

L'INDUSTRIE EN OS DU MÉSOLITHIQUE RÉCENT EN RUSSIE CENTRALE

THE LATE MESOLITHIC BONE INDUSTRY IN CENTRAL RUSSIA

Vladimir Lozovski

Résumé. – Cet article donne les caractéristiques de l'industrie en os du Mésolithique récent en Russie centrale sur l'exemple du site de Zamostje II. Un abondant inventaire (pointes de projectile, couteaux, haches en bois de cervidés, outils composés et objets d'art) permet de supposer qu'il s'agit d'un complexe spécifique différent de celui de la culture Kunda.

Mots clés : Russie centrale, Mésolithique, industrie osseuse, outils composés en os et microlithes, objets d'art.

Abstract. – This paper is devoted to the bone industry of the Final Mesolithic of Central Russia on the materials received from the excavations of Zamostje II site. The complete complex of bone artifacts (missile weapons, knives, axes from elk antler, slotted tools and objects of art) shows a number of specific features, which are different from the famous bone industry of Kunda mesolithic culture.

Key Words : Central Russia, Mesolithic, bone industry, slotted tools with microliths, objects of art.

I. INTRODUCTION

Up to the recent time, the Mesolithic of the region between Upper Volga and Oka rivers was characterized notably by complexes with flint artefacts. Among 500 mesolithic sites, only few settlements were discovered in wet conditions and had preserved the bone implements. The rarity of artefacts from these collections does not allow a careful characterization of the mesolithic bone industry.

However, the recent excavations of multi-layer peat-bog sites in the Upper Volga basin produced complete complexes with bone-antler tool-kits. The most interesting results were reached during the excavations of Zamostje II

site in the Dubna river floodland (Sergiev-Posad district, Moscow region). According to ¹⁴C and pollen analyses all complexes are dated within the time-spent of the Atlantic period and characterize the late stage of the Butovo mesolithic culture, otherwise stated Late Mesolithic in this region (Lozovski, Ramseyer, 1995).

The large collection of bone implements allows to characterize late mesolithic stone and bone industries in Central Russia. During the excavations in the mesolithic layers of Zamostje II, more than 9,000 implements from stone and 1,700 implements from bone and antler were found.

II. BONE INDUSTRY

For tool making, elk bones were used as the main procurement. The ancient inhabitants used long tubular, lateral, metacarpal bones as well as antlers for making most part of the tools and decorations. Sometimes, we can point out the use of bones of other animals (beaver, roe deer, martin, etc.).

Among bone implements, the points of missile weapons are presented on a large scale and diversity of forms. All bone points can be divided into two main groups:

I. Single arrow-heads of various forms and dimensions (fig. 1: 5, 6). This group can be distinguished into several types:

- single needle-shaped points with tapered tip and smooth conic tang;
- needle-shaped points with one barb near the flat tip;
- needle-shaped points with flat tip and two barbs on the opposite sides;
- long needle-shaped points with biconical tip;
- same points with slot for a series of flint inserts;
- biconical short points.

II. Big harpoon-heads from long tubular bones of elk (fig. 1: 7). As usual, it is massive roughly shaped long points with one or two barbs near the tip. Tang processed by rough flaking. The rest of the surface is left without any processing.

The diversity and richness of the bone arrow-head show that these implements were the main type of mesolithic missile weapons. Arrow-heads from stone are represented in a small amount. It is suggested by the materials from other mesolithic sites (Sachtysh IX, Ivanovskoye III and VII) (Krajnov, Lozovski, Kostylova, 1990; Krajnov, Khotinski, 1994).

Bone scrapers are represented by three implements from splitted tubular elk bones, the working edges of which were tapered from inner and outer faces. The same tools were excavated on the middle mesolithic site of Nizhneye Veretje I (Oshibkina, 1983). A large amount of beaver's jaws are added to this group. The incisor of these animals have been used by mesolithic men for skin processing also. Specific smoothing traces from scraping mark this operation. These implements make up 23 % of all bone tools.

