

First Manifestations of Cultural Traditions in the Early Palaeolithic Period in the Caucasus Region

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ABSTRACT

The material culture of the Early Palaeolithic period is represented by two types of lithic industries that are the primitive Oldowan and the much more advanced Acheulian with complex technologies and toolkits varying in time and space. In different regions there are groups of the Acheulian industries with peculiar technical and morphological characteristics reproduced over time, which can be explained by the presence of cultural traditions. It can be assumed that the formation of the different Acheulian traditions was partly influenced by the natural size, shape and structure of the lithic raw material, as these qualities of local rocks could both limit and promote the development of certain flaking techniques and tool forms. Studying two groups of Early Acheulian sites in the NW and South Caucasus showed that their lithic industries reflect two long-established cultural traditions. They have some similarities because in both cases the Early Acheulian artisans used raw materials available in the form of tabular rock fragments. At the same time, these traditions have clear differences, which reflect the variation in cultural choices within the range of possibilities offered by raw materials.

Keywords: Acheulian, Caucasus, Traditions, Raw material effect

INTRODUCTION

The Early Palaeolithic is the initial period of prehistory, corresponding to the very long physical and cultural development of the early hominids, who were the predecessors of modern humans. The material culture of this period (> 2.6 – 0.2 Myr) is represented exclusively by lithic artifacts. The Early Palaeolithic industries are traditionally attributed to two main industrial complexes, that are the primordial Oldowan (Mod I), first discovered in the Olduvai Gorge, Tanzania (Leakey, 1971), and subsequent Acheulian (Mod II), named after the town in north of France where the relevant artifact assemblages were first studied (Clark, 1994).

According to modern concepts, the Oldowan industries, which were produced predominantly by *Homo habilis*, are characterized by rather primitive techniques of removing small and sharp-edged flakes from pebbles and other rock fragments. These flakes were then used as cutting or scraping implements. The flaked pieces of rock also served as tools for cutting and chopping (core-choppers). Standardized forms of the tools are absent and only a few of the latter have carefully worked cutting edges

(de la Torre, Mora, 2005; Roche et al., 2009; Semaw, Stout, 2009).

The later Acheulian industries (after ~2.0 Myr) made by more advanced hominids (*Homo ergaster/erectus* – *Homo geidelbergensis*) show much more complicated flaking techniques, although the initial stages of Acheulian retain some archaic traits of the Oldowan (choppers, unprepared cores). In general, the Acheulian industries are distinguished by manufacturing of regularly shaped implements including a set of partly standardized large tools (handaxes, which are considered to be the main indicator of the Acheulian, as well as picks, cleavers etc.), which were made of selected rock fragments or large flake blanks produced by special technologies. There are also a variety of small tools (lateral and end scrapers, points, chisels, etc.), which were fashioned with a series of small detachments (retouching) (Semaw, Stout, 2009; Beyene et al., 2013; Sanhuini et al., 2013; Diez-Martin et al., 2015; Galotti, Mussi, 2018). The archaeological study of the Early Palaeolithic involves many aspects. Among the most important issues is the question of to what extent the material culture of the period was

variable and what factors were responsible for that variability.

Variability of the Early Palaeolithic Industries and Its Factors

As the Oldowan industries contain a very scarce set of tools (choppers, small flakes with rare cases of additional retouching of cutting edges or points) they differ little from each other. For example, the only Oldowan industry in the Caucasus, discovered at the Dmanisi site in South Georgia (Gabunia et al., 2000; de Lumley et al., 2002; Ferring et al., 2011), contains cote-choppers and small flakes, which are very similar to those from the Oldowan assemblages of Africa. On the contrary, the Acheulian industries show a significant variability in technology and tool forms. Firstly, there was an evolution of the Acheulian industries over time. In the early stage of the Acheulian, handaxes are usually characterized by massive bodies, irregular shapes and rather coarse trimming. They are usually accompanied by choppers of different forms and massive pick-like tools. In the Acheulian industries with well-developed production of large flakes, the latter were shaped as tools with a transverse cutting edge, called cleavers. At the end of the Acheulian epoch the manufacture of such categories of tools as choppers and picks decreases, while the techniques of making handaxes become more sophisticated, allowing them to be more flattened and symmetrical relative to their long axis. Alongside this general chronological trend, the evolution of the Acheulean industries had regional and local features, namely distinct flaking technologies and tool kits, distinguishing by the proportion of particular categories of tools and their shaping. For example, the Middle Acheulean industry of the site of Gesher Benot Ya'akov in Israel is characterized by heart-shaped handaxes and cleavers fashioned on large flakes (Goren-Inbar, Saragusti, 1996), while the similarly aged industry of the Latamna site in the neighboring region of Syria contains massive lance-shaped handaxes made of natural rock fragments as well as picks and choppers (Clark, 1967). Another example is the fact that in the Acheulian epoch in England the industries with predominantly oval-shaped handaxes coexisted with those with pointed handaxes (Roe, 1981).

