The Caucasus and the Middle East in the early Holocene[56] (According to recent archaeological research)

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Abstract

The article provides a comprehensive account of two significant prehistoric archaeological sites located in Adjara - Kobuleti village and Khutsubani, including their history, modern investigations, and

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findings. The authors highlight that bone remains were not uncovered during the excavation of Stone Age archaeological sites due to the soil's peculiarities. These remains could have shed light on the hunting environment of that era. Stone artifacts provide insight into the lives of ancient hunter-gatherers in our regionThus, a thorough examination of the stone industry is very important. According to this analysis the authors, a fascinating conclusion is drawn regarding the origins of the Western Transcaucasia stone industry. During the early Holocene era, a new method of stone processing and various types of tools emerged within the aforementioned region. This innovative approach was originally developed in the territory of Iran and Iraq. It's a Mlefaatien culture, which comprises of many significant sites. After conducting a techno-typological analysis of the stone complex, it is believed that hand pressure techniques, backed microblades, Kashkashok side-blow blade-flakes, grooved tools etc. emerged in Western Georgia result of the great migration process from Middle East in the beginning of the 10th millennia BC. This view is supported by the complete range of precise dates, which accurately reflect the migrations ways and times of the early migrants. Additional inquiries in this field, conducted in the future, will undoubtedly uncover even more fascinating insights.

Keywords: Caucasus; Middle East; early Holocene; stone industry; migration.

Introduction

The territory of Ajara, like other parts of Georgia, has been exploited from the earliest period of human history - the Stone Age. In the 60s of the 20th century, archaeological research in our region was found to be very important settlements dating back to the Stone Age. These include Khutsubani, Kvirike, village. Kobuleti, Jikhanjuri, Makhvilauri and others. (Berdzenishvili, Nebieridze, 1964: 7-16; Gogitidze

1978, 2008). These sites are "open-air" type settlements on the natural hills near the rivers. Currently, archaeological sites are located in the homestead of private owners, where there are accidental artifacts of stone during annual land cultivation. It is precisely such random discoveries that led to the discovery of Stone Age monuments in the Adjara territory and its scientific research.

In 1961, the Institute of History and Archeology of Iv. Javakhishvili started archaeological fieldwork (N. Berdzenishvili, L. Nebieridze, G. Grigolia, and others) in the Black Sea region. The expedition uncovered the Kobuleti and Khutsubani archaeological sites, where more than 500 flint and obsidian artifacts were discovered.From 1973 to 1986, archaeologist Sergo Gogitidze conducted extensive archaeological investigations in Kobuleti, resulting in the discovery of numerous artifacts, pits, and other archaeological objects. Simultaneously, works were also carried out on Khutsubani and the recently discovered Kvirike site. These archaeological campaigns uncovered a significant amount of material, estimated at approximately 30,000 items, establishing Adjara's prehistoric significance on the map of Georgia.

The new phase in the study of the Ajara Stone Age sites began in 2019, when the expedition of Batumi Archaeological Museum (head of expedition: Guram Chkhatarashvili) continued the archaeological fildwork in Kobuleti. The Batumi Shota Rustaveli State University financed these excavations. Recently, the field research area has also included the Khutsubani site, which was financed by the Kobuleti Municipality. It is worth mentioning that the archaeological studies undertaken were interdisciplinary and involved not only archaeologists but also various specialists in the Natural Sciences field, such as geologists, geochemists, geophysicists, palynologists, and others.

Detailed techno-typological analysis of archaeological material and the results of laboratory studies have given us the most important information about hunter-gatherers from Kintrishi valley lived there

about 11,000 years ago. In this work, we will discuss in detail the material discovered in Kobuleti and Khutsubani during archaeological excavations. In this paper, we will discuss in detail the material discovered in Kobuleti and Khutsubani during archaeological excavations. We separated some important groups of artifacts, which provide very interesting information about connections with the Middle East.

