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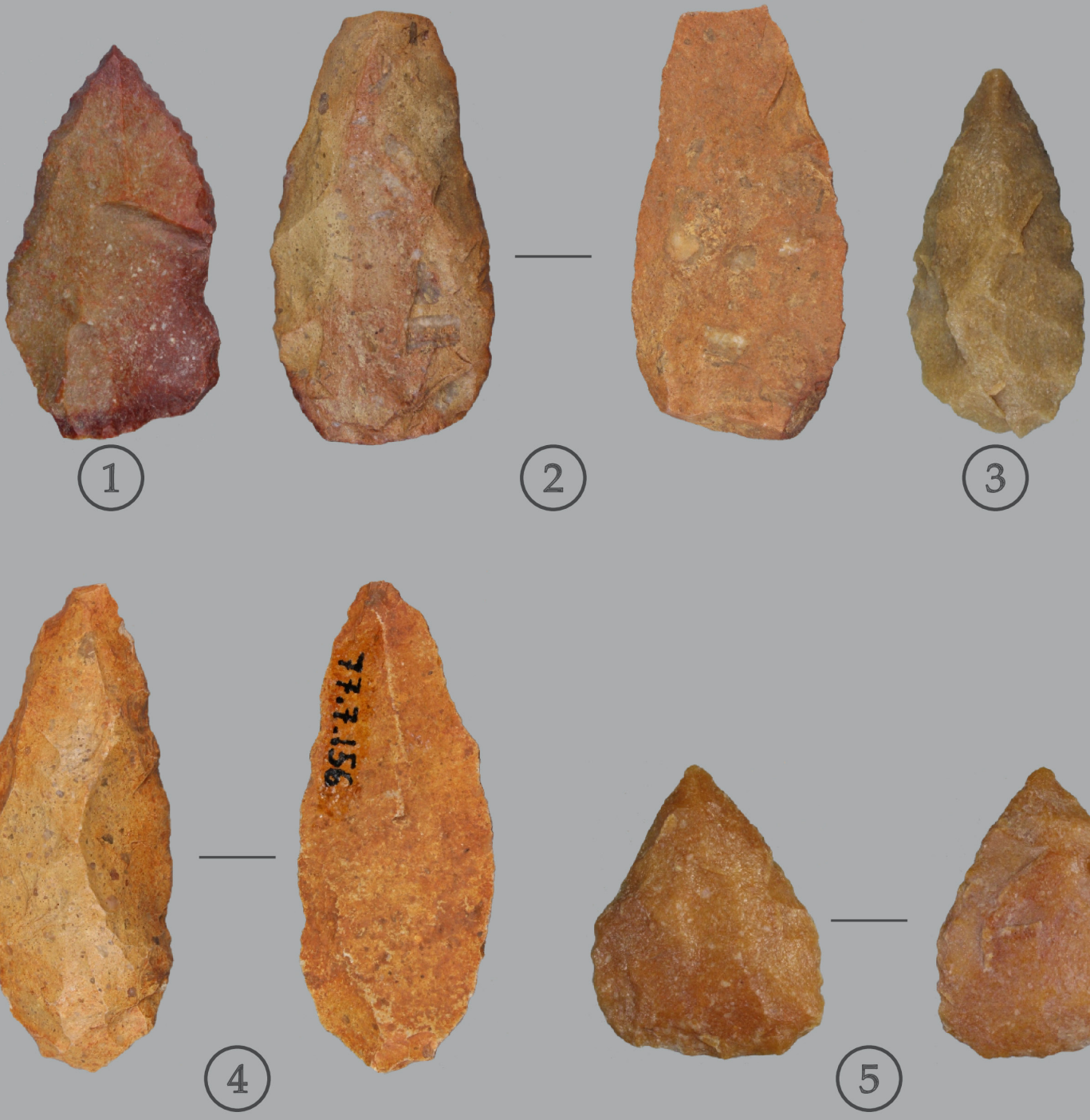


