы кремневых изделий. 1-14 – острия типа Уйташ; 15-23 – нуклеусы. (Рис. автора)

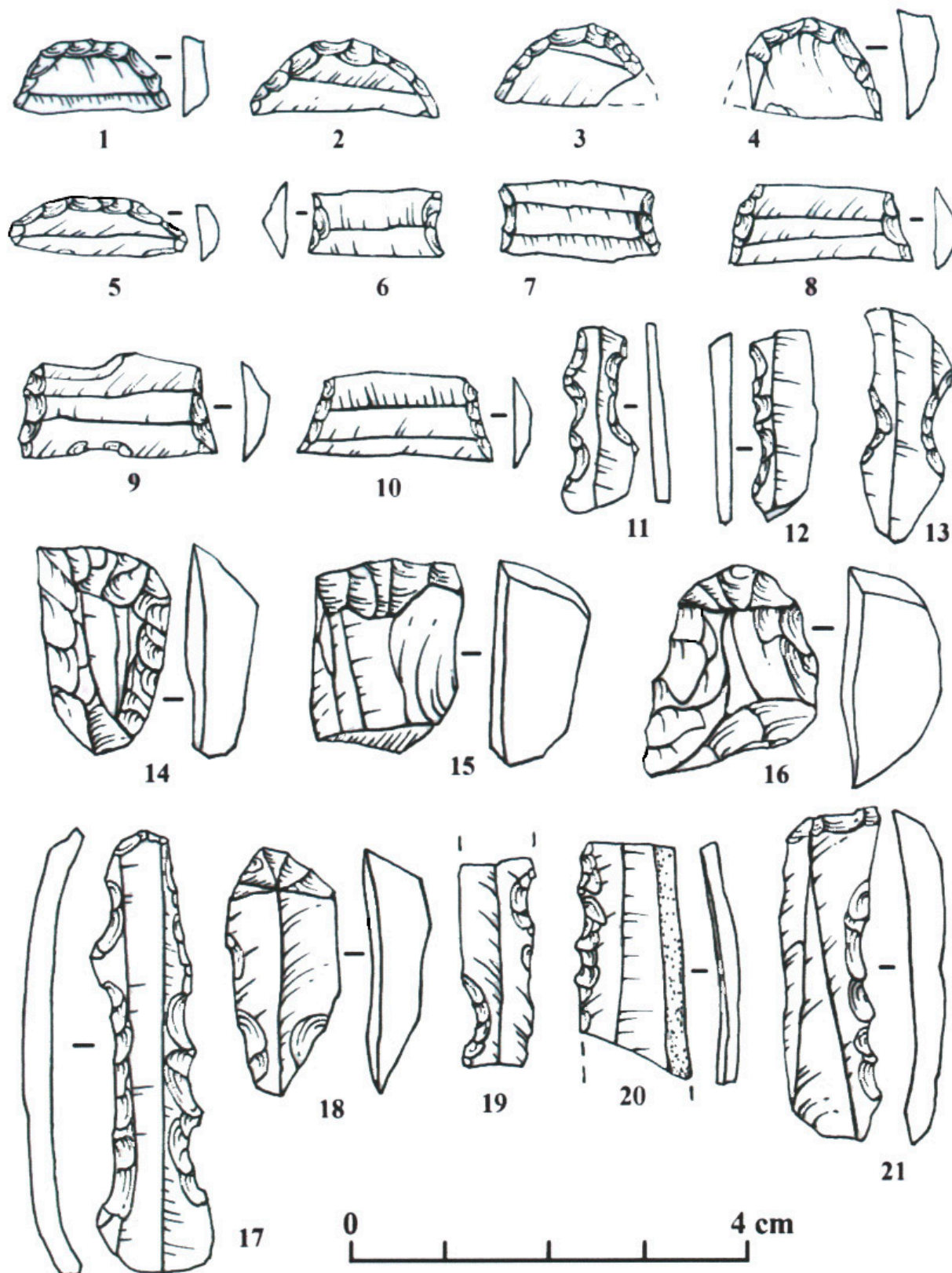


Fig. 4. Anazaga Rockshelter (Layers 2, 3). Flint tools. 1-5 – small segments; 6-10 – low segments; 11-12, 20 – barbed-notched tools; 14-16, 18 – scrapers; 13, 19 – retouch notched tools; 17 – tool with a denticulate side and a retouched protrusion; 21 – blade with a semicircle side retouch. (Author's drawings)

Рис. 4. Убежище Аназага (слои 2, 3). Образцы кремневых изделий. 1-5 – сегменты мелкие; 6-10 – трапеции низкие; 14-16, 18 – скребки; 11-12, 20 – изделия с зубчато-выемчатой ретушью; 13, 19 – орудия с ретушированной выемкой; 17 – орудие с зубчатым краем и ретушированным выступом; 21 – пластинка с полукруглой краевой ретушью. (Рис. автора)