Some researchers believe that the variability of the Acheulean industries reflects the random combination of a range of different factors. These include primarily the effects of varying

qualities of raw materials, as well as the technological knowledge and skills of particular craftsmen, the reduction of implements during use, their re-shaping, etc. (see e.g. White 1998; McFerron 2006; Moncel et al. 2018). Other researchers point out that along with chaotically varying features, the Acheulian industries of different regions show sets of specific technomorphological characteristics reproducing over time, which can only be explained by the existence of cultural traditions (Boeda, 1997; Hou et al., 2000; Bar-Yosef, 2006; Belyaeva, Lyubin, 2014). This assumption seems quite reasonable, since we deal with the reproduction of elements of material culture, and it is tradition that provides the transmission of culture over time.

It seems clear that the traditions observed in the Acheulian epoch did not arise spontaneously, but had to be established on the basis of some objective and stable factors that prompted the choice of certain technologies and tools forms. One can assume that the most important such factors were the qualities of rocks used as raw materials in different Acheulian industries. Since each of these rocks was available in pieces of a particular shape and size, and had a particular structure affecting its ability to be flaked, the Acheulian artisans had to develop and maintain the most appropriate techniques to produce tool blanks and tools themselves. In other words, the qualities of the raw materials were to contribute greatly to the establishment of specific flaking techniques and, consequently, fashioning of tools. The role of the raw material factor in the formation of cultural traditions can be considered on the examples of the earliest Acheulian industries of the Caucasus region.

The Early Acheulian Tradition in the North-Western Caucasus

At present, two groups of the Early Acheulian sites have been discovered in the Caucasus region. The first group of six sites is located on the Taman Peninsula in the NW part of Caucasus. Based on the biostratigraphic and paleomagnetic data as well as the geological correlations, the Kermek site dates back to 2.1-2.0 Myr, whereas other sites (Rodniki 1-4 and Bogatyri) may be placed into intervals of 1.4-1.0 Ma (Shchelinsky, 2014; 2019; 2021; Shchelinsky et al., 2016, 2018; Tesakov et al., 2020). The initial stage of the Early Acheulian in the Taman Peninsula is represented by the industry of the Kermek site (Shchelinsky, 2019; 2021). The assemblage of the site (Fig. 1: 1, 2,

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4, 6-10, 13) consists of 600 items, including 159 tools. Large tools (>10 cm) are composed of cleavers, large scraper/chopper-like scrapers, core scrapers/heavy-duty scrapers, picks and choppers (81 items in total, or 51% of the tool collection). It should be noted that handaxes were not found yet. The cleavers have been fashioned on sub-quadrangular large flakes with

the original narrow transverse cutting edge by little additional flaking of their bodies. The choppers were formed mainly with unifacial flaking but bifacial working is observed too. Noteworthy are choppers with deliberately created sub-rectangular shape as well as pointed ones. There is also a specimen looking rather as a double-ended chisel tool.

