

Figurative and decorative art of Kostenki: chronological and cultural differentiation

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To the memory of N.D. Praslov

The very high concentration of open-air sites within a small territory is one of the main characteristics of the Palaeolithic group of Kostenki. As a matter of fact, twenty-six Palaeolithic sites are known from the territory of the actual villages of Kostenki and Borshchevo: almost half of them are stratified sites, containing up to ten archaeological layers (Fig. 1).

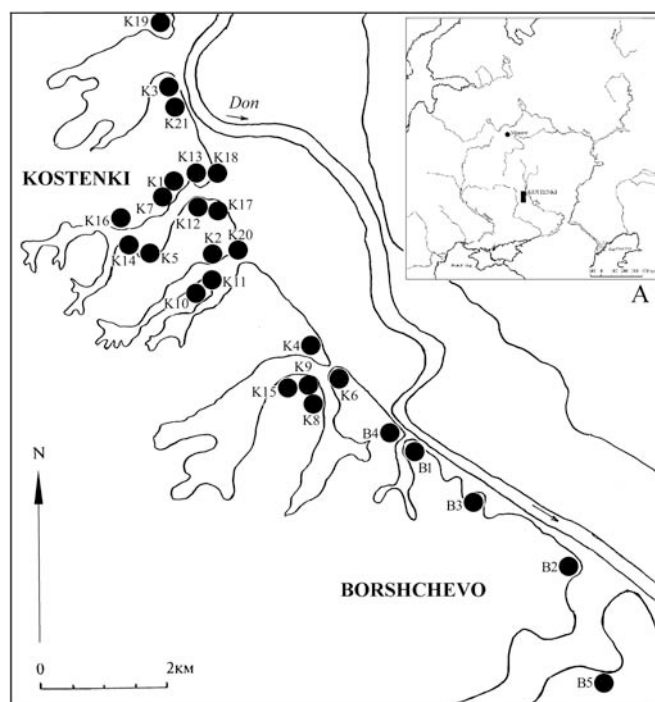


Fig. 1. Kostenki-Borshchevo locality of Palaeolithic sites. A. Geographic position.

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In general, we deal here with the remnants of over sixty well stratified settlements. Equal high concentrations of Palaeolithic sites are known from the locality of Les Eyzies (Dordogne, France) with its numerous stratified deposits in caves and rock-shelters and from the slopes of the Pavlov hill in Moravia with a series of open-air sites. However, a second characteristics associated with the group of Kostenki does not present any analogies: the record of the assemblages in this area allows to construct a specific model of the cultural evolution during the Palaeolithic period that differs significantly from the models proposed in other eastern European regions, for example the Middle Dniepr region, the Pontic steppe, the Dniestr, the North-East and probably the Urals (Sinitsyn 2010b).

1. Chronology and periodization: history and current state of research

As a result from field research conducted during the 1950s and 1960s by A.N. Rogachev together with the geologists M.N. Grishchenko, G.I. Lazukov, and A.A. Velichko, the archaeological sequence at Kostenki was subdivided into three main chronological stages based on stratigraphic observations (Velichko & Rogatchev 1969; Praslov & Rogachev 1982). The archaeological layers embedded in the loess-like loams underlying the modern chernozem were assigned to the late chronological stage (stage III). The layers assigned to the middle and early chronological stages (stages II and I) correspond to the deposits within the upper and lower humic beds respectively. These latter are subdivided by a deposit of volcanic ash (Fig. 2, left).

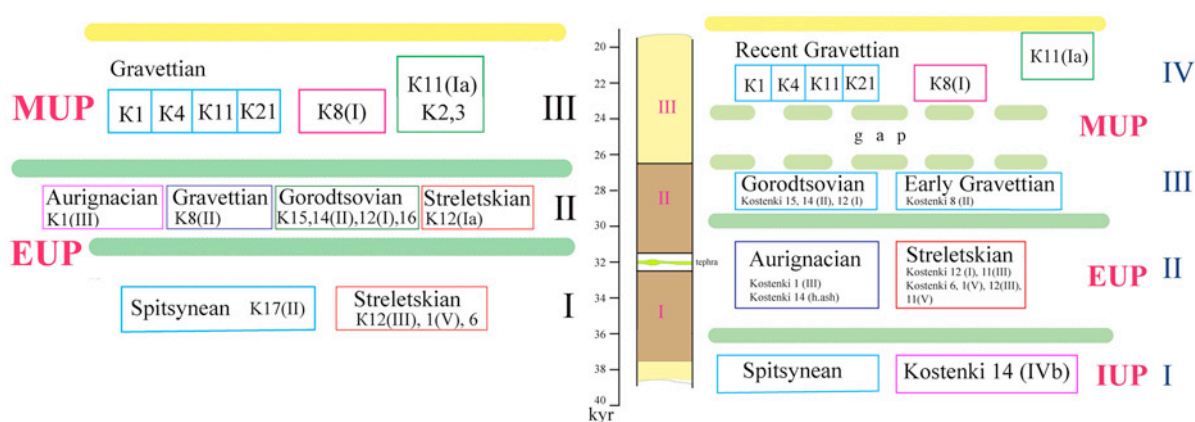


Fig. 2. Models of cultural diversification of Kostenki Palaeolithic: **left.** traditional model of A.-N. Rogachev; **right.** new model (according to Sinitsyn 2010a with modifications).

During the 1980s, a radiocarbon chronology was constructed for these three chronological stages (Praslov & Soulerjytsky 1997; Sinitsyn *et al.* 1997; Sinitsyn 1996, 1999):

- chronological stage III: 26,000-20,000 BP (actually 23,000-20,000 BP),
- chronological stage II: 32,000-27,000 BP,
- chronological stage I: 36,000-32,000 BP.

The cultural components of the first chronological stage were defined through the coexistence of Streletskian and Spitsyanean, the middle stage through the simultaneous occurrence of Streletskian, Aurignacian, Gorodtsovian and Gravettian

and the recent stage through a number of Gravettian varieties associated with sites of debatable cultural attribution.

Studies conducted over the last decade (Sinitsyn 2003b, 2004; Haesaerts *et al.* 2004; Sinitsyn & Hoffecker 2006; Anikovich *et al.* 2007; Holliday *et al.* 2007; Velichko *et al.* 2009; Sedov *et al.* 2010) provided significant evidence for the earlier age of the lowermost part of the Kostenki sequence also as evidences for their more complex structure.