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BOOK REVIEW

# Neanderthals at Bojnice in the Context of Central Europe

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**Abstract**

Book review of: Neruda, P., & Kaminská, L. (2013). *Neanderthals at Bojnice in the Context of Central Europe / Neandertálci z Bojnic v kontextu střední Evropy*. Anthropos - Studies in Anthropology, Palaeoethnology and Quaternary Geology, Vol. 36. Brno - Nitra: Moravské Zemské Muzeum & Archeologický Ústav SAV. 249 pages, Paperback, 265 Kč, ISBN 978-80-7028-407-0

**Keywords**

*Slovakia, White Carpathians, sources of radiolarites, mining areas, lithic industry, late Mesolithic, Neolithic, Eneolithic*

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This great book, prepared by Petr Neruda (Brno, Czech Republic) and Lubomira Kaminská (Košice, Slovakia) was published in English in 2013. The authors discuss the Middle Palaeolithic (hereafter – MP) Bojnice sites in central Slovakia, and other aspects of the Central European Middle Palaeolithic. Detailed publication of the Bojnice sites (Bojnice I – Prepoštská Cave and Bojnice III – Castle moat) have been long-awaited by many colleagues involved in Central European Palaeolithic research because previously only short communications were published about these two sites which yielded the most numerous artefact collections among all known Slovakian MP sites (*sic!*). Thus, the reviewed work should be in the focus of many colleagues interested in European MP.

I must note that I was among the few colleagues who were waiting for a detailed publication on the Slovakian MP sites because previously I had studied a portion of the Bojnice I and III lithic artefacts in the October of 1990 at the Nitra Archaeological Institute SAS, thanks to the kind permission of the sites' investigator and well-known Slovakian archaeologist, Jurai Bárta. Moreover, at that time, Bárta even guided my Ukrainian colleague Vitaly I. Usik and me to Bojnice and explained the history of investigations and stratigraphy of the sites. After that, I was intrigued to see how the results described in the 2013 book and my observations about the Middle Palaeolithic in Slovakia corresponded to each other.

The book is comprised of eight chapters from which the first six chapters have been written by the authors. Chapter 7 (pp. 182–196) is composed of 4 sub-chapters written by invited specialists on the following subjects: lithic raw materials by A. Přichystal, fossil molluscs by V. Ložek, anthracological analysis by J. Novák and archaeozoological study of animal bones by M. Zelinková Rašková. The short Chapter 8 (pp. 197–202) provides five sections on various archive excavation records. The last chapter is a rather long summary in Czech (Chapter 9, pp. 203–241) that allows readers from the Czech Republic and Slovakia with no English knowledge a detailed understanding of the book's topics. All illustrations, photos and tables in the book are captioned in both English and Czech languages.

The '*Introduction*' (pp. 13–36), indicated as Chapter 1, has an appropriate length. It presents a history of research and reviews all Slovakian MP sites and surface find spots with an emphasis, of course, on Bojnice I and III. It is worth noting that the first Slovakian MP artefacts were already found and recognized in the last quarter of the 19th century. However, the first proper scientific and multidisciplinary archaeological investigations of Slovakian MP sites were only realized in the late 1940s and early 1950s by F. Prošek, a Czech

archaeologist from Prague, who also excavated Bojnice I in 1950. Prošek's pupil, L. Bánesz carried on MP studies in eastern Slovakia, while J. Bárta had been working in western and central Slovakia. Accordingly, Bárta had continued the fieldwork at Bojnice I – Prepoštská Cave and also excavated the unexpectedly discovered Bojnice III – Castle moat in the 1960s. The book's authors emphasize the frequent occurrence of Slovakian MP sites within travertine deposits, which is also characteristic of the Bojnice I and III sites, connecting Neanderthal settlements to mineral springs. The Slovakian MP is proposed to be viewed through three chronological stages possibly bracketing the period from the Middle Pleistocene up to MIS 3 and being represented by various Mousterian and Micoquian industries.