A remarkable feature of the bone industry is that of knives and daggers, which make up 25 % of all bone tools (fig. 1). Among these implements, knives from elk ribs are predominant (80 % of all knives). The next finds are represented by knives from elks shoulder-blade bones and tubular bones.

During the excavations of the mesolithic layers, 106 items of specific tools with working edges cut under the angle of 45° were found. Use-wear analysis has shown that these tools were used only for different wood-working operations. A large number of them is very strange. It can be noted as another remarkable feature of the bone industry.

Awls are represented by implements made from lateral metacarpal bones of elk and splitted tubular bones. Another type is represented by long tiny needles with two divided points. The ethnographic sources show that these tools have been used for fishing net making.

Axes and adzes. These tools were usually made from elk antler, and only a small series of chisels was done from splitted tubular bones. All tools were made according to the standard technique: cut from antler tines with thinner palmated parts. The head has been shaped by the « nibbling » technique, the working edge – by grinding and polishing from both sides. The remaining surface has not been worked and has preserved the parent structure of antler. The function of these tools is not clear. However, the fact that most of the tools have a working edge damage or have been broken along the central axis suggests their wide use (fig. 1: 1).

Another specific feature of bone industry is the wide use of the groove technique. The slotted tools show a differentiation by typology and function (arrow and harpoon-heads, knives, daggers). Among them, the finds of tools from rein deer antler with flint inserts (spear-head and dagger) are of special interest.

Arrow-heads (broken species) include finds which are very similar in typology. A common feature of these tools is a small barb, situated on the edge opposite to that of the groove. The barb is directed downwards and is continuous with the arrow-head edge. Harpoon heads are associated with numerous harpoon points without tang and have deeper and wider