The data recovered from Kostenki 14 (Markina Gora) appear to be the most significant. Two markers of high chronological resolution were identified in this site. These are the layer of volcanic ash and the volcanic ash itself, as well as the Laschamps-Kargopolovo geomagnetic excursion (~ 42,000 BP) identified within a fossil soil underlying the tephra layer. The layer of volcanic ash was related to the Campanian Ignimbrite (CI) and the Y5 tephra level at bottom of the Mediterranean sequences, both deposits resulting from volcanic eruption in the Phlegraean Fields in southern Italy dated to 39,000-41,000 BP (Melekestsev *et al.* 1984; Fedele *et al.* 2003; Pyle *et al.* 2006; Giacco *et al.* 2006, 2008; Hoffecker *et al.* 2008). Consequently, the archaeological layers assigned to the Upper Palaeolithic underlying these horizons, are even older. Actually, we deal here with the earliest occurrence of Upper Paleolithic assemblages which are traditionally related to the appearance of modern humans in Eastern Europe.

According to recent excavations at Markina Gora, two cultural entities were added to the earliest chronological group: assemblage of the cultural layer IVb on the one hand, and on the other assemblage assigned to the Aurignacian containing Dufour bladelets, discovered within the level of volcanic ash (Sinitsyn 2003a, 2003b, 2004, 2010b).

Nowhere else in Europe the Early Upper Palaeolithic (EUP) exhibits such a high cultural variety. Two hypotheses concerning the cultural configuration of the chronological stage I at Kostenki can be put forward: the association of four cultural traditions occurring simultaneously, and/or the subdivision of these four traditions into two sub-groups: a younger (Aurignacian and Streletskian) and an older (Spitsyanean and the assemblage of layer IVb at Kostenki 14). In the current state of research, the second hypothesis seems to be more consistent.

The current model developed for the cultural composition of the middle chronological group (stage II) shows a similar structure. However, the simultaneous presence of four cultural entities appears to be rather complex compared to the European context. During the time span between 32,000 and 27,000 BP no other area within the Paleolithic world exhibits comparable cultural variety. Similarly, based on the radiocarbon dates, a subdivision into two succeeding subgroups, each characterized by its own specific structure, can be proposed. The date of about 28,000 BP obtained for the archaeological layer II at Kostenki 8 (Telmanskaya), assigned to the Gravettian, and the series of dates stemming from the archaeological layer II at Kostenki 14 (Markina Gora), at about 28,000 BP, are an argument to sustain a more recent age for both the Gravettian and Gorodtsovian assemblages within the chronological stage II. The dates of about 32,000 BP obtained for the archaeological layer III at Kostenki 1, attributed to the Aurignacian, as well as for the archaeological layer Ia at Kostenki 12, assigned to the Streletskian, may be an argument in favour of an older age of these cultural entities within this stage.

The first Gravettian assemblages appear almost simultaneously across Europe, from the Atlantic coast up to Kostenki. They mark the beginning of the Middle Upper Palaeolithic (MUP) period through an association of “mosaic” entities (Svoboda 2004), a new way of structural organization of the European Palaeolithic world. More particularly, the Kostenki model includes an additional component, contemporaneous of the Early Gravettian, the Gorodtsovian, an original East European cultural phenomenon.

The structure of the third chronological stage (stage III) remains unchanged and is represented by number of different Gravettian varieties associated with a series of distinct assemblages without Gravettian characteristics (Sinitsyn 2007b, 2010a).

The revised model, however respecting the current reflection, proposes a four-staged vision (Fig. 2 right):

I – Initial Upper Palaeolithic (IUP stratum), dated between 42,000 and 36,000 BP: represented by the Spitsyanean and the assemblage from the archaeological layer IVb at Markina Gora;

II – Early Upper Palaeolithic (EUP), dated between 36,000 and 28,000 BP: represented by the Aurignacian associated with a local “transitional” cultural tradition (Streletskian);

III – early Middle Upper Paleolithic (early MUP) dated at about 28,000 BP: this stage is marked by the appearance of the Gravettian, associated with the Gorodtsovian;

IV – recent Middle Upper Palaeolithic (recent MUP) dated between 23,000 and 20,000 BP: represented by a series of Gravettian styles associated with distinct assemblages.

In this model, the duration of the gap between the early Gravettian and the recent Gravettian remains a problem, however in accordance with other Eastern European cases (Demidenko 2008). According to this reflection both archaeological layers and geological deposits assigned to the LGM period are still unknown at Kostenki (Praslov, 1999).

The cultural affiliation of all cultural unities is based on the technical and typological aspects of the lithic productions. However, the other categories (bone industry, dwellings constructions, arts...) do not or not always match the cultural definitions based on lithics. The most obvious example are the impressive dwelling features built with mammoth bones of the Anosovo-Mezin type that were identified in association with different cultural traditions defined on the basis of the lithic industries.

In the current state of research concerning the Palaeolithic of the Kostenki sites, the main problem is the correlation of the different categories of the material culture (lithic and bone productions, dwelling features, personal ornaments, portable art etc.) within and between the different assemblages. The principal aim of this paper is to attempt a classification of the figurative art and the decorative artifacts also as personal ornaments for the cultural entities defined from the lithic productions.

Artifacts indicating artistic activities have been recovered from twenty-five archaeological layers of fifteen sites at Kostenki (Abramova 1967; Abramova & Sinitsyn 2002). They can be classified as following:

- 1) figurative art: anthropomorphic and zoomorphic figurines and engravings, rare for Eastern Europe;
- 2) carved, not clearly defined artifacts;
- 3) personal ornaments: diadems, bracelets, pendants and beads, currently decorated. Natural pieces with suspension holes are incorporated here;
- 4) decorations applied on a) tools, b) personal ornaments, c) artifacts without clearly determined function or bone fragments, mammoth tusks and soft stones.

2. The art inventory of the Initial Upper Palaeolithic stratum (42,000-36,000 BP)

Two cultural entities of the earliest chronological stage of the Kostenki model – Spitsyean (archaeological layer II, Kostenki 17) and the archaeological layer IVb at Kostenki 14 – have yielded rich series of ornamented artifacts.

2.1. Spitsyean

The lower archaeological layer at Kostenki 17 (site of Spitsyn) (Boriskovsky 1963) (Fig. 3) has yielded: a) about forty pendants made on teeth of arctic fox perforated by rotary biconical drilling (Fig. 3.13); b) pendants made on stone, fossil shells and belemnites with perforations equally made by drilling from two opposite surfaces; c) shells of the fresh water mollusk *Unio* with denticulate edge.

