Mousterian artifacts from the unique Vistulian loess-palaeosol sequence at Kolodiiv (East Carpathian Foreland, Ukraine)

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The Kolodiiv site is situated on the right side of the Sivka River (a small right tributary of the Dniester River), not far from its mouth on the Dniester River, in the western part of the village of Kolodiiv in the Halyç Prydnyistrov’ja region (Fig. 1). Mousterian finds were discovered on a steep slope rising above 20 m over the valley bottom. From a geomorphological aspect it is a Pleistocene terrace covered by a thick mantle of loess.

The stratigraphy of the Quaternary deposits near Kolodiiv was described for the first time by Demedyuk and Khretoforoova (1975). The Pleistocene deposits were later investigated by A. Boguckij, M. Lanczont and others (Madeyska, 2002). During exploratory study of profile 3 (see Lanczont and Boguckij, 2002) three flint artifacts and some pieces of charcoal from a fireplace were found at a depth of 12.5–12.9 m, in the solifluction horizon separating two Early Vistulian palaeosols (Kolodiiv 3 and Kolodiiv 2). All the indications are that these finds are remains of a Mousterian cultural layer (Sytynk, 2000; Cyrek and Sytynk, 2002). These Middle Palaeolithic materials were found in 1991. However, the large-scale excavations made in 1999 (Fig. 2, profile 4), 2000 (profile 4/5) and 2003 (profile 5) turned out to be fruitless (Lanczont and Boguckij, 2002). The location of the profiles investigated is shown in Figure 1.

The flint artifacts are made from good-quality flint from Turonian (Upper Cretaceous) strata. Deposits with gray and black Turonian flints occur in the Upper Dniester Region (Polanskyj, 1935). Artifacts look “fresh”, without mechanical damages or traces of weathering.

The first object (Fig. 3) is a partial bifacial bi-lonitudinal-convex knife made from a massive flake of shortened proportions. The working edge is smoothed out by easy removal and flat resharpening dorsal retouch which comes to the back of the object. The second flint object (Fig. 4) is also a partial bifacial product. It is a longitudinal dorsal knife with a large ventral retouch. The third object is a usual marginal flake of three-cornered shape with a natural (concretion) platform. It is a by-product.

The nearest analogies are the assemblages of the Ripiçeni-Izvor stratigraphic successions on the Prut River. In the monograph by Păunescu (1993) devoted to this multilayer site we can retrace the development of the stone production in the region between the Prut and Dniester rivers, beginning from the Riss–Würm (Premousterian) and ending with the interstadial of Lasceaux–Würm III (Gravettian). It is a unique chronicle of the development of the Middle and Upper Palaeolithic, which can be correlated with the stratigraphical column of the cultural layers of the MolodoVo site.

The Mousterian layers (I–VI) of the Ripiçeni-Izvor lie on clayey soil at depth in the interval 6–10 m and are dated to the Amersfoort–Hengelo (Podgraderem) interval. However, only...
layers V–VI of the Ripiçeni-Izvor are characterized by explicit Micoquian traditions of bifacial processing and broad using of Levallois techniques. The Levallois technology begins from the “Premousterian” materials which were found not far from the limestone bedrock. It is interesting that the “Premousterian” and Mousterian layers I–III do not have not bifacial shapes (Pâunescu, 1993). This means that bifacial technologies of Micoquian character appeared here only after Moershoofd, in the period before Hengelo (nearly 40 thousand years ago).

The richest Micoquian cultural layer IV of the Ripiçeni-Izvor has a Levallois index of 38.8 and 16.59% for blades. The bifacial technique is represented by the Micoquian knives and scrapers of partly bifacial character. It seems that the Mousterian assemblages of bifacial tradition in the Dniester and Prut regions (Yezupil, layer II; Kolodiiv; Ripiçeni-Izvor, Mousterian levels) are characterized by Micoquian elements of bifacial products, segment-like knives and scrapers with lengthened proportions, and three-cornered shaped points.

Marked analogues of the bifacial tools of the Dniester Region occur in Eastern Germany, Mousterian (Riss–Würm, Eem) sites with bifacial Micoquian tools. The sites of the Ilm valley are well known, especially the travertine complexes of Weimar, Taubach and Ehringsdorf, which contain special cultural groups (Mania and Toepfer, 1973). Among important sites of this period may be included the materials of Rabutz situated between Leipzig and Halle.

Analogues to the partly-bifacial products (with basal-ventral large retouch) from Kolodiiv were found among the materials from Saalfeld in East Germany (Mania and Toepfer, 1973, taf. 71.1). For example, there was found a blade-flake with
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Fig. 3. Flint artifact from Kolodiiv, the partial bifacial bi-longitudinal-convex knife

Fig. 4. Flint artifact from Kolodiiv, the longitudinal dorsal knife with ventral large retouch
broad facets and shapeforming retouch alongsides. On the ventral surface we can observe a large removal scar and small scars of retouch of the striking platform. The nearest analogues occur in the Prądnik valley caves near Ojców in Poland (Kozłowski and Kozłowskis, 1996).

Similar tools were found at the site of Döbris-Pirkau (Mania and Toepfer, 1973, taf. 69.2). These authors pointed out the similarity of these tools to the Prądnik type knives from the Wylotne Cave at Ojców (Chmielewski, 1969; Kozłowski and Kozłowski, 1996). The materials from the “A”-layer of Königsau are the nearest morphological analogues. The likeness of these objects could be found in the shapes, scales and techniques of lateral surface formation and the techniques of the edge preparing.

There are many other well-known sites in Germany with original Micoquian tool shapes: Hyänenhöhle in Gera-Lindentaler, Gera-Pfortener, Zwickau, Wolftitz and elsewhere (Mania and Toepfer, 1973, taf. 69–71), Fontmaure (Velleches, Vienne), Lichtenberg, Lkr. Lüchow-Dannenberg, Boxgrove (G.-B.), West Sussex.

Thus, the evidence of typologically clear bifacial tools in a geologically clear position (the solifluction horizon separating two Early Vistulian palaeosols which overlie Eemian gyttja) provides a basis for referring this site to the bifacial techniques “East-Micoquian Route of Development”. Analogues find in respect of chronology, geology, and technical typology occur in layer II of the nearby Yezupil site (Boguckij et al., 2001). At present, genetic unity of these sites seems clear.

Sites with typical East-Micoquian elements have been discovered and partly investigated in the Dniester Region only during the last decade. They are represented by small collections but in spite of the paucity of found artifacts they are typologically determined products, which undoubtedly belong to the “cultural rate”.

REFERENCES