Geographical Location

The settlements of Kobuleti and Khutsubani are situated in western Georgia, located 10-12 km from Kobuleti, within the villages bearing the same name in the Kintrish valley. The sites are territorially located in the Colkheti plain, where there is a geographically widespread subtropical climate. The flora characteristic of this climate is present in the mentioned zone, as confirmed by palynological samples collected during excavations in Kobuleti and Khutsubani. In the cultural layers dating back to the 9th-8th millennia, researchers identified various plants that flourish in warm and moist soil, such as hornbeam (Corpinus betulus), lime (Tilia), maple (Acer), walnut (Juglans regia), hazel (Corylus), and Zelkova (Chkhatarashvili et al., 2020: 224). Regarding the latter, it is a relic from the Tertiary period that still grows in Georgia today, specifically in warm locations and at low altitudes along the Alazani Valley and Kolkheti coast (Kvavadze, Conor, 2005). It is feasible to assume that the same climate may have been present in other parts of Kobuleti based on the provided information.

It is significant to note that due to the moist soil, no organic matter has ever been discovered during Stone Age settlement excavations.Thus, the specific animals that were hunted by humans during that time remain unknown. Consequently, we must confine ourselves to the information contained in the Early Holocene faunistic list.

Methods

Both traditional and modern archaeological methods were utilized in the research, facilitating a comprehensive study of the issue.

- The study of Kobuleti and Khutsubani materials were carried out formal-typological method of J. Tixie (Tixie, 1974) and Kh. Amirkhanov (Amirkhanov, 1987) typological scheme of the Holocene period.
- Traditional typological analysis was utilized to ascertain the age of archaeological discoveries and sites. The research conducted enabled us to identify the analoggys of Kobuleti and khutsubani stone industry in abroad.
- In order to obtain the absolute ages of the sites were used the Radiocarbon method (C^{14} AMS) on charcoals from Kobuleti and Khutsubani.

Results

The Kobuleti and Khutsubani excavations have uncovered important artifacts. The technological analysis of the stone industry demonstrates the utilization of the hand pressure technique to process conical and pencil-like cores. The collection houses over 8 units of cores. Furthermore, there are also tablets present that were typically used to correct the core platform.

Flint and obsidian were main source to process the tools. Flint is distinguished by its high quality. Despite the different colors, it seems that it has to come from one source. As for the obsidian, they are dominated by a transparent and black color. All artifacts are 2 356 unit (Table I). Among them 544 unit are tools (Fig. 1). There are various types of tools, such as retouched blades, burins, scrapers, chisels etc. The group backed and truncated microblades (width of 1-3 mm) are particularly interesting. These micro tools can be inserted into bone or wood. Similar tools have been discovered at sites both in Georgia and abroad, such as Kvachara (Bader, Tsereteli 1989: 93-105), Mirnnoe (Sapozhnikov, Sapozhnikova 2011: 119), and others.

In flint and obsidian collection features several units of "Kashkashok side-blow blade-flakes". Similar tools are obtained as follows: wooden hummer is struck on the dorsal side of the plate on a stone

anvil. This technique of blade segmentation was used to obtain narrow blade segments. The place of the chipping was retouched (Fig. 2).

Notably, the collection contains numerous cobblestones, one of which forms a fascinating assembly of "grooved tools" (Fig. 3). A total of three units have been recorded.It is widely believed by many scientists that these tools were utilized in the creation of bone awls or other pointed objects (Usacheva, 2020).

Discussion

The study of the Kobuleti and Khutsubani stone industry shows that the complexs has a great resemblance to the so called Mlefaatien culture. This culture appears in the modern territory of Iran and Iraqi in the late Pleistocene and Early Holocene (Table 2, 1-3). The main sites of this culture are: Mlefaat (Dittermore, 1983), Karim Shahir (Howe, 1983), Jarmo (Hole, 1987), Gand Dareh, Asiab (Kozlowski, 1999), Chaga Safid (Hole, 1977), Ali Kosh (Hole, Flannary , Neely, 1969), Hajji Firuz (Kozlowski, 1999) etc.

Mlefaatien culture sites are characterized by the following peculiarities:

1) The use of hand pressure technique for obtaining blades, bladelets, and microblades
2) the presence of conical and pencil like core in the collection;
3) abundance of backed bladelets and microblades in the tools;
4) The presence of different types of burins: angle, dihedral, bilaterial, etc.
5) Use of oval and round scrapers. The presence of endsrapers;
6) Production of "Kashkashok side-blow blade-flakes" tools;
7) Presence of "grooved tools".