Two (Fig. 3.1,6) of four pendants made on belemnite fragments (*Belemnitella mucronata sahloth* originating from Senonian deposits) bear clear transversally incised lines, artificially emphasized by the natural linear structure of the belemnites. Their transparent and shining surfaces, in contrast to two other items with matte surfaces (Fig. 3.5,7), led to the assumption (N.D. Praslov, E.Yu. Gria) of chemical treatment of these materials aiming at easier manufacturing or aesthetic purposes.

Substantial series of pendants were made on fossil shells and corals stemming from Devonian sources (Fig. 3.8-11), which are numerous in the Voronezh district. They were also produced from fossil Paleozoic tubes, equally stemming from local sources. Seven pendants made on hard rocks (Fig. 3.2-4,12), both voluminous and flat, show traces that indicate the use of a hand-operated rotary drill as experimented by S.A.Semenov.

The associated bone industry is small in number, uniform and not diagnostic with regard to its cultural attribution: two awls made on the ulna bone of arctic fox (or hare), several fragments of undetermined bone and ivory tools (Boriskovsky 1963). In contrast, the lithic assemblage seems highly indicative of distinct cultural uniformity of the earliest Upper Palaeolithic. From the technical point of view, blade production by uni- and bipolar knapping of more or less voluminous cores is predominant. The typological composition is characteristic of the Upper Palaeolithic: a tool-kit dominated by burins mostly on a retouched oblique truncation, including double and multiple types, end-scrapers, mainly on a blade, points of very wide-spread types (*ib.*). The cultural affiliation of the Spitsyean to the main Upper Palaeolithic technocomplexes remains a matter of debate (see Sinitsyn 2010b), however, it is clearly a very particular tradition containing two highly diagnostic categories of material culture: lithic and artistic productions.



Fig. 3. IUP stratum. Spitsyean. Kostenki 17 (cultural layer II).

The exclusive raw material strategy is an additional argument in favour of the particularism of the Spitsyean compared to the other cultural entities of the Initial and Early Upper Palaeolithic. As a matter of fact, exogenous, black cretaceous flint, unknown in the Kostenki area, is predominant within the lithic production of the lower archaeological layer at Kostenki 17. It is typical for the Gravettian assemblages but unusual for Aurignacian and Streletskian that show a wide range of local raw materials.

2.2. *Kostenki 14 (Markina Gora), archaeological layer IVb*

The assemblage of the lower archaeological layer at Kostenki 14 (Markina Gora) has provided evidence for an alternative model of adaptation. Here, all the available raw materials are used, however with local sources predominating. These are mainly slabs of siliceous limestone (dolomite) and brown-red jasperoid flint stemming from moraine deposits. Exogenous, black cretaceous and semi-transparent, smoke-colored flints are equally used to a higher degree as shown by a lower percentage of waste. The lithic productions are dominated by blade technology amongst a large range of techniques. Prismatic as well as flat uni- and bipolar cores have been identified, and cores made on dolomite slabs morphologically resembling lateral dihedral burins. Microblade production is considered as a distinct technical method using modified thick flakes and blades as cores. From the typological point of view, the assemblage is composed of end-scrapers and burins of very various morphologies, different types of splintered pieces including tools with concave and fluted working edges. A series of oval-shaped bifaces with plano-convex sections seems to be particularly characteristic. Two diagnostic Aurignacian “type fossils”

seemingly are of high significance: beaked burins and Les Vachons type burins (Sinitsyn 2010b). According to the periodization proposed for Aquitania, they are mainly dated to the Aurignacian III-IV (Demars & Laurent 1992; Pesesse & Michel 2006). Although these two types may appear very early (at least according to evidence from Italy – Arrighi *et al.* 2006), their identification at Kostenki produces clear evidence for their easternmost and probably earliest occurrence. Independent from the yet unresolved problem of the cultural affiliation of the lithic assemblage from the archaeological layer IVb at Markina Gora, we doubtlessly deal here with a specific, previously unknown cultural tradition.

A particular component of this inventory is the bone industry that contained a series of “mattock-like” tools made on bone, antler and mammoth tusk with “splintered” working edge usually opposed to the distal end (Fig. 4.8), a single chisel-like tool (Fig. 4.6) and a rod with quadrangular section. A series of regular, transversally engraved short incisions along one face may be considered as a decorative element (Fig. 4.9).



Fig. 4. IUP stratum. Kostenki 14 (cultural layer IVb).

The ornaments are represented by a pendant made on the metapod of an arctic fox provided with a hole made by biconical drilling (Fig. 4.5) and by a bead made on

a snail shell (*Columbelidae*) provided with two perforations (Fig. 4.3). Its natural habitat being restricted to the Mediterranean basin, the presence of this snail attests to direct contacts and the likely origin of this population. The use of natural holes on flint tools and flakes with one piece presenting traces of utilization, for suspension (Fig. 4.1), another with intentional modification of the piece by retouch in order to place the perforation in a symmetrical central position (Fig. 4.2).

The carved voluminous figurine made on mammoth tusk (Fig. 4.4) is the most important piece. Given the asymmetrical profile that evokes a human head on its neck, it is considered as an anthropomorphic representation (Sinitsyn 2003b, 2004; Abramova 2005, 2010). The piece was broken, most probably during the process of manufacturing and then reused for other purposes as shown by the damages on its surface. Nonetheless, we deal here with the earliest manifestation of carved anthropomorphic figuration in Europe, dated to 36,000-37,000 BP (Sinitsyn & Hoffecker 2006). Currently, the earliest anthropomorphic figurines have been connected with the evolved Aurignacian dated to 32,000 BP, but they are actually related to older dates (Conard & Bolus 2006; Jöris *et al.* 2010) (these few dates are more reliable as obtained more recently) and they exclusively stem from Central European sites (Bosinski 1982): the “Fanny” from Stratzing (Neugebauer-Maresch 1993, 1999), the “lion man” from Hohlenstein-Stadel (Hahn 1977), the figurines from Hohle Fels (Conard 2003, 2009), and the debatable “anthropomorphic” figurine associated with a number of zoomorphic figurines from Vogelherd (layer V) (Conard 2003; Conard & Bolus 2003). The importance of the “anthropomorphic” fragment from the lower layer of Kostenki 14 is its high age, older than 40,000 years ago according to calibrated radiocarbon, OSL series, and its stratigraphic position underlying the CI (Y5) tephra and the fossil soil with the Laschamps geomagnetic excursion. The association within this assemblage of figurative art, ornaments and decorative artifacts dated to the earliest stage of the Upper Palaeolithic is a very important argument for the revision of the commonly accepted late emergence of figurative art (Zilhão 2007).