Chapter 2 '*Methodology of assessment of the preserved materials*' (pp. 37–41) clearly and shortly deals with both published and especially unpublished information on the Bojnice I and III sites, including field notes, observations on the vertical and horizontal artefact distributions, and other artefact data. The latter showcase not only the classification approaches the authors applied on the lithics but also issues regarding the preservation and identification of andesite and quartz artefacts based on morphological features visible to the naked eye.

Chapter 3 '*Bojnice I – the Prepoštská Cave*' (pp. 42–123) is the main chapter with all possible objective data on the Bojnice I site. Now the cave is 11 meters wide, 7 meters long and 4–8 meters high and it was probably larger during Palaeolithic time because data indicate a collapse of its overhang. The first excavations leading to the discovery of Palaeolithic and some other later-period finds in the cave were performed in 1926–1927. Since that time, the cave is regarded an important Palaeolithic site, although then the cave and its sediments suffered serious damages by amateur digs. The next professional excavation at Bojnice I was conducted only later, in 1950 by F. Prošek, whose methods counted as complex and multidisciplinary in his time.

Then Bárta excavated the cave between 1965 and 1967. As a result of these 1950 and 1960s excavations, now there are three excavation blocks and their finds to be analysed: 'Trench I' of Prošek's investigations, 'Trench II' and 'Trench III – Ossuary' of Bárta's investigations. The complex stratigraphy (ca. 2 and 7 m thick) revealed that the MP artefacts did concentrate in the upper portion of the lower part of the cave's sediment sequence, in Prošek's lithological layer G/8 and Bárta's layer D in trenches I and II, respectively. The layers with MP finds (ca. 18 cm thick) were composed of incoherent travertine in the trenches. Trench III – Ossuary is characterized by a considerable amount of Pleistocene faunal remains and several MP artefacts being probably in a secondary position. According to the stratigraphy, malacofauna and plant print data, both Prošek and Bárta connected MP occupations at Bojnice I Cave with the end of Würm I and the beginning of Würm I/II. Two charcoal samples and five animal bone fragments from the excavations in the 1960s were sent by Neruda & Kaminská to the Poznan and Oxford 14C laboratories for dating. The results are not satisfactory. One charcoal sample was not suitable for analysis, while the other sample was dated to the Eneolithic period. Two bone samples retained insufficient amounts of collagen and the three remaining bone samples also had low collagen content. Hence the results from the Oxford lab indicated only possible upper age limits in more than 45–49 ka uncal BP (Tab. 1 on p. 51). The authors of the reviewed book conducted a throughout techno-typological and metric analysis of the lithic artefacts from the three excavation blocks: *ca*. 2,200 pieces from trench I, *ca*. 800 pieces from trench II and *ca*. 2,900 pieces from trench III – Ossuary. The artefacts were also classified by raw material types resulted in the dominant presence of local quartz and andesite and the occurrence of fine-grained lithic raw materials from distant sources, such as radiolarite and limnosilicite. The 'cultural classification' conclusion is that the recovered MP lithics do belong to the Central European Micoquian based on the following features: the dominance of the discoid method with many various '*hierarchized bifacial and unifacial subdiscoid cores*' for primary flaking processes (Figs. 28 through 51 on pp. 95–101) and series of specific *débordant* flakes and pseudo-Levallois points (Fig. 52 on p. 101); the presence of complex side-scrapers ('*double, transverse, offset, with thinned back*') (Figs. 56–58 on pp. 105–107), '*bifacial raclettes - groszaks*' (Fig. 62 on p. 111) and bifacial tools, including backed pieces and a hand-axe (Figs. 67–69 on pp. 116–118) and related to them, bone retouchers (Fig. 74 on p. 123). Moreover, the authors investigated the claim of a possible Taubachian industrial attribution for the Bojnice I lithics and concluded: '*the Bojnice site comes closest to the Micoquian layer 7a in Kůlna, while e.g. the Taubachian of layer 11 in Kůlna reveals different characteristics' and it 'can be unambiguously linked with the Central European Micoquian of the older phase of the Weichselian*' (p. 95).