According to the latest studies (Manko, Chkhatarashvili, 2022; Chkhatarashvili et. al., 2020), at the beginning of the early Holocene, the tribes carrying the Mlefaatien culture begin to migrate to the territory of the Caucasus. As a result of the mentioned migration, the so-called Kobuleti culture appeared. This cultre are include following

archaeological sites: Kobuleti (Gogitidze, 1978; 2008), Anaseuli I-II (Nebieridze, 1972), Darteti rockshelter layer V (Nebieridze, 1978), Bavra, Bavra I-II (Gabunia, 2001; Gabunia, Tsereteli 2003), Bavra- Abl-ari (Varoutsikos et. al., 2017), Kvirike, Khutsubani (Gogitidze, 1978; Manko, Chkhatarashvili, 2022), Sosruko, layer M1-M2 (Zamjatnin, Akritas, 1957; Leonova, 2021) and others.

As a result of the techno-typological study of the stone industry of the Mlefaatien and Kobuleti cultures, several important conclusions can be made. In particular:

1. Both complexe coexisted in one period - early Holocene; This is also confirmed by the series of absolute dates (Table 2).
2. Both industry used the hand pressure techniques involving the conic and pencil like cores. Before the beginning of the Holocene, i.e. Before the start of the Mlephaatien migration, none of the sites of the Western Transcaucasia show hand pressure technique. This is confirmed by the youngest date of the Kasozhskaya cave in the North Caucasus (see Table 2, 24-25).
3. One of the leading places in both industries is hold the backed microblades, which were used to insert tools for hunting. One important detail should be noted here. The only industry where we have backed microblades is the Final Upper Palaeolithic (Epigravettian culture). According to the absolute dates of layer B of Dzudzuana Cave (Table 2, 26-28) (Bar-Yosef, et. al., 2011), Epigravetian industry existed in Transcaucasia before the beginning of the Holocene. With the youngest dates of the Epigravettian comparing the absolute data from Kobuleti and Khutsubani, we get approx. 2500 year chronological range. Taking into account the mentioned circumstances, we consider it impossible that the mentioned industry (backed) could last so long.
4. Among the stone tools of both cultures, the leading place is occupied by burins, which are distinguished by diversity and, most importantly, show complete similarity with each other. The same applies to the

presence of oval and/or round scrapers. There is a similarity in the production of endscrapers;

5. Kashkashok side-blow blade-flakes can be said to be an unmistakable indicator of the relationship between the Caucasus and the Middle East. In Near Eastern complexes, Kashkashok-type tools appear in the late Boreal and early Atlantic periods (Table 2, 17-21). As for its appearance in the territory of the Western Transcaucasia, it should have happened at the beginning of the Atlantic period, which is clearly seen by the typological analysis of the Khutsubani stone collection. It should be emphasized here that the Kashkashok side-blow blade-flakes is represented in several copies on another significant site of the Kintrishi valley - Kvirike, about which we will talk separately later.

6. An interesting example of contacts with the Middle East in Kobuleti stone collection is the appearance of "grooved tools". Similar artifacts can be found on several sites of the Mlefaatien culture - Ali Koshi, Sabzhi, Jarmo and others. Their appearance in the complexes of the Middle East and Western Transcaucasia is associated with the beginning of the Atlantic Age (Table 2, 22-23).

Conclusion

Based on the detailed techno-typological analysis of the above-mentioned complexes of the Middle East and Western Transcaucasia, an opinion was expressed about the beginning of large migration processes from the territory of modern Iran-Iraq in the early Holocene era. One of the important waves of migrants enters the Western Transcaucasia, which will give rise to several important innovations both in the actual stone processing and in the typology of tools: new, previously unknown tools also appear, which then spread to different territories.

It is worth noting that, in addition to the techno-typological analysis of the stone industry, the migration processes are confirmed

by the series of absolute dates at our disposal, which also very well reflect the route and time of migration of migrants (Table 2).

Researcher Valery Manko has very interesting opinions on the migrations of the Mlefaatian culture and their role in the creation of the Neolithic culture in the territory of South-Eastern Europe, who connects the origin of the Kukrek culture in the territory of modern Crimea with the Mlefaatian migrants (for details, see Манко 2015; Manko, Chkhatarashvili, 2022).

In our opinion, the Kobuleti culture is one of the earliest cultures in the territory of southwestern Georgia, which is directly related to the Mlefaat culture. We think that in the future, as a result of large-scale field research and detailed study of the collections in the museum funds, the area of the mentioned culture will increase.

Table 1. Kobuleti and Khutsubani. Flint and Obsidian complexs.

