

Style, deficit or reduction? Analysing the Bioče Micro-Mousterian

Stil, Mangel oder Reduzierung? Die Analyse des Mikro-Mousterien von Bioče

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ABSTRACT - This paper presents the Micro-Mousterian assemblage uncovered during the 2013 excavation at Bioče rock-shelter (Montenegro). Excavations at this site resumed after a long break. In the Eastern Adriatic region this type of assemblage marks the last stage of the Middle Palaeolithic, traditionally regarded as having occurred between 60 and 28 ka BP (OIS 3). A common feature is a toolkit based on small-sized pieces. This article is built on considerations of a toolkit that belongs to the most representative collection of layer 1.4. We argue that the reason for the abundance of small tools lies in the long-term use of the site by its inhabitants, as well as in the re-use of tools. The analysis of the artefact collection shows that the decrease in tool size in major groups is determined by the number of working edge rejuvenation episodes. In parallel with the size decrease due to artefact reduction, there is a change of tool forms from simple to more complex. These results force us to be careful when searching for analogues to the Bioče assemblage in the region, and show that it is problematic to merge the Final Middle Palaeolithic assemblages of the region under a single label "Micro-Mousterian".

ZUSAMMENFASSUNG - Im vorliegenden Artikel wird ein Mikro-Mousterien Komplex vorgestellt, der 2013 am Bioče-Felsdach (Montenegro) erstmals ausgegraben wurde. Die Grabungen wurden nach einer langen Pause erneut aufgenommen. In der ostadriatischen Region kennzeichnet dieser Typ der Mousterien-Komplexe das letzte Stadium des Mittelpaläolithikums (nach traditioneller Sicht datiert zwischen 60 und 28 ka BP, OIS 3). Ein allgemeines Merkmal ist die Präsenz von Kleingeräten im Werkzeug-Inventar. Der Hauptgegenstand dieses Artikels ist die Geräteausstattung, die im repräsentativsten Inventar, der Schicht 1.4, vorliegt. Es werden Gründe gesucht, die den mikrolithischen Charakter dieses Mousterien aus dem Bioče-Felsdach erklären. Wir stellen fest, dass die Häufigkeit an Kleingeräten auf die lange Besiedlung des Felsdachs und die mehrfache Nutzung der Geräte zurückgeht. Im Verlauf der Analyse hat sich herausgestellt, dass sich die Verringerung der Größe der meisten Geräte durch die Anzahl der Erneuerung der Arbeitskante erklären lässt. Parallel zu der Verkleinerung der Geräte infolge Reduktion ist auch eine Veränderung in der Form von einfach bis komplex zu beobachten. Diese Ergebnisse raten zur Vorsicht bei der Suche nach vergleichbaren Fundplätzen in der betrachteten Region und zeigen, dass es problematisch ist, die verschiedenen Komplexe des spätesten Mittelpaläolithikums als eine singuläre Einheit des „Mikro-Mousterien“ zu betrachten.

KEYWORDS - eastern Adriatic region, Final Middle Palaeolithic, toolkit, effect of artefact reduction, working edge rejuvenation, Mousterian of Charentian type, microlithic Middle Palaeolithic
Ost Adriatische Region, spätes Mittelpaläolithikum, Geräteausstattung, Reduktionseffekt der Artefakte, Erneuerung der Arbeitskante, Mousterien Typ Charentien, mikrolithisches Mousterien

Introduction

In the current state of archaeological research, different approaches are used to identify and interpret the variability of archaeological assemblages in the eastern Adriatic region. The typological method from François Bordes (1961) was preferentially used for a long time (Basler 1975a; Brodar 1958, 1958–1959, 1962, 1965; Đuričić 2006). In south-west France, six major Mousterian facies were described as the "classic Mousterian complex" during the history of Palaeolithic

research. However, many attempts to integrate several Middle Palaeolithic assemblages in a single group or facies were unsuccessful. This is due to the lack of a clearly defined set of techno-typological characteristics among the emphasized groups. This statement is also true for Micro-Mousterian assemblages. This type of stone industry was first found in Syria. Alfred Rust described an undated Micro-Mousterian from the Yabroud rock-shelter I, level 5 (Rust 1950). These assemblages are not rare and are known from Armenia, Greece, the Balkans, Italy, central Europe and France, where they occur during OIS 6 - 3 (Stepanchuk & Chabai 1986; Papaconstantinou 1989; Mihailović 2014).

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Practically the only feature that links the Old World's Micro-Mousterian assemblages together is the presence of a toolkit with small-sized pieces.