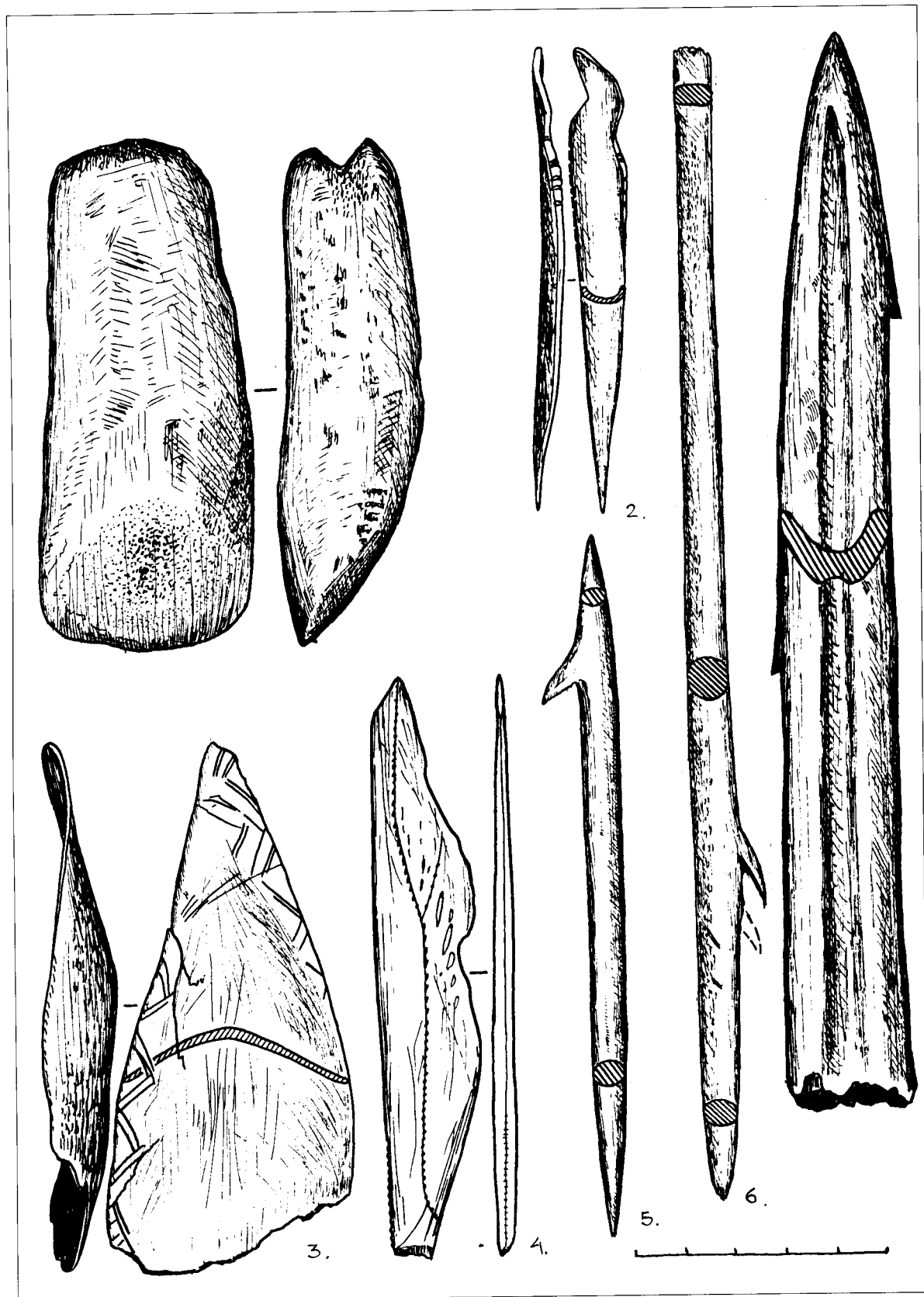


Figure 1. – Zamostje II : 1. Axe from elk antler. 2. Pin. 3. Spoon. 4. Knife. 5-6. Arrow-heads. 7. Harpoon-head.

grooves. Grooves are usually situated on the opposite side of the edge with massive barbs.

Spear-heads with inserts have the pointed form which is closely related to their use: it is a symmetrical tool with two flint edges of equal length (137 and 138 mm) and proximal area, which is shaped to the shaft. Now there is only one insert in the left groove, and two intact inserts and one fragment in the right one. However, it is possible that the left edge had five, and the right edge five or six, inserts. The inserts were fixed very close to each other (fig. 2).

The dagger sharpened point was deliberately curved to the right. The tool surface was polished. There are remains of a birch bark cover on the handle, the original width of which was about 70 mm. At the end of this handle there is a hole (5 × 5 mm), which suggests the tool was worn. Grooves are situated on the opposite sides of the hafting and have a length of 135 mm and 125 mm. Three flint inserts were preserved in situ in the left groove, and four in the right. However, originally the left groove and four are in the right. However, originally the left edge consisted of four inserts, and the right edge contained five inserts (fig. 3).

The group of knives-daggers includes also other implements with handles, the most interesting of which is a well preserved dagger. It is a tool resembling the one already described. Both symmetrical grooves are located along the central part of the hafting. Along the length of the groove, on both surfaces, there is an ornamentation consisting of two curved figures.

Analysis of the slotted tools shows that the functional purpose is clear only for some implements (arrow-heads, daggers). There are very many sharpened (awls) and repaired tools (arrow and harpoon-heads). This points out the dynamics of tool use in the settlement.

On the basis of the preserved finds, it is possible to say that the making of normal pressure knapping bladelets with a width of 1-2 mm was widespread. Flint edges were made from bladelet sections with length between 23-24 mm, and were fixed with the proximal end downwards and very close to each other. In one case, the inserts were fixed with the ventral surface downwards, in another case: upwards. This was intentional; the goal was to make an edge of a certain form. The groove width did not play a special role, because there are several cases where the width of the inserts is bigger or smaller than

that of the groove. Two major groups of tools have resin, which fixed the inserts very tightly.

The wet conditions of peat-bog sediments made possible the preservation of a large number of objects which undoubtedly were linked with the spiritual life of the ancient population. Artistic finds fall into three categories: pendants, elk and bird figures, and bird-shaped and incised decorations on ordinary tools.

The finds of pendants from elk and beaver teeth are numerous among these materials. The technique of making pendants from elk and beaver teeth was the same: on the front of the tooth, two small grooves were cut on the opposite sides of the root. The only difference is that a parient flake for the beaver pendant is made from a splinted incisor.