Chapter 4 '*Bojnice III – Castle moat*' (pp. 124–160) contains data on another site discussed here, situated

just ca. 0.5 km away from Bojnice I Cave. Bojnice III is truly an unusual site in Palaeolithic archaeology. The famous Bojnice castle stands on a travertine hill, built upon its 13th-century predecessor as reconstruction by its Hungarian owner Count Ferenc János Pálffy at the end of the 19th century, following the standards of French Romantic-era castles. In 1964, workers were cleaning the moat's slope and discovered Pleistocene animal bones and MP lithic artefacts.

Natural science specialists were informed about the discovery and following that, the already famous Czech naturalist and malacologist Vojen Ložek realized the first excavations there in 1964. Excavations were continued in 1965–1969 by Jurai Bárta. The excavated site happened to be a multi-layer MP occupation rich in lithic artefacts (Bárta called them 'micro-Mousterian'), animal bones, malacofauna, charcoal pieces and even plant prints. The 2013 book's authors had to match the data from these two excavation systems. According to the analyzed malacofauna, fauna and charcoal data, the site's sediment sequence (ca. 10 meters long with 11 archaeological layers) encompasses both the late Last Interglacial (layers XI–X) and the beginning of the Last Glacial before MIS 4 (layers IX–I). Measured on a sample from an uncertain location in layers X–IX in the 1980s, a single U/Th date, *ca*. 105,000 BP confirms the site's archaeological geochronology. The artefacts recovered in the 1960s can be viewed in the following way, according to the data of Neruda and Kaminská. A few redeposited MP artefacts were recorded in Holocene sediments and they are different from *in situ* lithics. They are all 'normal-sized (≥5 cm long) andesite pieces, which is not a common raw material at Bojnice III,' and mostly are products of discoidal core reduction. Due to the two above-noted features, as well as similar weathered surfaces on andesite pieces, these sparse Bojnice III artefacts are rather similar to the Bojnice I lithics than to the rest of Bojnice III MP finds. Their presence supports the chronological suggestion that Bojnice I Micoquian artefacts may belong to MIS 3, while Bojnice III *in situ* artefacts are much older and connected to the first part of the Upper Pleistocene. The *in situ* Bojnice III lithic artefact assemblages are not abundant at all, not one reaches even 1000 items. The rarity of artefacts are apparent in the seven upper layers (I–VII) and the lowermost layer XI, while the richest assemblage from layer II contains merely 48 lithics, including natural fragments and 'manuports', being also usually represented from ca. 2% up to 12% of all pieces in each layer's assemblage. Consequently, only assemblages from layers VIII (930 items), IX (499 items) and X (816 items), from the end of the Last Interglacial and the very beginning of the Last Glacial provided samples with a reasonable quantity.

Having such quantities of the assemblages and also seeing that the lithics from all archaeological layers are alike enough, first of all technologically, Neruda and Kaminská consider them belonging to the same Middle Palaeolithic industrial unit, furthermore, they suggest its Micoquian affiliation. According to raw material data, local quartz dominates (usually up to 85-90% of all pieces in each of 11 assemblages) over andesite, quartzite and such fine-grained rocks as limnosilicite, radiolarite and erratic silicite. The latter three raw materials are foreign to the site and the authors are indeed very correct in proposing that pieces made of these materials were usually brought there in the form of prepared tools. They were merely reshaped or rejuvenated inside the camp, resulting in the presence of tiny rejuvenation flakes of these raw materials in several layers. The related tools are absent among the finds, they were probably taken to another site. From the technological point of view, the book's authors indicate that discoidal reduction methods are well-represented in all assemblages as various discoid and sub-discoid core variants, while Levallois core reduction does not occur at all. Curiously enough, aside from the cores with similar discoidal methods, only a single core related to a '*sub-prismatic volumetric method*' in the layer-X assemblage (p. 155) was mentioned as a representative of any other reduction method for all cores and debitage from all eleven Bojnice III lithic assemblages. It seems that parallel primitive core reduction without faceted striking platforms and/or lateral supplementary striking platforms should be frequent. Also, the specimen proposed to be a sub-discoid core from layer I (Fig. 85: 1 on p. 140) seems to be a good representative of the Quina core reduction method. Accordingly, I would say that the Bojnice III MP materials do not demonstrate merely the discoidal core reduction method but other methods as well, still being usually associated with… discoidal reduction again, hence my additions do not change the authors' conclusion significantly.