Fig. 5. Anazaga Rockshelter (Layers 2, 3). Lithic tools.
1, 5 – hammerstones; 2-3 – sinkers; 4, 6 – choppers. (Author's photo)

Рис. 5. Убежище Аназага (слои 2, 3). Образцы каменных изделий.
1, 5 – отбойники; 2-3 – грузила; 4, 6 – чопперы. (Фото автора)

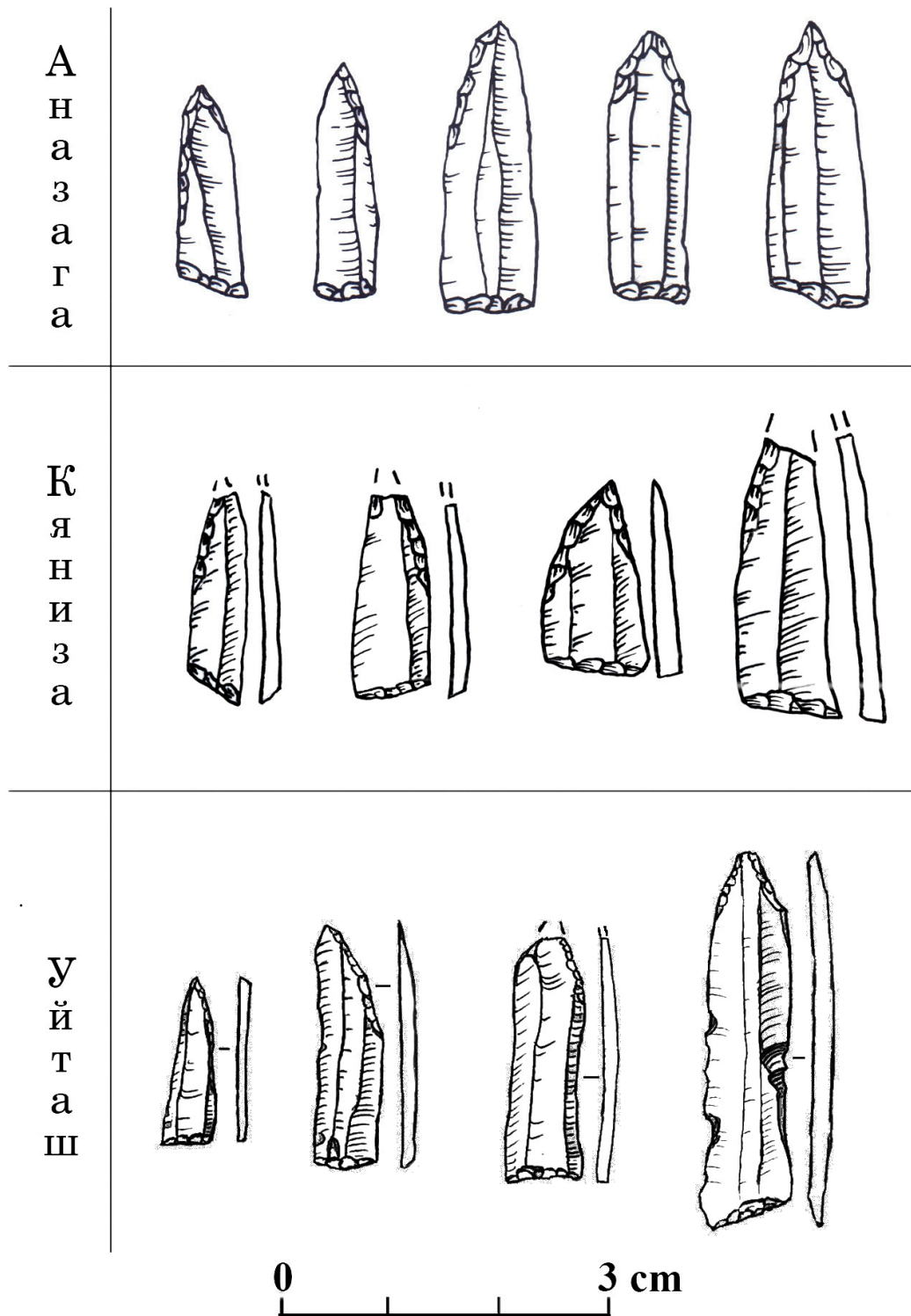


Fig. 6. Uytash point in the inventory of sites of Anazaga, Kyaniza, and Uytash location. (Author's drawing)

Рис. 6. Острие типа Уйташ в инвентаре стоянок Аназага, Кяниза и местонахождения Уйташ. (Рис. автора)



Fig. 7. Map of approximate areas of neolithic cultures of the East Caucasus

Рис.7. Карта примерных ареалов неолитических культур Восточного Кавказа

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