Another evidence of art is represented by two elk figures. Both are in the shape of an elk's head and made from the base of elk's antler which has been carved and smoothed over the whole surface. It is an artistic image of this animal, with the typical features of an elk's head: its hooked nose, standing ears and bulging eyes. A hole made between the eyes shows that the objects served as handles of a ritual staff. The larger is 28 × 10 × 5 cm, and the smaller 16 × 8 × 4 cm. The side surfaces of the smaller sculpture were covered by light ornamentation consisting of three parallel zig-zag lines (fig. 4: 1, 3).

These finds fall into the already familiar framework of Russian prehistoric art and require no new interpretation. Most of them were found directly linked with sacrificial constructions: burials and hunters' « sanctuaries ». Thus, the newly found elk heads were also linked with ancient hunter's creeds.

The same excavation at the Zamostje II site yielded two small figures of birds (6 × 4,5 × 2 cm, 5 × 3,5 × 1 cm). Both figures were made from roughly shaped bones. The images are mainly contours, lacking in detail, but a duck with a curved neck can be clearly seen (fig. 4: 2).

In addition to these figures, ducks were symbolized on a large number of ordinary tools used in everyday activities (knives, needles and daggers). Of special interest are bone pins whose heads represent the profiles of ducks (fig. 1: 2). These pieces have an ornamentation consisting of a simple linear geometric decoration incised along their length. The small dimensions of the pins as well as their artistic preparation suggest that they were used as a kind of decoration on clothing.