Artifacts	**Kobuleti**	**%**	**Khutsubani**	**%**
Core	3	0,26	5	0,92
Tablettes	4	0,31	7	1,29
Burin spalls	9	0,70	5	0,92
Blade (1.2 – cm.)	25	1,79	68	12,5
Bladelet (0,6-1,2 cm.)	194	15,2	102	18,8
Microblade (0.6 cm less)	159	12,50	9	1,66
Primary flakes	6	0,47	33	6,09
Secondary flakes	272	21,40	282	52,12
Chips	378	29,74	20	3,29
Chunks	221	17,38	10	1,84
Tools	**262**	**17,09**	**282**	**34,26/ 100%**

Scrapers	15	5,73	46	16,31
Burins	62	23,66	136	48,23
Retouched blade	89	33,97	47	16,67
Notched Blades	27	10,31	29	10,28
Retouched flakes	9	3,44	7	2,48
Backed microblades	25	9,54	8	2,84
Kashkashok side-blow blades flakes	0	0	5	1,77
,,Grooved tools"	3	1,14	0	0
Truncated microblades	19	7,25	1	0,35
Chisels	12	4,58	3	1,06
Burin-Endsraper	1	0,38	0	0
TOTAL	**1533**	**100**	**823**	**100%**

Table 2. Absolue dates.

№	BP	Lab. Index	Sample	Site	Publication
1	10850±200	Gd-4465	Charcoal	M'lefaat	Kozłowski 1994
2	10890±140	Gd-6150	Charcoal	M'lefaat	Kozłowski 1994
3	10425±145	UCLA-305	?	Chaga Sefid	Hole 1977
4	9700 ±140	?	?	Bavra	Gabunia, Tsereteli, 2003
5	10250 ± 50	Poz-61367	Tooth	Bavra-Ablari	Varoutsikos, et al. 2017
6	9530 ± 40	Poz-66742	Charcoal	Bavra	Varoutsikos, et al. 2017

7	9410 ± 40	Poz-61370	Charcoal	Bavra	Varoutsikos, et al. 2017
8	9420 ± 40	BETA -363172	Charcoal	Bavra	Varoutsikos, et al. 2017
9	8670±30	BETA -393559	Bone	Bavra	Varoutsikos, et al. 2017
10	9720±45	OS-90615	Charcoal	Anaseuli I	Meshveliani, 2013
11	9540±40	OS-78999	Charcoal	Anaseuli I	Meshveliani, 2013
12	8260±35	OS-78998	Charcoal	Anaseuli I	Meshveliani, 2013
13	8670±100	SPb-3084	Charcoal	Kobuleti	Chkhatarashvili, Manko, 2020
14	9629±37	FTMC-LD04-1	Charcoal	Khutsubani	Unpublished
15	9960±140	LU-9477	Bone	Sosruko	Golovanova et al. 2020
16	9945±35	IGANams-7988	Bone	Sosruko	Leonova 2021
17	7880±110	TK-859	?	Kashkashok 2	Matsutani 1991
18	7730±90	TK-803	?	Kashkashok 2	Matsutani 1991
19	7720±50	GrN-24248	Charcoal	Sabi Abyad	Akkermans, Verhoeven 2000
20	6930±45	GrN-26924	Charcoal	Sabi Abyad	Akkermans, Verhoeven

					2000
21	7269±86	P-455	Charcoal	Hajji Firuz	Chataigner 1995
22	7820±190	I-1494	Charcoal	Ali Kosh	Hole 1987
23	7220±160	I-1495	Charcoal	Ali Kosh	Hole 1987
24	11000 ± 150	Spb-128	?	Kasozhskaia	Golovanova, Doronichev, 2012
25	10550±130	Spb-130	?	Kasozhskaia	Golovanova, Doronichev, 2012
26	13860 ± 90	RTT-3278	Bone	Dzudzuana (B)	Bar-Yosef et al., 2011
27	13250 ± 70	RTT-3821	Bone	Dzudzuana (B)	Bar-Yosef et al., 2011
28	11500 ± 75	RTT-3282	Bone	Dzudzuana (B)	Bar-Yosef et al., 2011