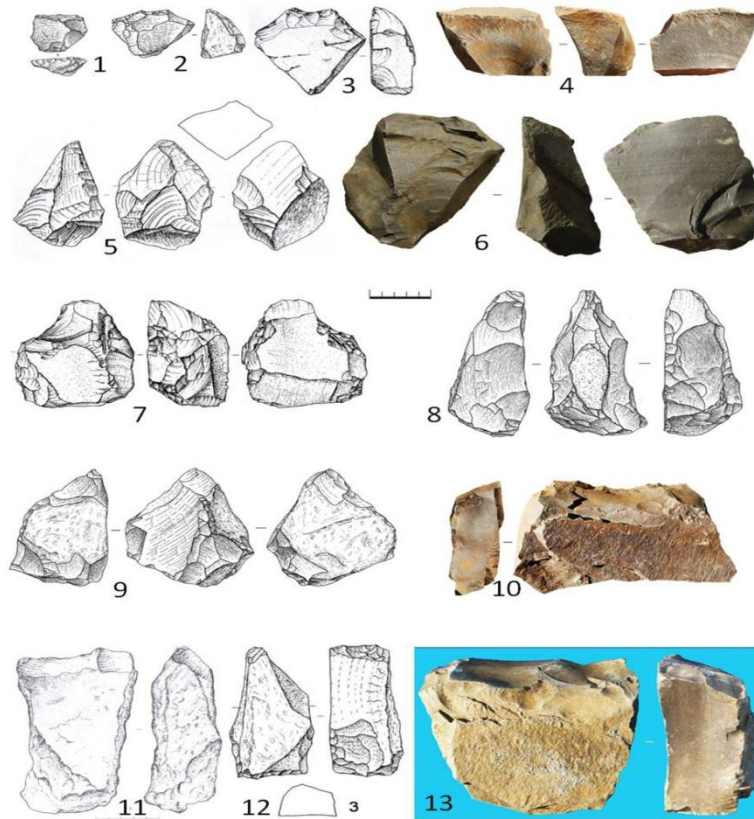


FIGURE 1. Early Acheulian industries of the Taman Peninsula, NW Caucasus. 1 – end scraper; 2, 3 – side scrapers; 4 – ordinary flake; 5 – pick-like handaxe; 6 – flake cleaver; 7-9 – picks; 10, 11, 13 – sub-rectangular choppers; 12 – chisel-like tool.

The most choppers were fashioned on tabular or slab-like rock fragments, with some made on large flakes. The large scrapers are quite similar to choppers but distinguished by a more thorough retouching of the cutting edge. These tools made of both large flakes and tabular clasts of dolomite have a single cutting edge and an opposing butt.

They vary widely from relatively thin tools with sharpened edges to quite thick pieces with steep or even abrupt edges. Some of the latter may be defined rather as core scrapers, or heavy-duty scrapers. The picks were made mostly of thick fragments of dolomite, but those on thick flakes were met too.

Most often, the picks have a sub triangular shape, which may be both elongated and shortened. The cross-sections are sub-quadrangular, trapezoidal or sub-triangular. In

most cases, the widest flat side was not worked, while the other facets are partially flaked with special emphasis on the pointed tip. The other half of the tool collection (78 items) consists of a set of smaller tools fashioned on flakes and tabular fragments of dolomite through retouching their edges (side and end scrapers, pointed tools, denticulate and notched tools). Some of these tools have sub-rectangular outlines.

The products of primary flaking of the local dolomite are represented by cores and multi-sized flakes. There was production of both ordinary flakes and large flakes more than 10 cm long.

The ordinary flakes used as blanks for fashioning small tools were produced mostly through uni-directional reduction of unprepared cores with a single flaking surface. These core

types reflect removing of flakes from one or more abrupt edges of sufficiently thick tabular pieces of dolomite. The large flakes were detached from much thicker tabular pieces. Judging by the finding of only two giant cores for the large flakes in the cultural layer, these blanks were produced not in the site but rather wherever such unusual fragments of dolomite occurred.

Along with flakes the Kermek artisans made tools of suitable tabular fragments of local dolomite transported from the vicinity of the site. Selection of the latter was performed by sorting of naturally occurring tabular clasts or intentional splitting of too large pieces into smaller fragments with a desired shape and size.

The later Early Acheulian sites of the Taman Peninsula (Rodniki 1-4 and Bogatyri) yielded very similar but somewhat more developed industries (Shchelinsky, 2014). The set of tools (picks, choppers, chisel-like tools, large and small scrapers etc.) and their forms do not change considerably (Fig. 1: 3, 11, 12), but they are supplemented by several small-sized and crude pick-like handaxes (Fig. 1: 5). Compared to the Kermek industry, the tools become more standardized and better worked, and the number of geometric forms increases, including those with sub-rectangular and sub-triangular outlines.