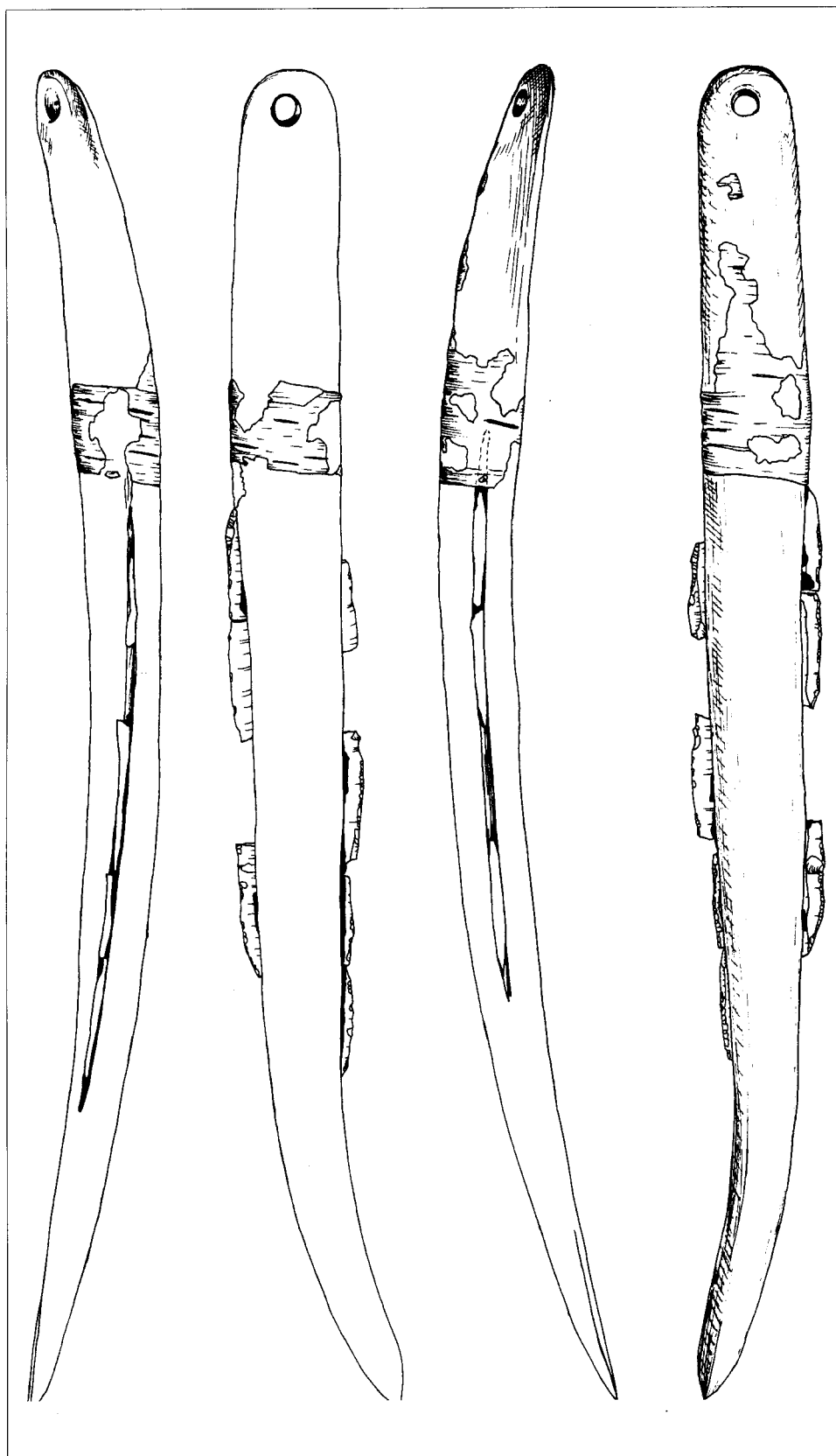


Figure 2. – Zamostje II : spear-head with inserts.