3. The art inventory of the Early Upper Palaeolithic (36,000-29,000 BP)

As everywhere in Europe, the Early Upper Palaeolithic at Kostenki is characterized by a binary structure: a pan-European Aurignacian component associated with a local variant of a “transitional” industry, in this case the Streletskian following the example of the Châtelperronian in Aquitania, the Uluzzian in Italy or the Szeletian in Central Europe.

3.1. Aurignacian

The Aurignacian assemblages (Kostenki 1, cultural layer III, dated to 32,000 BP; Kostenki 14, cultural layer within the layer of volcanic ash, 35,000 BP – Douka *et al.* 2010) have yielded similar lithic inventories containing Dufour bladelets of the Roc-de-Comb type (Demars & Laurent 1989), but differing artistic assemblages. Both sites have in common the presence of beads made on local fresh water shells *Neretidae* (Fig. 5.b, 6.b) and pendants made on teeth from arctic fox, but pierced at Kostenki 1 (Fig. 6.d) and punched at Kostenki 14 (Fig. 5.d). Differences are shown by the personal ornaments: perforated sea shells (Fig. 6.c) and picked decorations on bone fragments at Kostenki 1-III (Fig. 6.a) while these are a singular pendant made on a fossil (Fig. 5.a) and a series of long beads made on long bones of arctic fox decorated with circular and spiral ornaments (Fig. 5.c) at Kostenki 14. Very important

appears to be analyses of spatial distributions of the last kind of personal ornament: they were identified in the cultural layer XI of Denisova cave (Altai) (Derevianko, Shunkov, 2004), and some sites of the West European Aurignacian (Isturitz, La Souquette, Les Cottés) (White 1989).

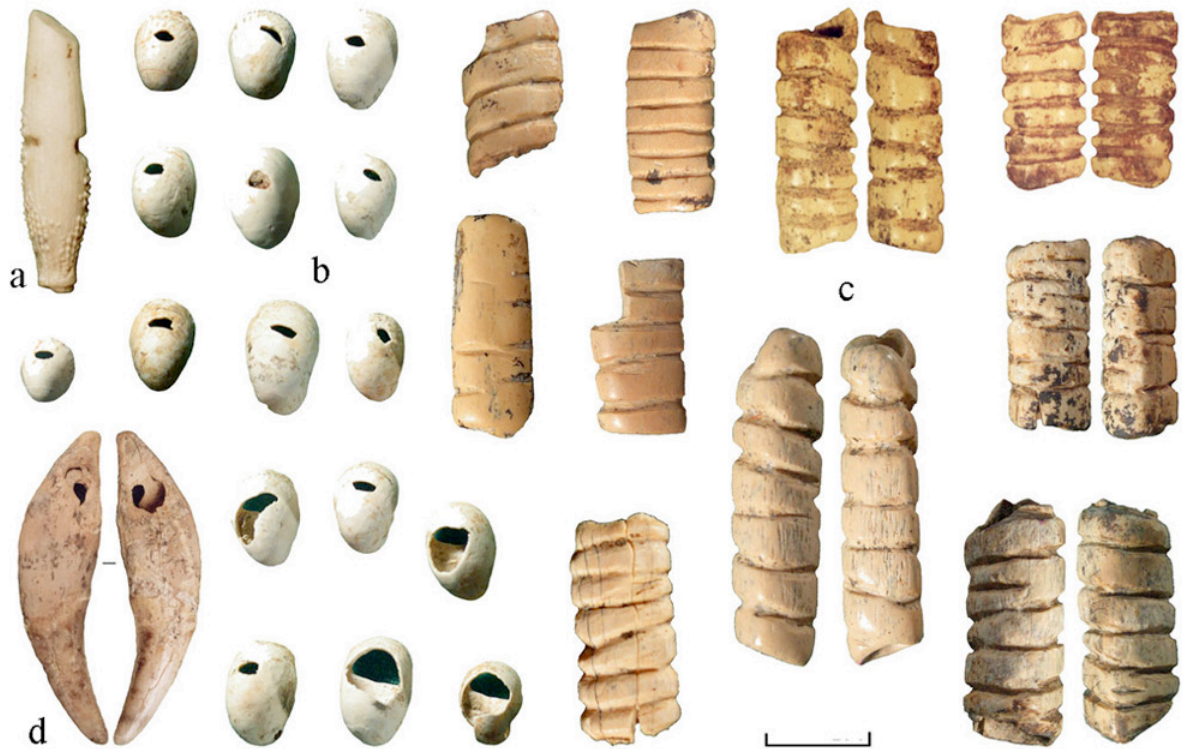


Fig. 5. EUP. Aurignacian. Kostenki 14 (cultural layer in volcanic ash).

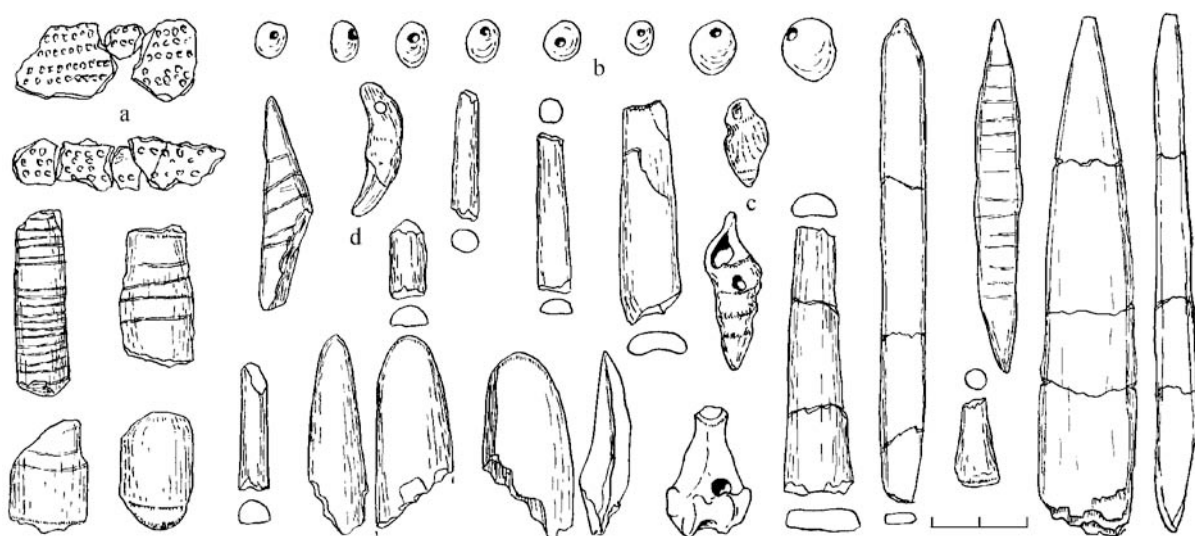


Fig. 6. EUP. Aurignacian. Kostenki 1 (cultural layer III).