The tools continued to be made from both flake blanks of various sizes and tabulated clasts of local dolomite. Thus, based on the study of the Tamanian Early Acheulian sites, we can speak of the long development of a single tradition, namely the Tamanian characterized by a combination of cleavers with particular types of choppers and picks, the rarity of handaxes, and the presence of tools of geometric shapes.

These features appear to have developed on the basis of the adaptation of the first inhabitants of the Taman Peninsula to the characteristics of the local dolomite. This raw material, on the one hand, made it possible to produce flake blanks for tools, including large detachments suitable for fashioning cleavers.

At the same time, this rock was available as natural tabulated fragments, which were also used for making tools and may have contributed to the emergence of geometric shapes among the latter. It should be noted, however, that natural rock fragments tiles with such outlines were deliberately selected and sometimes shaped additionally by flaking, i.e. it was a cultural choice that became traditional.

The Early Acheulian Tradition in the Southern Part of the Caucasus

Two Early Acheulian sites known to date in the South Caucasus are located in the volcanic area in the north of Armenia (Lori Plateau). The multi-layered Karakhach site was dated by the U-Pb method in the interval 1.85-1.77 Myr, which is also assumed for the lower layers of the neighboring Muradovo site (Presnyakov et al., 2012; Trifonov et al., 2016; Belyaeva et al., 2019; Belyaeva, 2020). The Karakhach site yielded around three thousand artifacts and almost a thousand more were found in the relevant layers of the Muradovo site.

The Early Acheulian assemblages produced by the inhabitants of Karakhach and Muradovo are quite similar and may be considered as a single industry (Fig. 2), which may be designated as the Lorian (Belyaeva, Lyubin, 2013; Belyaeva et al., 2019; Belyaeva, 2020).

The total lithic collection consists predominantly of tools (Fig. 2), while products of primary flaking (uni-directional cores, ordinary flakes) are very rare. Large tools (9-20% in different layers) are represented by such categories as handaxes, large scraper/chopper-like scrapers, large knives, core scrapers/heavy-duty scrapers, picks, choppers and chisel-like tools.

The rest are smaller tools (side and end scrapers, pointed tools, denticulated and notched tools, becks etc.) fashioned by retouching, which modified mainly their cutting edges or other working elements. Almost all the tools of the Lorian industry were made of tabulated fragment of local volcanic rocks, which are rhyodacite and rhyolite (Belyaeva et al., 2019). The tools that have been identified as handaxes have flattened more or less elongated bodies and two lateral cutting edges, which converge to form a pointed or slightly rounded distal end (Fig. 2: 8-9).

There are around fifty such tools widely varying in size, shape and extent of modifying flaking. Among them are some very thick tools have been identified as pick-like handaxe (Fig. 2: 11). The entirely bifacial flaking is observed in a few cases and the most are partial bifaces and even unifaces. Only one handaxe was made of flake, while the bulk of them were fashioned on relatively thin tabular clasts. Larger or smaller areas of the natural surfaces of these blanks are frequently retained on the sides, butt and edges of the handaxes. In the latter case the handaxes

become backed and sometimes even double-backed. Of special note are the three handaxes

with unusual shape that resemble a gable-roof house (Fig. 2: 9).



FIGURE 2. Early Acheulian industries of the Lori Plateau, South Caucasus. 1 – pointed tool; 2, 5-7 – end scrapers; 3 – side scraper; 4 – chisel-like tool; 8, 9 – handaxes; 10 – pick; 11 – pick-like handaxe; 12 – fan-shaped chopper; 13 – large chisel-like tool; 14 – sub-rectangular chopper.

There are numerous large scrapers that are quite similar to choppers but distinguished by a rather thin cross-section and a more thorough fashioning of cutting edges. Their shapes are often sub-rectangular or more rarely sub-trapezoidal and sub-triangular. The heavy duty scrapers were met too. There are also partly similar but strongly elongated tools with an opposing cutting edge and blunt edge joining at the distal end, which were defined as backed macro-knives. Like the large scrapers, the picks and choppers are present in large numbers. All these were made of thick tabular fragments. The picks have distal end fashioned as a massive point or chisel edge. The shapes of the picks are most often sub-triangular or resemble a smoothing iron. The choppers are represented mostly by single-edged specimens of variable shapes. Their straight or slightly convex cutting edges are lateral or transverse to the long axis of the tool body. Particularly noteworthy are two groups of choppers with sub-rectangular and fan-like shapes (Fig.2: 12, 14). There are also some more complicated forms of choppers with end and side location of cutting edges as well pointed specimens. Of special interest are a few unusual large tools looking as narrow and elongated slabs with transverse cutting edge at the end (Fig.2: 13). Depending on whether this cutting edge is positioned in the frontal plane of