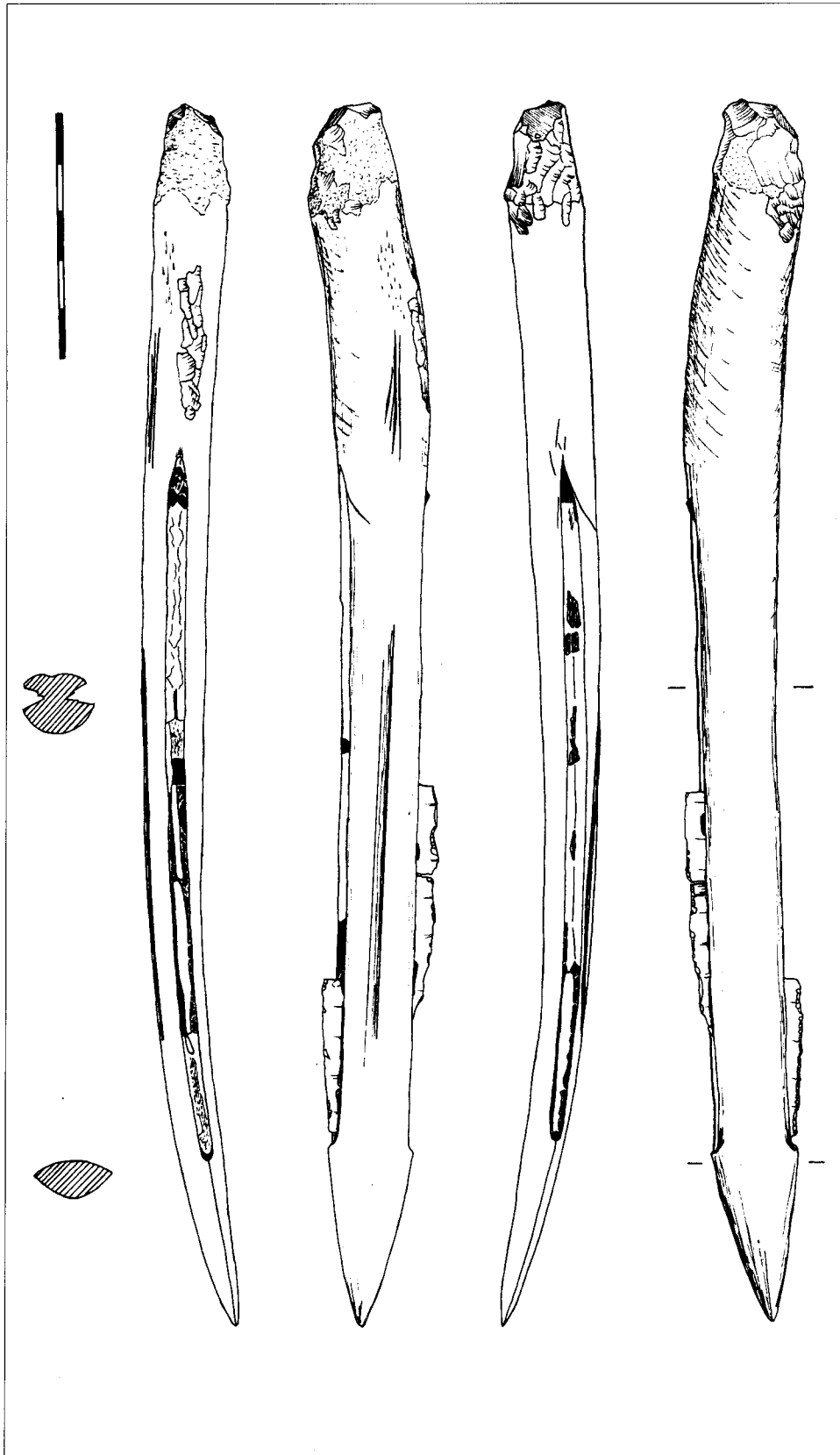


Figure 3. – Zamostje II : dagger with inserts.