On the east coast of the Adriatic Sea Micro-Mousterian assemblages are known from Middle Palaeolithic sites of Dalmatia (Croatia) and Montenegro. They mark the last stage of the Middle Palaeolithic (according to the traditional view about 60 to 28 ka BP, OIS 3). This stage is characterized by a warm and humid climate, when the spread of forest vegetation is documented for the region (Panagiotopoulos et al. 2014). In this period, serious changes occur in the subsistence strategies of the region's inhabitants, and entirely new technical solutions were applied in stone tool production (Mihailović 2014). Most sites in Dalmatia are surface collections (Karavanić 2009; Vujević 2009; Karavanić & Smith 2014; Karavanić et al. 2014), while stratified Micro-Mousterian assemblages have been recorded only in the sequence of the Mujina Pecina site (Karavanić 2000). Here, the cultural layers accumulated in a very short period during OIS 3. This is confirmed by the dates obtained for the site which vary between 45 - 39 ka BP (Rink et al. 2002). A common feature of surface complexes and the stratified Middle Palaeolithic sites of this area is the toolkit with small-sized pieces (Basler 1983; Karavanić 2000; Karavanić et al. 2014). The tools are dominated by denticulated and notched items, although retouched flakes and blades and different side-scrapers are also quite numerous. The flakes and occasional blades used as blanks for tools were periodically produced with the Levallois method.

Micro-Mousterian assemblages are present in layers XVI - XII of Crvena Stijena rock-shelter, located near the border of Montenegro and Bosnia-Herzegovina (Brodar 1958, 1958-1959, 1962, 1965; Basler 1975a, 1979; Basler 1975b; Bakovic et al. 2008). 30 cultural layers were distinguished at this site with archaeological material ranging from the Lower Palaeolithic to the Bronze Age.

Apparently, the time depth of the Micro-Mousterian complexes falls into the range of OIS stages 4 - 3 (layers XVI - XII). Most probably, layer XVI belongs to OIS 4 as shown by geological observations (Brunnacker 1975; Morley & Woodward 2011). Layer XII has yielded a calibrated (OxCal 4.3 with IntCal 13) radiocarbon date on charcoal of 46'020-42'906 calBP (95.4%; 40'777 ± 900 BP; GrN-6083) (Vogel & Waterbolk 1972) and therefore belongs to the middle stage of OIS 3.

Primary reduction involved mainly radial and discoid methods accompanied by the Levallois method. Several cores were used for blade production. The composition of the toolkit is similar between all layers. The tools consist of side-scrapers, notched and denticulated tools. Layers XIII and XIV contain numerous atypical end-scrapers, and all layers have a few blades with an abrupt retouch. Mousterian points

are poorly represented. Based on the small size of the artefacts, some researchers compared the assemblages of layers XVI - XII of Crvena Stijena with the Micro-Mousterian complexes in Syria and Italy (Brodar 1962, 1965; Basler 1975a, 1979). They emphasized that "the microlithic" character of the toolkit is mainly caused by the cultural preference of the makers.

The second Middle Palaeolithic key-site in Montenegro is the Bioče rock-shelter which is the focus of this article. According to L. Đuričić (2006), who started research at this site, the stone industries of all layers do not show any significant differences in technology or typology. The majority of flakes were produced with the Levallois method. Most of the tools (side-scrapers, small Mousterian points, raclettes and others) range in size from 2 to 4 cm.

A brief overview shows the main problems related to the Micro-Mousterian phenomenon in the eastern Adriatic region

- criteria that are applied to unite the Middle Palaeolithic sites in the same group. In most cases, tool size is the decisive attribute that accounts for a Micro-Mousterian affiliation. Differences in the techno-typological characteristics of the assemblages are usually not taken into consideration;
- chronological variability between sites; there is a significant absence of evolutionary change over time in most of the sites; nonetheless, an opposite pattern is observed in some cases (see below);
- lack of explanations of the causes that generated "the microlithic" character of the toolkit. There are three main points of view on this issue. L. Đuričić (2006) indicates that the small size of retouched artefacts is not caused by a deficiency of large-sized blanks; instead, it is the result of a deliberate microlithization. I. Karavanić (2007), who studied the Micro-Mousterian assemblages of Croatia, considers that the small size is generated by the initial size or the low quality of the raw material used. D. Mihailović (2014), a Serbian specialist, describes the main feature of Micro-Mousterian industries as an "ad hoc technology in core exploitation" in order to reduce it to its maximum.

Determining the causes of this "microlithization" during the Late Mousterian period will provide new data for interpreting the behaviour of the last Neanderthals in the Mediterranean region. Recent studies show that almost all Late Middle Palaeolithic sites contain only small assemblages (Mihailović 2014; Karavanić & Smith 2014; Dogandžić et al. 2014). This makes a holistic determination of the stone industries impossible. The study of Bioče rock-shelter resumed after a long break (Derevianko et al. 2012, 2014, 2016) and uses modern standards of stone artefact excavation and analysis. This allows for an identification of the specific features of lithic artefact production in different cultural layers (see next paragraph). This article deals with the toolkit of the most representative collection of layer 1.4 to