It is not a surprise that a hard-hammer technique dominates core reduction on the mostly hard raw materials, such as quartz. At the same time, the authors' valuable observation that several debitage pieces and chips with faceted butts come from reduction with a soft-hammer on bifacial tools in layers VIII–X. Also, the Bojnice III MP assemblages are flake-based without any complete blades identified. All 11 lithic assemblages' debitage pieces demonstrate a prevalence of small items (≤4 cm) over larger pieces. It

is well understandable for both the intensively worked exotic raw materials at the site and the local quartz as '*quartz easily breaks into small amorphous fragments alongside its crystal structures*' (p. 146). The tools, which are well-represented only in the assemblages of layers VIII–X, show repeated co-occurrence of simple and convergent unifacial side-scrapers, single occurrences of bifacial and partially bifacial tools, and a moderate number of denticulated and notched tools. Taking into account the presence of single reduced pieces suggestive of bifacial backed knives in layers VIII (Fig. 88: 10 on p. 147) and IX (Fig. 89: 8 on p. 150), and three partially bifacial tools (two side-scrapers and a point) in layer X (Fig. 92: 5, 7-8), Neruda and Kaminská proposed a Micoquian industrial attribution for the discussed Bojnice III MP materials.

Chapter 5 '*General implications*' (pp. 161–176) is devoted to two such subjects on the Bojnice sites. The first subject is an attempt to understand Neanderthal lifeways and their particular activities at Bojnice III, their moves around the site or, as the authors say – '*a sort of view beyond the site*' (p. 161). The authors understood well the differences in the use of certain raw material types inside and outside the site: in their analyses of the 11 assemblages in Chapter 4, they ask the question about '*missing artefacts*' (presence of tool-maintenance chips and absence of the reshaped or/rejuvenated tools) in some assemblages. Indeed, the authors studied separately artefacts and artefact types made of local coarse raw materials (quartz, quartzite, andesite) at one hand, and fine-grained distant raw materials imported to the site from outcrops located *ca*. 25–50 km away (radiolarite, limnosilicite, erratic silicite) from the other. Neruda and Kaminská utilized numerous modern methods in their work and it is interesting to see how the authors came to the pattern presented in the followings. The Bojnice III MP Neanderthals were collecting coarse raw materials from local fluvial sediments and bringing those to the site for primary and secondary (tool) production. At the same time, fine-grained radiolarites and silicites were brought to the site mostly in the form of well-made tools produced elsewhere (as a rule, unifacial convergent side-scrapers and a few bifacial items). These latter tools often had been taken away from Bojnice III, hence such tools are often missing in the studied MP assemblages. The second subject is connected to not just the MP but namely the Micoquian industrial attribution of the Bojnice I and III lithic artefacts by the book's authors. Many arguments are proposed by them in favour of the Micoquian attribution and I agree with them in the case of the Bojnice I materials but I contest their attribution regarding the Bojnice III assemblages. The Micoquian features are said to be the presence of unifacial complex (convergent) side-scrapers and bifacial backed knives in Bojnice III. And Neruda and Kaminská are fully aware of the also possible Taubachian industrial attribution for these Bojnice III lithics. The main argument for the Micoquian alternative is the occurrence of proper bifacial backed knives in Bojnice III, whereas the archaeological record at the Taubachian type site Kůlna Cave, layer 11 (southern Moravia, Czech Republic) are said to demonstrate that bifacial backed knife-like pieces there show '*absence of retouch to modify the working edge of the artefact*' and because of this, the proper Taubachian bifacial pieces in fact '*come closer to bifacial (discoid) cores than to tools proper*' (p. 168). Analyzing the Micoquian topic further, regarding the whole of Central Europe and involving relevant data from Eastern Europe, the book's authors even proposed their definition of Micoquian that is fully cited below (p. 172):