More generally, the Aurignacian artistic elements of the Kostenki group apparently match pan-European Aurignacian aesthetic standards (Hahn 1972; D'Errico & Vanhaeren 2007; White 2007; Sinitsyn 2007a), lacking, however, carved figurines.

3.2. *Streletskian*

By contrast, the Streletskian sites, more numerous, have yielded very poor artistic assemblages. The most significant amongst them are perforated stone pendants recovered from the archaeological layer V at Kostenki 1 and from the archaeological layer Ia at Kostenki 12 (Anikovitch *et al.* 2008: 98, Fig. 49).

4. The art inventory of the early Middle Upper Palaeolithic (28,000 BP)

As everywhere in Europe the beginning of the Middle Upper Palaeolithic at Kostenki is marked by the appearance of the Gravettian associated with the Gorodtsovian, a specifically Eastern European cultural entity.

4.1. *Early Gravettian*

The early Gravettian assemblage of the archaeological layer II at Kostenki 8 (Telmanskaya st.) has yielded varied though small series of ornaments and decorative artifacts without specific pieces or decoration patterns. The traditional affiliation to the Mediterranean variety of the Gravettian (Efimenko 1953, 1960) is actually maintained (Sinitsyn 2007b), but it obviously needs better foundation based on real comparative analyses.

Personal ornaments are represented by: a) small, circular buttons, less than 1cm in diameter and 1-2mm in thickness, with one or two perforations (Fig. 7.1); b) pendants with decorated surface: one of plano-convex section (Fig. 7.3) with two broken ends, another with circular section with a broken eye and covered by circular incisions (Fig. 7.4); c) diaphyses of small game decorated by lines of short parallel transversal incisions (Fig. 7.2), most probably used as long beads; d) pendant on long bone of a small mammal with a biconical perforation for suspension (Fig. 7.5). A single voluminous piece carved on mammoth tusk (Fig. 7.9) with polished and coloured (?) surfaces, was most probable used as a plug for the water-skin. The bone assemblage yielded a series of rods and points (Fig. 7.7) including one hafted (?) knife (Fig. 7.16). Two fragments of bone tools have a longitudinal fluted channel, the one is pointed (Fig. 7.10), and the other resembles a smoothing tool with a large transversal working edge (Fig. 7.14). Number of bones show cut marks (Fig. 7.11,15) sometimes intended as decoration (Fig. 7.8,12).

In general the assemblage of ornaments and bone industry associated with the archaeological Layer II at Kostenki 8 exhibits a wide-spread Upper Palaeolithic association, excepted for the small thin circular buttons that have no close analogies.

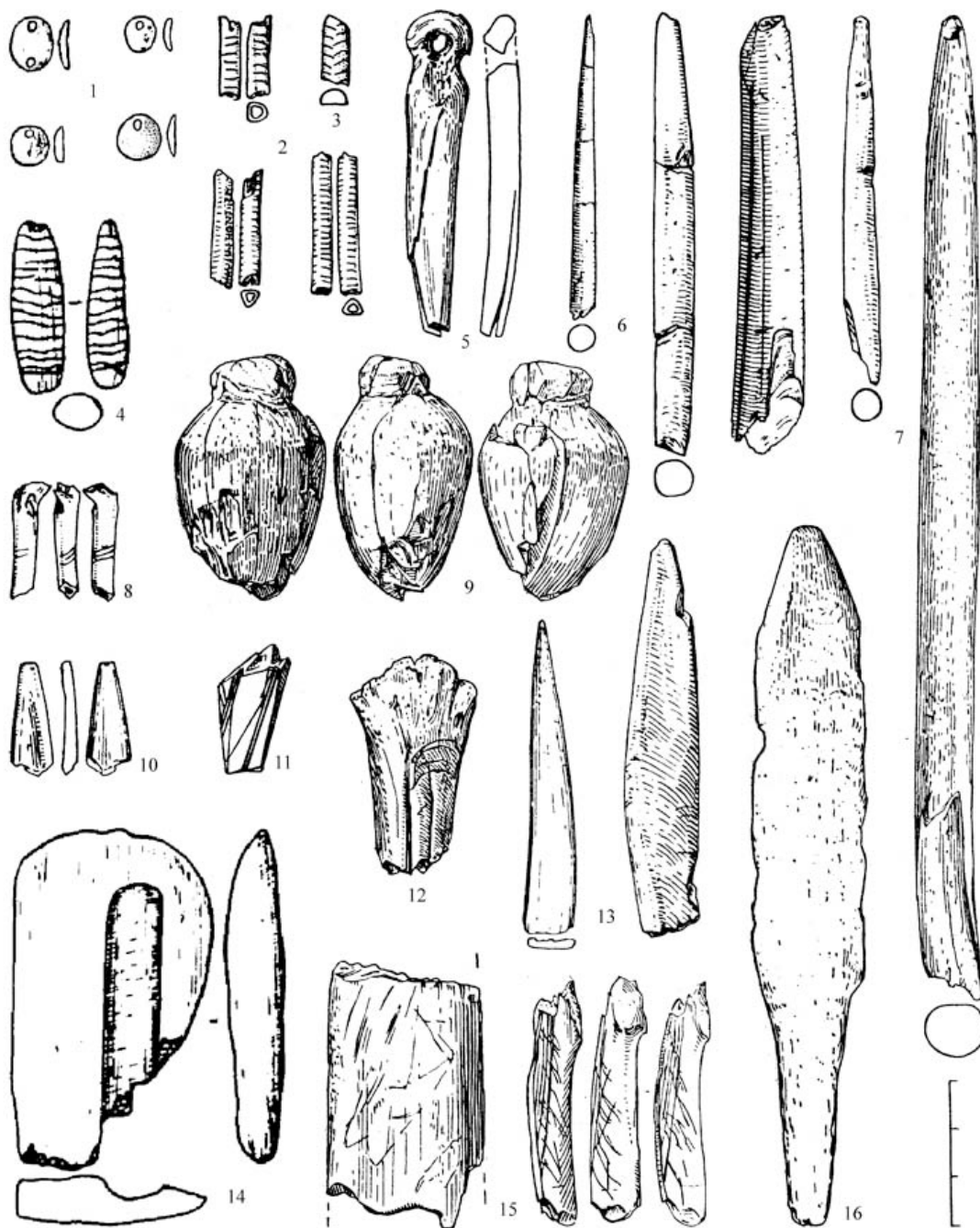


Fig. 7. Early MUP. Gravettian. Kostenki 8 (cultural layer II) (according to Praslov & Rogachev 1982 with additions).