the tool (wedge-shaped cross-section) or in the plane of one of the sides (plano-convex cross-section), they have been defined as large slab-shaped chisels and push-planes, respectively.

The smaller tools of the Lorian industry were made mostly of correspondingly sized tabular rock fragments and, in very rare cases, of flakes. The most numerous are side and end scrapers as well pointed tools. The side scrapers are mostly single-edged but several examples of convergent and angular side scrapers were met too. There is a number of side scrapers with sub-rectangular and sub-triangular shapes, which were met also among end-scrapers. The latter are represented by both short and elongated specimens. The pointed tools vary from elongated forms with convergent edges to short thorns. Some tools combining different scraping and piercing elements were defined as combination tools. There are also small quantities of chisel-like tools, push-planes denticulate and notched tools.

Compared to the Tamanian industries, the Lorian industry contains a somewhat richer set of both small and large tools including a number of handaxes. It should be noted that the Early Acheulian people of the Lori area, unlike those of the Tamanian Peninsula, learned to systematically produce so technologically complicated tools as handaxes, despite the rather

difficult-to-treat local raw material, which was not only tabulated but often had a stratified structure. However, the edges of many handaxes remained partially blunt i.e. they became backed handaxes. A possible reason for this is that the thick and abrupt edges of tabular blanks often made it difficult to sharpen them by bifacial working along the entire perimeter. In the Tamanian industries, there was no specialized production of large flake blanks in the Lorian sites, so, accordingly, no flake cleavers were made there. Further, the Lorian artisans were not doing mass production of flake blanks for tools at all, preferring to make the latter from natural tabular fragments of local volcanic rocks. Possibly, this is one of the reasons why tools of geometric shapes are more common in the Lori sites than in the Tamanian, where tools were fashioned on both flakes and tabular clasts. However, the earliest inhabitants of the Lori Plateau not only followed the natural forms of raw material, but also selected and even transformed them, creating such peculiarly shaped types of tools as fun-shaped choppers and scrapers as well as macro-knives, slab-like chisels and push-planes, which were further reproduced over time. These are the main features of the Early Acheulian industry, which has existed in Lori for at least 200 Kyr. It clearly reflects a cultural tradition that arose through creative adaptation to local raw materials.

CONCLUDING REMARKS

The Early Acheulian industries described above were formed in distant areas of Early Acheulian habitation (Taman Peninsula, NW Caucasus and Lori Plateau, South Caucasus). These lithic industries existed in both regions of the Caucasus for a very long time, demonstrating the stability of the basic technical and morphological characteristics. The industries under consideration have some common features (use of natural tool blanks, abundance of choppers and picks, presence of tools with geometric shapes etc.), which can be explained by their close ages and similar qualities of the raw materials, which in both cases were available in the form of tabular fragments. At the same time, the Tamanian and the Lorian industries have significant differences from each other in some aspects of flaking technologies as well as in composition and design of lithic tools. These differences may in part be due to some distinctions in the structure of the rocks (compactness of Tamanian dolomite versus layering of Lorian lava rocks) which influenced their suitability for processing. However, some

of the specific features of each of the industries clearly reflect cultural choices, i.e. the sustained preference of the Early Acheulian artisans for certain technologies and tool design options within the limits of the possibilities provided by the qualities of the raw materials. This allows us to speak of two traditions based on particular adaptations to local raw materials.