'I*n view of the great diversity of the sites in terms of their taphonomy and the preserved economic strategy, in our opinion the important fact is not the presence of a specific form of bifacial backed knife (e.g. with a paraburin blow), but the existence of a specific combination of technological and typological elements. The term Micoquian should include the industries, which comprise the proofs of utilisation of asymmetrical, bifacial pointed tools (handaxes of various dimensions, backed knives of various forms, leaf side scrapers etc.), and these should occur within the context of other characteristic elements, especially complex side scrapers (double, offset, pointed, with thinned back and various combinations) and/or specific forms like circular side scrapers – the so-called groszaks*'. And they continued with the application of this definition to the Moravian and Slovakian materials – '*The presence or absence of the Levallois method depends on the region, since we have proofs of collections, in which the Levallois method is present, whereas in Moravia and Slovakia it holds for the time being that the Micoquian assemblages are non-Levallois. This group also includes the sites in Bojnice, in the instances of which the main way of acquiring blanks is based on the utilisation of discoid, nonhierarchized and sub-discoid cores with hierarchized surfaces*'. As regards the characteristics of the bifacial backed knives from the Bojnice sites they emphasized that '*reduced forms are analogous with artefacts in the Micoquian collections from the Kůlna Cave*'.

After rendering the Bojnice MP assemblages into the Central European Micoquian, the book's authors compared their techno-typological characteristics

to several assemblages they consider Micoquian on techno-typological grounds. However, an interesting note of the authors is worth citing here: '*it is evident that some Micoquian assemblages (Šipka, Bojnice I, Bojnice III-8, and Bojnice III-10) are relatively close to e.g. the Taubachian collection from the Kůlna Cave (graph 5A)*' (p. 174).

Chapter 6 '*Bojnice in the context of Central Europe*' (pp. 177–181) discusses the following important issues that summarize the book's data. The chronology of the Bojnice sites is said to be different from each other: Bojnice I is restricted to the Late MP of MIS 3 comparable to Kůlna Cave, layer 7a; Bojnice III is placed into MIS 5 (see above). The entire chronology of the Central European Micoquian is also presented, including the still heavily discussed suggestion of the earliest appearance of Micoquian more than 200,000 years ago at Biśnik Cave in Poland, as well as the end of the MP, where the authors, using Micoquian data, presented several existing difficulties in the understanding of the transitional period from the Late MP to the Early Upper Palaeolithic. Finally, the Taubachian subject has been touched upon as well. This MP microlithic industry of the MIS 5 period was identified by K. Valoch in the 1970s using the Kůlna Cave, layer 11 and also several Slovakian and Hungarian materials, considering it an essentially Central European MP phenomenon (Valoch 1977). Neruda and Kaminská correctly mentioned the following basic characteristics of the Taubachian industry as recognized by K. Valoch: '*utilisation of a large quantity of various lithic raw materials, often in the form of pebbles, … small dimensions of the industry, the absence of the Levallois method…, side scrapers of various types predominate and occur together with numerous notches and denticulates*' (p. 179). Here I would add that Valoch also noted the presence of bifacial 'plano-convex' tools in the Taubachian assemblages. Neruda and Kaminská recognize certain obvious similarities between the Bojnice III lithics and Taubachian Kůlna Cave materials arguing, however, that some of these similarities '*can be the result of a specific human behaviour (there are only poorer quality items of tools left at the site) or taphonomy of a cultural layer or locality*' in Bojnice III (p. 179).