4.2. Gorodtsovian

In contrast to the Gravettian, the sites of the Gorodtsovian have yielded a very particular and diagnostic assemblage of decorative pieces.

Actually, the Gorodtsovian seems to be a variable cultural entity that exhibits a strong “Mousterian” component (up to 50 % in the archaeological layer II at Kostenki 14). It is not affiliated with the Aurignacian nor with the Gravettian. Particular large “shovels” with nail-shaped heads of the handles (Fig. 8) made on mammoth

bones appears to be the "fossil director" of this cultural unity. The richest and most varying assemblage of decorative pieces stems from the archaeological layer II at Kostenki 14 (Markina Gora) (Praslov & Rogachev 1982; Sinitsyn 1996).



Fig. 8. Early MUP. Gorodtsovian. Kostenki 14 (cultural layer II). Bone assemblage.

Personal ornaments are represented by: a) small beads on mammoth tusk with perforations made by biconical rotary drilling (Fig. 9.1); b) pendants of three types: trapeze-shaped with convex surfaces and an eye for suspension (Fig. 9.2), undefined shape and thin (Fig. 9.3) and elongated with plano-convex section with linear transversal incisions on the convex part and a broken eye made by unidirectional drilling (Fig. 9.7); c) long beads made on diaphyses of small animals decorated with short incisions (Fig. 9.8). Number of bone tools, unfortunately all broken, provide evidence for decorative practices in everyday human activity (Fig. 9.10-12) including the handle of the "shovels" (Fig. 8). A "fibula" with zoomorphic end and a decorated rod (Fig. 9.9) are of particular importance.

Intensive production of bone tools and decorations plays an important role on this site or in this excavated part of the settlement as shown by the very high concentration of needles, awls, points, including pieces with particular morphology (Fig. 9.5-6), spatulas and smoothing tools, a number of bones with cut marks and incisions resulting from their use as anvils, a great number of bone retouchers.



Fig. 9. Early MUP. Gorodtsovian. Kostenki 14 (cultural layer II). Personal ornaments and decorated tools.

5. The art inventory of the recent Middle Upper Palaeolithic (23,000-20,000 BP)

According to the current state of research, mainly based on series of radiocarbon dates, a gap between 27,000 and 23,000-22,000 BP can be identified within the chronological sequence at Kostenki (Fig. 2). A series of recent Gravettian varieties succeeds to this gap and appears simultaneously with sites that are not affiliated to the Gravettian and artistic assemblages that exhibit a new stylistic and aesthetic system of values.

The most significant artistic assemblages of this period stem from the sites of the Kostenki-Avdeevo culture, Kostenki 21 (archaeological layer III) and Kostenki 11 (archaeological layer II).

The famous female figurines made on mammoth tusk and marl are particularly diagnostic of the cultural attribution to the Kostenki-Avdeevo culture (Kostenki 1-I, Kostenki 13, Kostenki 14-I, Kostenki 18, Avdeevo, Gagarino, Zaraisk, Khotylevo 2, Berdyzh) (Gvozdover 1995; Abramova 1967, 2010; Praslov 1985, 1986, 1993) (Fig. 10.11-12, 10.18, and fragments Fig. 10.10, 17), but only a few engravings (Fig. 10.8). All the sites of this group (Grigor'ev 1993) have yielded numerous and various series of figurative art and decorative objects including so-called "medallions" for example a schematic female sign (Fig. 10.6); realistic zoomorphic sculptures (heads of lion, bear, wolf...) (Fig. 10.1-5, 16), pendants (Fig. 10.7), "fibulas" of so-called "camel leg" type (Fig. 10.9), series of decorated bracelets (Fig. 10.14-15) and diadems (Fig. 10.20), a great variety of personal ornaments, and number of decorated bone tools (Fig. 10.13). Although the temporal and geographical definition of the Kostenki-Avdeevo group remains subject to debate, the composition and the stylistic similarity (but not the identity) of all these sites seems to be an argument in favour of its reality as a population unity.