Both the Tamanian and the Lorian traditions are very different from the Acheulian of neighboring territories of the Middle East and should be considered as purely intra-Caucasian phenomena. As far as current evidence suggests, the Tamanian tradition had no continuation in later stages of the Acheulian of the Caucasus region. As for the Lori tradition, it can be seen, firstly, in the somewhat later Acheulian industry of the Kurtan I site (Lori Plateau) dated in the interval 1.5-0.8 Myr (Belyaeva et al., 2019). Among the few Acheulian artifacts extracted from the lower layers of the site there are some types of tools (chisel-ended picks, sub-rectangular choppers, large slab-like chisels) analogous to those indicating the Lorian industry. In addition, several similar tools characterizing the Lorian tradition have been met in a number of locations recently discovered in different parts of the Lori Plateau, which should be investigated to enlarge lithic collections and ascertain their age. The further development of that tradition and fate of its bearers is unknown, as traces of human habitation in the Caucasus during the subsequent Middle Acheulian period (~0.8-0.5 Myr) are practically absent, probably because of a significant deterioration in climate due to the increased amplitude and duration of global glacial cycles and the accelerated tectonic uplift of the Caucasus terrain (Trifonov et al., 2019; Tesakov et al., 2020).

The new widespread dispersal by the Acheulian people in the Caucasus occurs long afterwards, during the relatively warm period (420-320 Kyr) corresponding to the late stage of the Acheulian. The Late Acheulian industries of the Caucasus differ from the local Early Acheulian complexes in most characteristics (well-developed techniques of producing flake blanks, systematic production of flat handaxes on large flakes, absence of picks and choppers, etc.). At the same time they display certain features that set them apart from the same-age industries of neighboring regions too. These features include the absence of cleavers, despite the production of large flakes, as well as a high proportion of sub-rectangular-shaped handaxes and backed

handaxes. As such features have been noted for the Lorian Early Acheulian tradition, it is possible that the late Acheulian of the Caucasus may have partly inter-regional roots that have yet to be traced.