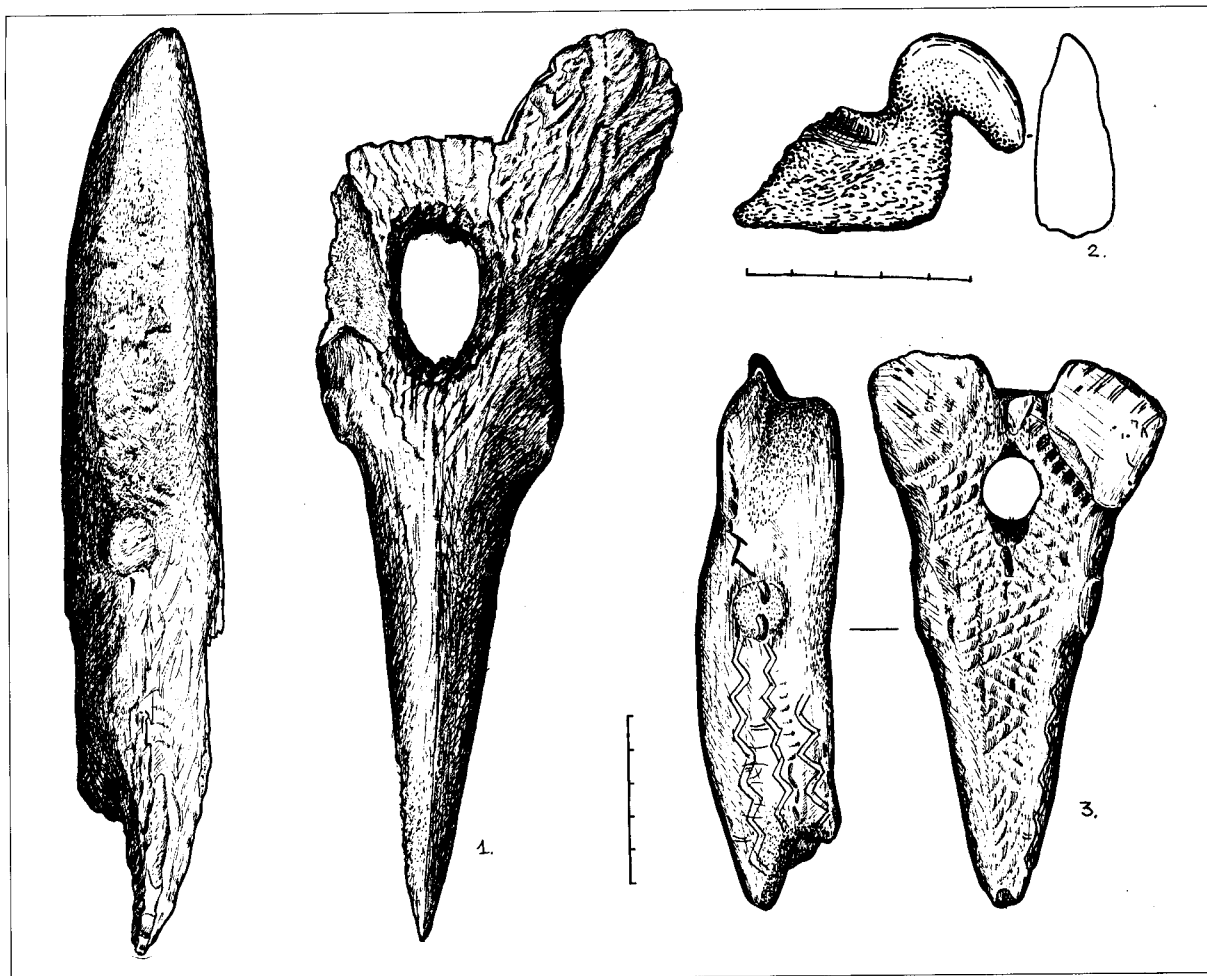


Figure 4. – Zamostje II: 1,3. elk heads. 2. duck figure.

A large number of ordinary tools have a decoration on their surfaces. It is possible to distinguish several types of ornamentation, each are sometimes associated with certain groups of tools only.

1. Decoration from slightly notches along the tool edge or on the surface was used only on arrow- and harpoon-heads.

2. Decoration from simple incised lines is the most widespread among bone tools. The ornamentation was not deeply cut, and was simply scratched on the surface. The motives of zigzag (fig. 1 : 3), parallel lines, steps or triangles are usual on the tools (arrow- and

harpoon-heads, knives, daggers, spoons, etc.).

3. Design on the tools was formed from deeply cut oval notches. Ornamentation schemes are different : there are parallel lines, simple and double zigzag lines. As usual, such decoration covers all the surface of the tool. Only knives from elk ribs were decorated in such a manner.

4. The main element of this kind of ornament is represented by deep-cut lines with slight notching at the edge. The design schemes are different too : it could be simple lines (fig. 1 : 4), rectangles (harpoon-heads), or flatly arched figures (dagger).

III. CONCLUSIONS

Having been compared with the materials published, the stone industry of the Zamostje II site reveals its close similarity to the complexes from late mesolithic sites (Davidkovo, Ivanovs-

koye III, VII, Chernaya I) (Sidorov, 1973 ; Krainov, Khotinsky, 1984 ; Kravtsov, Lozovski, 1991).

The bone industry from the Zamostje II site can be compared with the materials from well-

known monuments in the Baltic and East-Onega regions (Pulli, Kunda, Zvidze, Zveynieke II, Nizhneye, Veretje I sites) (Jaanits, 1981; Zagorskis, 1973). However, all these sites are dated from an earlier time than Zamostje II (Preboreal period – site Pulli and first half of Boreal period – the other settlements). The time and distance break between these sites and Zamostje II allows us to point out just the general common features of both industries.

First of all, the same composition of hunting animals has defined the same procurement for tool-making. We can point out very similar types of knives from elk ribs, daggers from elk shoulder blades and tools with working edges under the angle 45° (Zvidze, Nizhneye Veretye I sites). The same types of axes and adzes are represented in the tool-kit of these sites, but the quantity of these tools is essentially less significant than in Zamostje II. A remarkable differentiation can be noted in

the group of missile weapons, because the complexes from the Baltic region show other structures and types of points. Thus, the groups of barbed points and biconical arrowheads, which are widespread among these sites, are very rare in Zamostje II's tool-kit. The types of harpoon-heads from the Zamostje II site are different from those of the Baltic settlements (Jaanits, 1966; Zagorska, 1981; Oshibkina, 1983).

The decoration with duck heads and specific zigzag or linear ornament on a large number of tools is a distinctive feature of this industry, and could correspond with some finds in sites of the Kunda culture.

Although the mesolithic bone industry from Zamostje II site has common features with the complexes from the Baltic region, there is no background to regard this site as of Kunda culture tradition. The specific and pronounced character of Zamostje II bone industry reveals another cultural tradition.

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