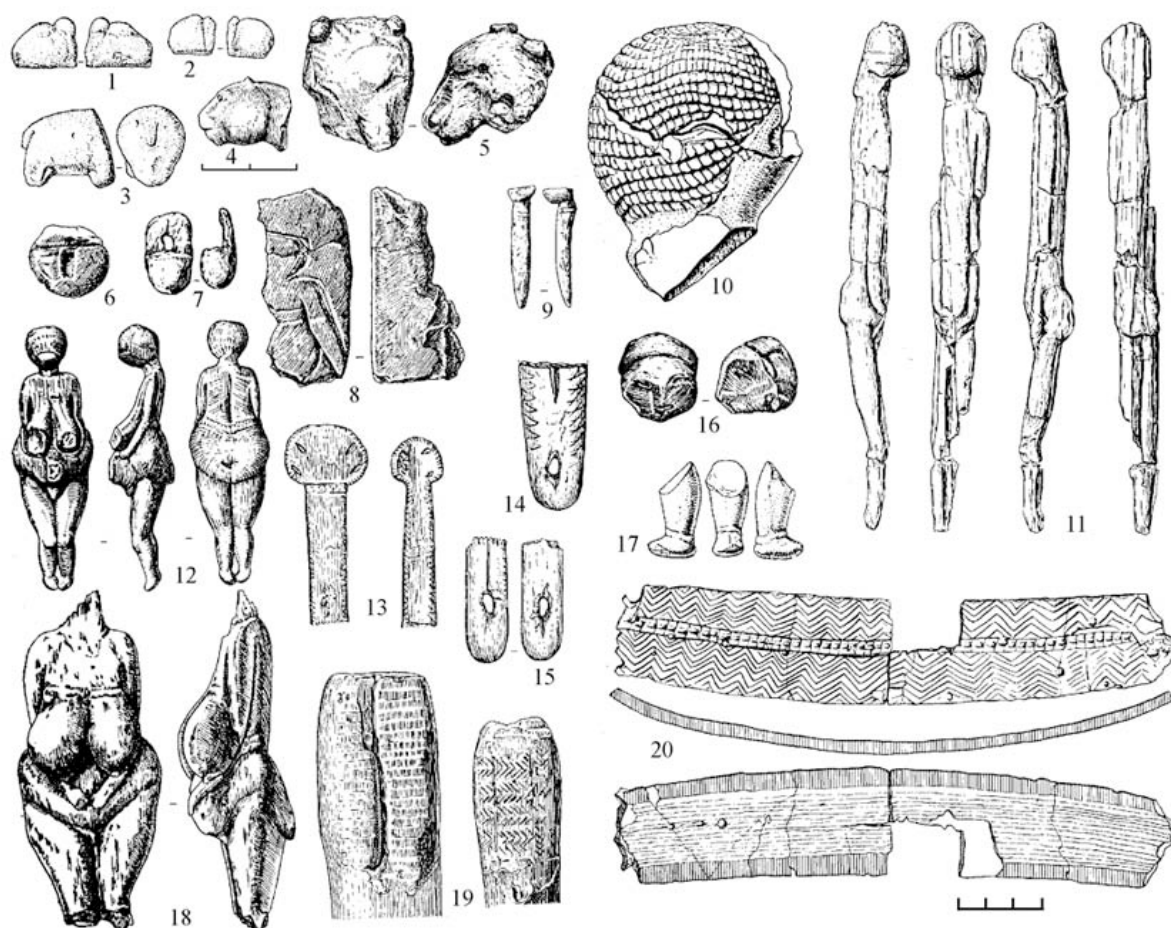


Fig. 10. Recent MUP. Kostenki-Avdeevo culture. Kostenki 1 (cultural layer I) (according to Praslov & Rogachev 1982).

A particular aspect of the artistic component within the assemblage of the archaeological layer II at Kostenki 11 is a series of small animal figurines made on marl: five figurines of mammoth, three of rhinoceros together with unfinished,

fragmented and undetermined zoomorphic pieces (Fig. 11). They present some stylistic and morphological similarities with figurines from Kostenki 1 (Fig. 10.1-2). Flat-based figurines are associated with semi-spherical pieces (sometimes less than 1cm) and a bone awl with zoomorphic head (Fig. 11). The lithic production of this site exhibits very unusual combinations that raise the question of its Gravettian affiliation.

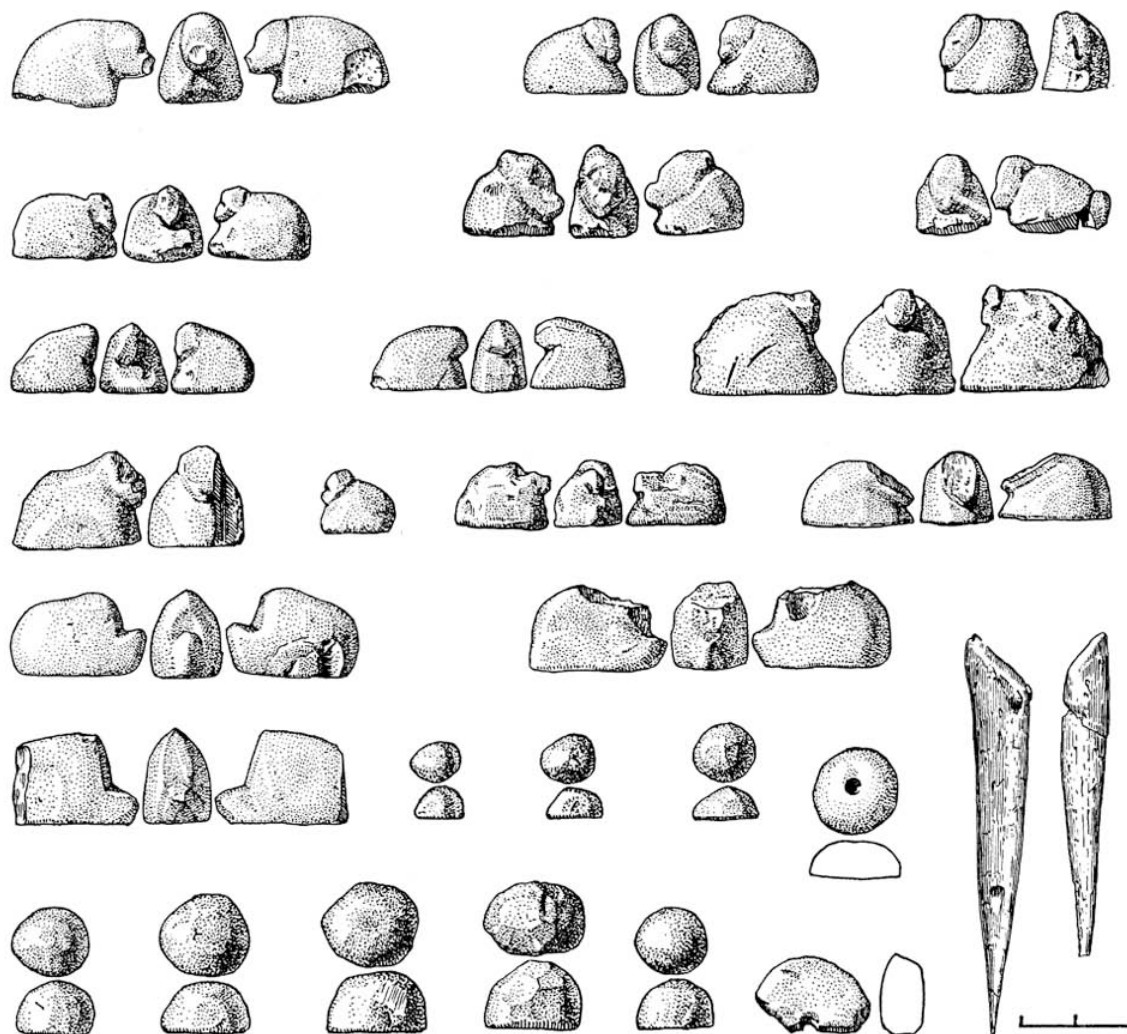


Fig. 11. Recent MUP. Kostenki 11 (cultural layer II) (according to Abramova 1962).

The composition of the artistic assemblage at Kostenki 21 (site of Gmelin) (cultural layer III) appears to be very significant, being associated with a lithic assemblage that contains a particular type of shouldered points, the morphology of which resembles shouldered points of the Western European Gravettian distinct from projectiles of the Kostenki-Avdeevo type. This assemblage contains animal engravings on round plano-convex pebbles, atypical for the Eastern European Palaeolithic (Fig. 12.7), a decorated flat “rod” with a large hole (Fig. 12.11), a series of pendants of particular “flounder-like” shape (Fig. 12.3-4), unknown from other cultural unities. Artificially modified fossils (Fig. 12.2), pendants (Fig. 12.6), fragments of decorated bones (Fig. 12.5,8) in association with a very varying bone assemblage including both wide-

spread rods (Fig. 12.1,9) and specific handle types (Fig. 12.10) are an additional argument for the specificity of the Gmelin culture.