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REFERENCES

- [1] Bar-Yosef, O. (2006). The known and unknown about Acheulian//Axe Age: Acheulian Tool making from Quarry to Discard. London, Oakville, 479-494.
- [2] Belyaeva, E.V. (2020). Rannechel'skie industrii Zaccaucazskogo nagoria I sopredel'nyh territoriy Caucasa i Blijnego Vostoka (Early Acheulian industries of the Transcaucasian upland and the adjacent areas of the Caucasus and the Near East). Rannepaleoliticheskie pamiatniki i prirodnyaya sreda Caucasa i sopredel'nyh territoriy v rannem-srednem pleistocene. St-Petersburg, Peterburgskoe Vostokovedenie (Archaeologica Petropolitana) (Eds. Belyaeva, E.V., Tesakov, A.S), St-Petersburg, 41-64 (in Russian).
- [3] Belyaeva, E.V., Lyubin, V.P. (2013). Achel'skie pamiatniki Severnoy Armenii (Acheulian localities of North Armenia). In Osnovnye problemy archeologii, antropologii and ethnographii Eurazii. K 70-letiyu akademika A.P. Dervyanko (Eds. Molodin, V.I., Shun'kov M.V.). Novosibirsk, 37-52 (in Russian).
- [4] Belyaeva, E.V., Lyubin, V.P. (2014). Novy vzgliad na razvitiye achelia na Caucase (A new look at evolution of the Acheulian in the Caucasus. In: Problems of stone age archaeology. To 70-anniversary of V.I. Belyaeva. Saint-Peterbourg, 189-214 (in Russian).
- [5] Belyaeva, E.V., Lyubin, V.P., Trifonov, V.G. (2019). Decouverte de sites de Paleolithique inferieur au Nord d'Armenie. L'Anthropologie, 123, 257-275.
- [6] Beyene, Y., Katoh, Sh., Wolde Gabriel, G., Harte, W. K., Utofi, K., Sudo, M., Kondo, M., Hyodo, M., Renne, P.R., Suwa, G., Asfaw, B. (2013). The characteristics and chronology of the earliest Acheulean at Konso, Ethiopia. Proceedings of the National Academy of Sciences, 110 (5), 1584–1591.
- [7] Boeda E. (1997). Technogenese des systemes de production lithique au Paleolithique inferieur et moyen en Europe occidentale et au Proche-Orient, Habilitation a diriger les recherches. Universite ParisX-Nanterre. Vol. 2.
- [8] Clark, J.D. (1967). The middle Acheulian site at Latamne, northern Syria// Quaternaria 9. Pp.1-68.
- [9] Clark J.D. (1994). The Acheulean Industrial Complex in Africa and elsewhere. Integrative Paths to the Past (Eds R.S. Corruccini and R.L. Ciochon). Prentice-Hall, New Jersey. Pp. 451–469.
- [10] de la Torre I., Mora R. (2005). Technological strategies in the Lower Pleistocene at Olduvai Beds I & II. ERAUL, Études et Recherches Archéologiques de l'Université de Liège. Vol. 112.
- [11] de Lumley, H., Lordkipanidze, D., Feraud, G., Garcia, T., Perrenoud, Ch., Falqueres, Ch., Gagnepain, J., Saos, T., Voinchet, P. (2002). Datation par la methode Ar/Ar de la couche de cendres volcaniques (couche VI) de Dmanissi (Georgie) qui a livré des restes d'hominides fossiles de 1,81 Ma. C.R. Palevol, 1, 181-189.
- [12] Diez-Martin, F., Sanchez Yustos, P., Uribealarea, D., Baquedano, E., Mark, D.F., Marulla, A. et al. (2015). The Origin of the Acheulian. The 1.7 Million-Years-Old Site of FLK West, Olduvai Gorge, Tanzania. Scientific reports, 5, 17-38.
- [13] Ferring, R., Oms, O., Agusti, J., Berna, F., Nioradze, M., Shelia, T., Tappen, M., Vekua, A., Zhvania, D. and Lordkipanidze, D. (2011). Earliest human occupations at Dmanisi (Georgian Caucasus) dated to 1.85–1.78 Ma. Proceedings of the National Academy of Sciences 108(20), 10432–10436.
- [14] Gabunia, L., Vekua, A., Lordkipanidze, D. (2000). The environmental contexts of early human occupation of Georgia (Transcaucasia). Journal of Human Evolution, 38, 785–802.
- [15] Galotti, R., Mussi, M., 2018a. The Emergence of the Acheulian in East Africa: Historical Perspectives and Current Issues. The Emergence of Acheulian in East Africa and Beyond (Eds Galotti, R., Mussi, M.). Cham., Springer, 1-12.
- [16] Goren-Inbar N., Saragusti I. (1996) An Acheulian biface assemblage from the site of Gesher Benot Ya'aqov, Israel: indications of African affinities. J. Field Archaeol. 23. Pp. 15–30.
- [17] Hou Y.M., Potts R., Yuan B., Guo Y., Deino Z.T., Wang A., Clark W., Xie J., Huang W.W. (2000). Mid-Pleistocene Acheulean-like stone technology of the Bose Basin, South China// Science 287, P.1622-1626.
- [18] Leakey M.D. (1971). Olduvai Gorge. Volume 3. Excavations in Beds I and II, 1960–63. Cambridge,
- [19] Moncel, M.A., Arzarello M., Boëda E., Bonilauri S., Chevrier B., Gaillard Cl., Forestier H., Yinghua Li, Sémah F., Zeitoun V. (2018). Assemblages with bifacial tools in Eurasia (third part). Considerations on the bifacial phenomenon throughout Eurasia Assemblages d'outils bifaciaux en Eurasie