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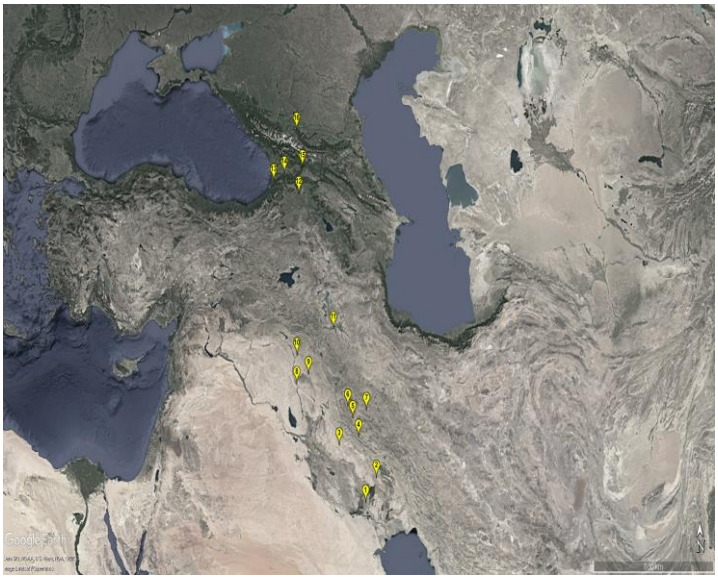
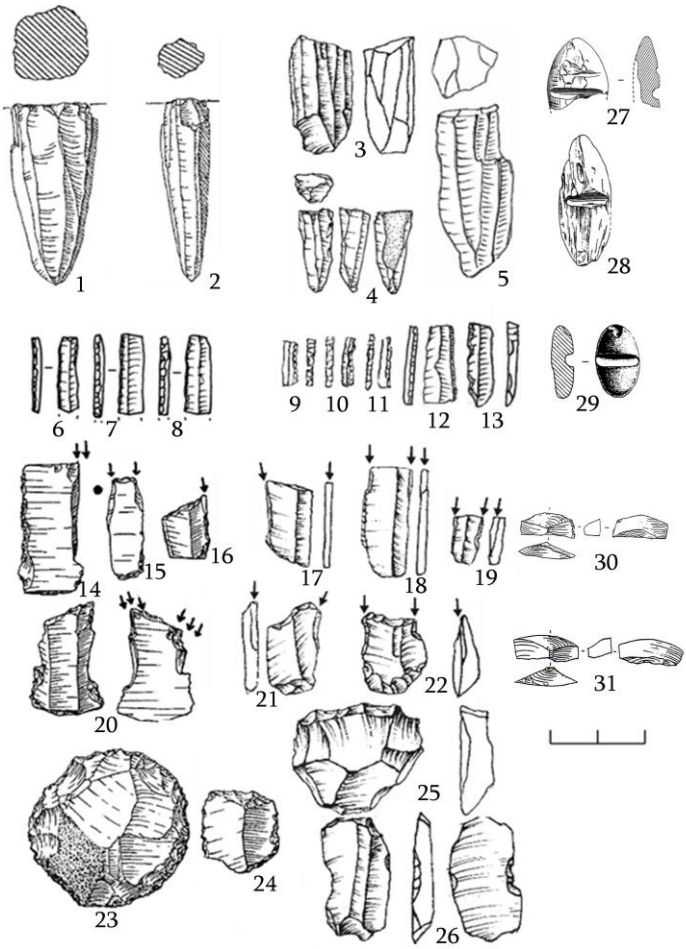
Describe of illustration:

Pic. 1. Early Holocene period archaeological sites with hand pressure technique and backed microblades.

1 – Ali Kosh; 2 – Chaga Sefid; 3 – Tepe Guran; 4 - Sabz; 5 - Sarab; 6 - Asiab; 7 – Ganj Dareh; 8 - Jarmo; 9 – Karim Shahir; 10 - Mlefaat; 11 – Hajji Firuz; 12 – Bavra, Bavra I-II, Bavra-Ablari; 13 – Kobuleti, Khutsubani, Kvirike; 14 – Anaseuli I; 15 – Darkveti rockshelter; 16 - Sosruko



Pic. 2. Stone tools complexs from some arcaeological sites of Middle East and Western Georgia (Howe, 1983, fig. 12, 1-3; Golovanova et. al., 2020, fig. 6, 9; Manko, Chkhatarashvili, 2022, fig. 2; Nishiaki 1996, fig. 3).
1-5 Cores; 6-13 Backed microblades; 14-22 Burins; 23-25 Scrapers; 26 - Chisel; 27-29 ,,Grooved tools"; 30-31 Kashkashok side-blow blade-flakes.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