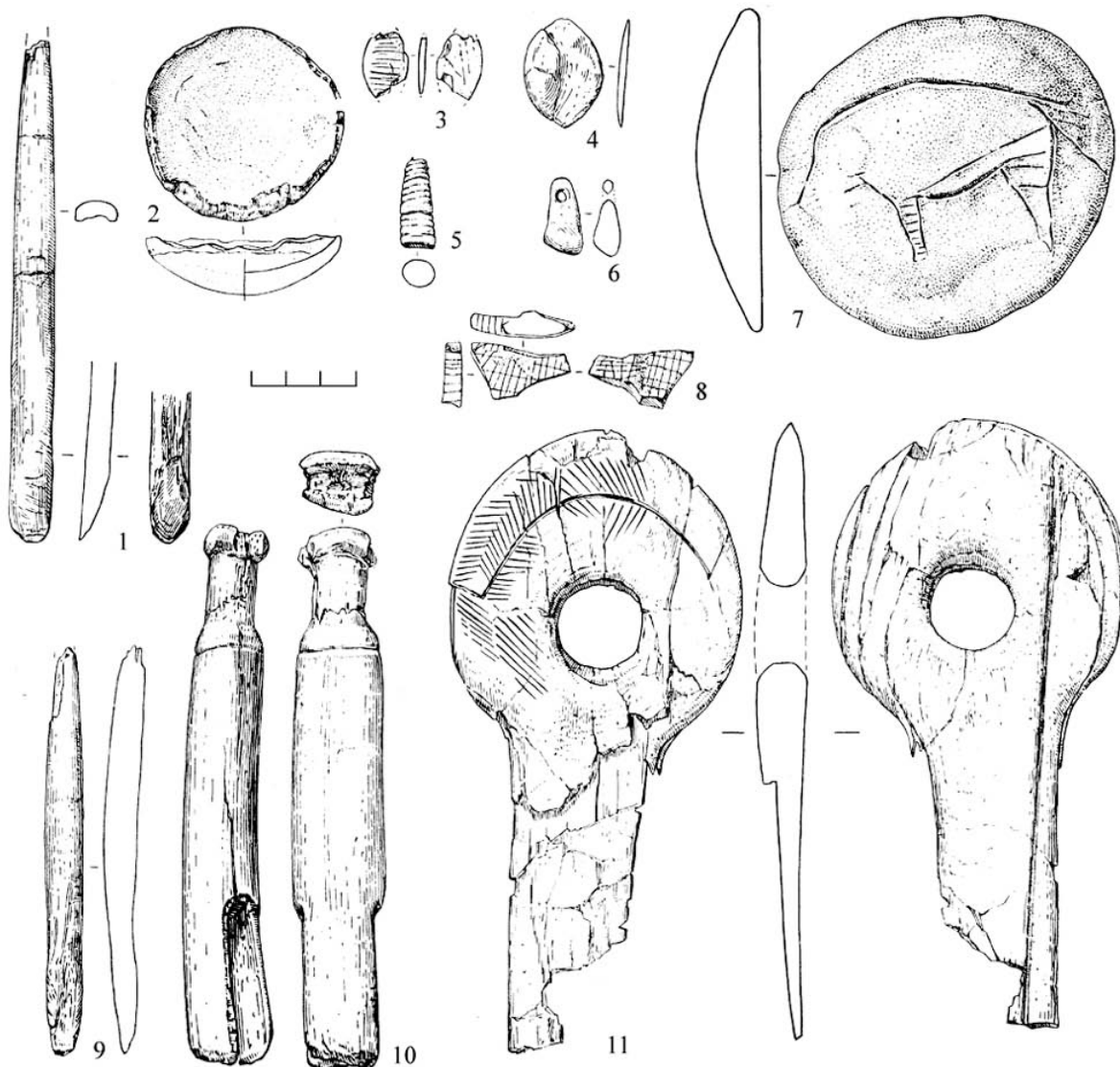


Fig. 12. Recent MUP. Gmelin culture. Kostenki 21 (cultural layer III) (according to Praslov & Rogachev 1982).

Affiliation of these varieties to the Gravettian techno-complex now is more problematic than it seems early (amongst others: Sinitsyn 2007b). The main technical method of blade production of the Kostenki-Avdeevo cultural group is based on precores of the “gigantolith” type (Giria & Bradley 1998) that came recently into the focus of research (Lev 2009). On the one side, this method was recognized to be at the basis of the knapping technology identified for a number of Late Magdalenian sites in the Paris basin (most recently: Valentin 2006) and also for the Aurignacian (?) site of Radomyshl 1 in the Ukraine (Usik 2001, 2002), and on the other it remains largely unknown from the European Gravettian sites. It is neither considered as a Gravettian technological method of flint knapping technology. It is worth to mention that fifty years ago, the Kostenki-Avdeevo assemblages were quoted to have an “Aurignacian-Solutrean” attribution (Efimenko 1953) according to techno-typological

features with equally significant reasons than those advanced for their actual Gravettian affiliation. Nevertheless, the artistic component of this cultural group, more particularly the famous female figurines, remains to be the main argument in favor of its Gravettian attribution.

The very atypical technical and typological composition of the lithic assemblage of the cultural layer II at Kostenki 11 is unknown from the European Gravettian: the association of a large variety of truncations, Federmesser-like backed points and partially bifacial leaf-shaped points.

In general, the artistic assemblages of the late chronological group (recent MUP – Fig. 2) are distinct from the Early Upper Palaeolithic typological and stylistic associations, and they are related to a distinct system of aesthetic values as well as to distinct cultural entities based on the lithic productions. As a whole, the artistic or symbolic components are in accordance with the cultural varieties defined from the lithic productions, but sometimes with single common elements, for example animals carved on marl from Kostenki 1 (layer I), Kostenki 4 (layer I) and Kostenki 11 (layer II).

Conclusion

- 1) Figurative art and decorative pieces, as well as decoration patterns on bone tools occur at Kostenki from the initial stage of the Upper Palaeolithic period (before 40,000 years ago).
- 2) In general, arts and ornaments in the archaeological cultures of the two early chronological stages are well correlated with the lithic assemblages
- 3) Only the Aurignacian assemblages show significant differences in the “artistic” component of the material culture that can be used as an argument in favour of very large variability of the system of aesthetic values within this rather uniform group.
- 4) A particular inter-cultural component may be identified for the recent Gravettian cultural units, most probably connected with common, though specific aspects of Gravettian symbolics, more open to cultural exchanges and borrowings.

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