- (troisième partie). Considérations sur le phénomène bifacial à travers l'Eurasie. C.R. Paleovol 17, 77-97. Liubine (Lyubin) V.P., 2002. L'Acheuleen du Caucase. ERAUL 93, Liege.
- [20] McFerron Sh.P. (2006). What typology can tell us about Acheulian handaxe production. *Axe Age. Acheulian tool-making from quarry to discard*. London, 267-286.
- [21] Presnyakov, S.L., Belyaeva, E.V., Lyubin, V.P., Radionov, N.V., Antonov, A.V., Saltykova, A.K., Berezhnaya, N.G., Sergeev, S.A. (2012). Age of the earliest Paleolithic sites in the northern part of the Armenian Highland by SHRIMP-II U-Pb geochronology of zircons from volcanic ashes. *Gondwana Research* 21, 929-938.
- [22] Roe, D.A. (1981). *The Lower and Middle Palaeolithic in Britain*. London: Routledge & Kegan Paul.
- [23] Roche, H., Blumenschine, R.J., Shea, J. (2009). *Origins and Adaptations of Early Homo: What Archaeology Tells Us. The First Humans: Origin and Early Evolution of the Genus Homo. Vertebrate Paleobiology and Paleoanthropology series* (Eds Grine, F.E., Fleagle, J.G., Leakey, R.E). Springer, 135-147.
- [24] Sanhuini, M., Semaw, S., Rogers, M. (2013). *The African Acheulean. The Oxford Handbook of African Archaeology*. Online Publication Date: Sep 2013 DOI: 10.1093/oxfordhb/9780199569885.013.0022.
- [25] Semaw, S., Rogers, M., Stout, D. (2009). The Oldowan-Acheulian transition: Is there a «Developed Oldowan» artifact tradition. *Sourcebook of Paleolithic Transitions* (Eds Camps, M., Chauhan M.). P. New York: Springer, 173-192.
- [26] Shchelinsky, V. E. (2014). Eopleistozenovaya rannepaleoliticheskaya stoyanka
- [27] Rodniki 1 v Zapadnom Predkavkaz'e (Eopleistocene Early Paleolithic site of Rodniki in the western Ciscaucasia). IIMC RAS, Saint-Petersburg (in Russian).
- [28] Shchelinsky, V. E. (2019). Sur quelques résultats d'études du Paléolithique inférieur au bord de la mer d'Azov (Russie). *L'Anthropologie* 123 (4-5), 688-694.
- [29] Shchelinsky, V. E. (2021). Panniy ashel Zapadnogo Prekavkaz'ya (The Early Acheulian of the western Ciscaucasia). *Peterburgskoe Vostokovedenie* (Archaeologica Petropolitana), St-Petersburg (in Russian).
- [30] Shchelinsky, V. E., Gurova, M., Tesakov, A. S., Titov, V. V., Frolov, P. D.,
- [31] Simakova, A. N. (2016). The Early Pleistocene site of Kermek in western
- [32] Ciscaucasia (southern Russia): Stratigraphy, biotic record and lithic industry
- [33] (preliminary results). *Quaternary International* 393, 51-69.
- [34] Shchelinsky, V., Tesakov, A., Titov, V., Frolov, P. (2018). The Early Paleolithic industries with large cutting tools on the Taman peninsula (Azov-Black Sea region, Russia): age, representative forms of tools. 18th UISPP World congress, Paris, June 2018. Book of abstracts, 173-174.
- [35] Tesakov, A. S., Trifonov, V. G., Simakova, A. N., Sokolov, S.A., Trikhunkov, Ya. I., Çelik, H., Frolov, P. D., Belyaeva, E.V., Shalaeva, E.A., Gaydalenok, O.V., Bachmanov, D. M. (2020). Geodinamicheskie i biocenoticheskie uslovia rannego-srednego pleistocena v kontekste zaselenia drevnim chelovekom Krymsko-Caucazsko-Araviyskogo regiona (Geodynamic and biocenotic conditions of the Early-Middle Pleistocene in the context of the early human occupation of the Crimea-Caucasus-Arabian region). *Rannepaleoliticheskie pamiatniki i prirodnyaya sreda Caucasa i sopredel'nyh territoriy v rannem-srednem pleistocene* (Eds. Belyaeva, E.V., Tesakov, A.S). St-Petersburg, Peterburgskoe Vostokovedenie (Archaeologica Petropolitana), St-Petersburg, 7-24 (in Russian).
- [36] Trifonov, V. G., Lyubin, V. P., Belyaeva, E. N., Lebedev, V. A., Trikhunkov, Ya. I., Tesakov, A. S., Simakova, A. N., Veselovsky, R. V., Latyshev, A. V., Presnyakov, S. L., Ivanova, T. P., Ozhereliev, D. V., Bachmanov, D. M., Lyapunov, S. M. (2016). Stratigraphic and tectonic settings of Early Paleolithic of North-West Armenia. *Quaternary International*, 420, 178-198.
- [37] Trifonov, V. G., Tesakov, A. S., Simakova, A. N., Bachmanov, D. M. (2019). Environmental and geodynamic settings of the earliest hominin migration to the Arabian-Caucasus region: A review. *Quaternary International*, 534, 116-137.
- [38] White, M.J. (1998). On the significance of the Acheulian biface variability in the southern Britain. *Proceedings of the Prehistoric Society* 64, 15-44.

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