Finally, at the end of my review of this excellent book on both Slovakian and Central European MP that I indeed highly recommend for a thorough reading and thinking about the many raised subjects there, let me express some of my suggestions for the Bojnice III MP materials. Taking Valoch's interpretation of the Taubachian, the Bojnice III lithics fit well into that industry with its diversity of various pebble raw materials, the small size of the lithics rarely exceeding 4 cm, the absence of the Levallois method, the variability of side-scrapers, the presence of denticulated and notched tools, as well as some bifacial tools. Moreover, more attention should be paid to the following. A great prevalence of quartz artefacts, a hard rock for a systematic and long-lasting core reduction, certainly did lead to the multitude of small-sized pieces made of this local raw material. Also, similar small-sized debitage was added by the curation of artefacts (mostly tools) made of long-distance raw materials, such as radiolarites and silicites. Accordingly, the described basic peculiarities of lithic reduction processes at the Bojnice III site caused the 'microlithic' character of the MP pieces there. In addition, it should not be forgotten the strong representation of discoid method cores and their distinctive products (pseudo-Levallois points) in the Kůlna Cave, layer-11 toolkit (Valoch 1988, see Abb. 39–40) that are also characteristic of the Bojnice III assemblages. Unifacial convergent side-scrapers are not only well-known in Central European Micoquian assemblages but are also abundant in the Kůlna Cave, layer 11 toolkit (Valoch 1988, Abb. 42: 1, 4–5, 9, 11–12, 16; 43: 1, 3; 44: 5; 45: 10). Concerning the bifacial 'plano-convex' tools, I agree with Neruda and Kaminská that some (!) of the Kůlna Cave Taubachian bifacial tools lack a regular retouch looking more as core-like objects than tools (Valoch 1988, Abb. 47: 1-3, 6). However, some other bifacials do have well-retouched edges being certainly tools (Valoch 1988, Abb. 43: 10; 45: 13; 47: 4–5). Thus, bifacial tools proper do occur in both the Kůlna Cave Taubachian and the Neruda's and Kaminská's Bojnice III Micoquian. Moreover, Neruda and Kaminská correctly noted that the Kůlna Cave Taubachian bifacial tools '*were mainly produced on relatively distant porcelanite*' (p. 168). Therefore I assume their rather long-lasting and/or intensive reduction before their arrival to the Kůlna Cave. Then the tools were subjected to significant reshaping and rejuvenation in the cave, that is why (!) some of them after ceased to be tools were used as cores yielding blanks from the distant raw material. Other bifacial tools were heavily reduced leaving their lateral edges without backs, thus changing their morphology into highly atypical backed knives or not knives at all (see similar data on the Crimean Micoquian – Demidenko & Uthmeier 2013; Demidenko 2015). All the above-mentioned features are recognized in the Bojnice III assemblages, defined by Neruda and Kaminská to specific human behaviours. The presence of bone retouchers in Kůlna Cave's Micoquian and Taubachian layers (Valoch 1988, Abb. 25: 1; 37: 3–4; 48: 1–6; see also

Neruda et al. 2011) as well as Neruda's and Kaminská's Bojnice I Micoquian (Fig. 74 on p. 123), and the blanks with faceted butts from Bojnice III, layer X that were connected by the authors of the book in technological terms '*with the modification of bifacial tools, since exactly faceted striking platforms were knapped by soft retouchers*' (p. 156) confirms the secondary treatment of the two sites' Micoquian and Taubachian bifacials as tools sensu stricto. All in all, as I was thinking in 1990, the Bojnice III lithic materials show stronger affinity with the Kůlna Cave, Taubachian layer 11 data and I would attribute them to the Taubachian industries. But it is not enough now to say that these Slovakian MP materials rather belong to the Taubachian. That's because I must raise another question – is Taubachian a real culturally determined MP technocomplex? Or is it a specific Early Micoquian economic and chronological facies? Hypothetically, accessing local high-quality raw materials had posed certain difficulties during MIS 5 which led these Micoquian Neanderthals to the production of more Taubachian-looking pieces instead of their ordinary Micoquian artefacts. At present, I am more inclined to the latter hypothesis, also remembering in this respect that Petr Neruda considers the material of Kůlna Cave, layer 11 the only definite Taubachian lithic assemblage in Central Europe (personal communications with P. Neruda in 2014 and 2015). But, of course, further research is needed on the issue of the Central European Micoquian and Taubachian, and such work should be done with Neruda and Kaminská. Again, all my observations and suggestions in the present review have been only possible due to to the high quality and detailed data and analyses realized by Neruda and Kaminská in their monograph. My sincere congratulations to Petr and Lubomira on the publication of such a great book!

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