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Paweł Valde-Nowak, Marián Soják

Paleolithic Man in the Tatra Mountains

Abstract: At the end of 2018, when the Hučivá Cave (Hučivá diera, Rausch Keller) was explored in Tatranská Lomnica, profile deposits in rear areas of the cave were found disturbed by an amateur excavation. One stone artefact was first found in back-dirt clay-layer material at the excavation pit, later joined by four more specimens from the cleaned pit profile. The Typological analysis of the artefacts shows, that their closest parallels are found in inventories of the Magdalenian culture.

Hučivá is the only cave in the whole Tatras with documented prehistoric settlement and the only Slovak cave with evidence of the Magdalenian culture. The discovery provides new information concerning subsistence strategies of late Pleistocene hunters in High Tatra Mountain landscapes. In light of this discovery, the possibility of seasonal movements along the northern slopes of this mountains range to the east and then south, through the mountain passes to the upper Spiš region should now be considered.

Key words: Palaeolithic, Western Carpathians, Tatra Mountains, Magdalenian, cave-site

I. INTRODUCTION

Despite significant progress in research of prehistoric settlement in mountainous areas, the problem of traces of Paleolithic man in the Tatra Mountains, has been intensively explored by landlords, geologists, and even archaeologists of the 19th century, remains unresolved. In the years preceding World War II, it seemed that the issue of Paleolithic occupations had been answered in the positive (Jura 1955). However, it was later determined that so-called bones and stone tools found in Magura Cave in the Polish part of the Tatra Mountains, once considered to be the artifacts cave bear hunters were not produced by human hands. Therefore, foundations for distinguishing early Tatra archaeological culture were disproven. That lack of proof, for decades, has discouraged stone age research in the Polish part of the Tatra Mountains. The situation wasn't any better on the Slovak,

southern, side of the Tatras. It is all the more strange because the number of archaeological remains in numerous caves known from other parts of Slovakia was significant even as early as the 19th century.

II. HUČIVÁ CAVE – DESCRIPTION AND LOCATION

During a visit to the Hučivá Cave in the Belianske Tatras, at the end of 2018 (with the aim to verify it as a possible archaeological site and prepare photographic documentation), significant disturbance of cave sediments was noticed. Detailed inspection of the disturbed cave sediments led to the discovery of the cave's first stone artifact. Clearing of the disturbed area, and cleaning of the exposed profile, revealed three more stone artifacts. Data collected during the visit, including descriptions of the artifacts are presented in this article.

Hučivá Cave (also known as the *Hučivá diera* or *Rausch Keller*) lies in the cadastre of the High Tatras-Tatranská Kotlina (Poprad district) in the Prešov region. It is located on the southern slope of Kobylie Hill (1109 m), near the "Sparkling Spring" (*Rausch Quelle*). Its name likely refers to the sound of water that echoes over a long distance. The cave is located southwest of Tatranska Kotlina and south of the Belianska Cave, the only tourist accessible cave in the Belianske Tatry (Fig. 1).

In 1994, under registration number 1148, the Regional Office for Environmental Protection in Prešov established the cave as the protected Hučivá diera Nature Monument. From 1 July 2008, the cave became publicly available. It can be reached by the blue tourist trail (the so-called Zbojnícky chodník) which connects Tatranská Kotlina and Kežmarská Žľaba. After about one-third of the above-mentioned trail, a right turn leads up the slope along the left bank of the stream to the cave entrance (at an altitude of 937 m), on the steep southern slope which sometimes transitions into rock cliffs, all overgrown with trees. The cave's triangular entrance is visible from a distance (Fig. 2A). In front of the cave opening, there is a several-meter wide terrace slightly inclined towards the valley (Fig. 2B).

The cave is marked with an information board, attached to a rock wall left of its entrance (GPS coordinates: N 49°13'14,8", E 20°18'37,2", C-KN 14 705/14, LV 402). The cave is embedded in dark limestones of the Middle Triassic Gutenstein Formation.

The cave is dry and has the shape of a spacious corridor. After completing their amateur excavation of its rear spaces, probably done by speleologists, the length of the cave was increased from 13 to 16 meters (Bella et al. 2018, 270: No. 5787). The cave interior is relatively well-lit from its entrance into half its length.

The corridor narrows into a slit corridor oriented to the northeast, from where it passes into a sloped chimney. There is no dripstone in the cave and its floor has

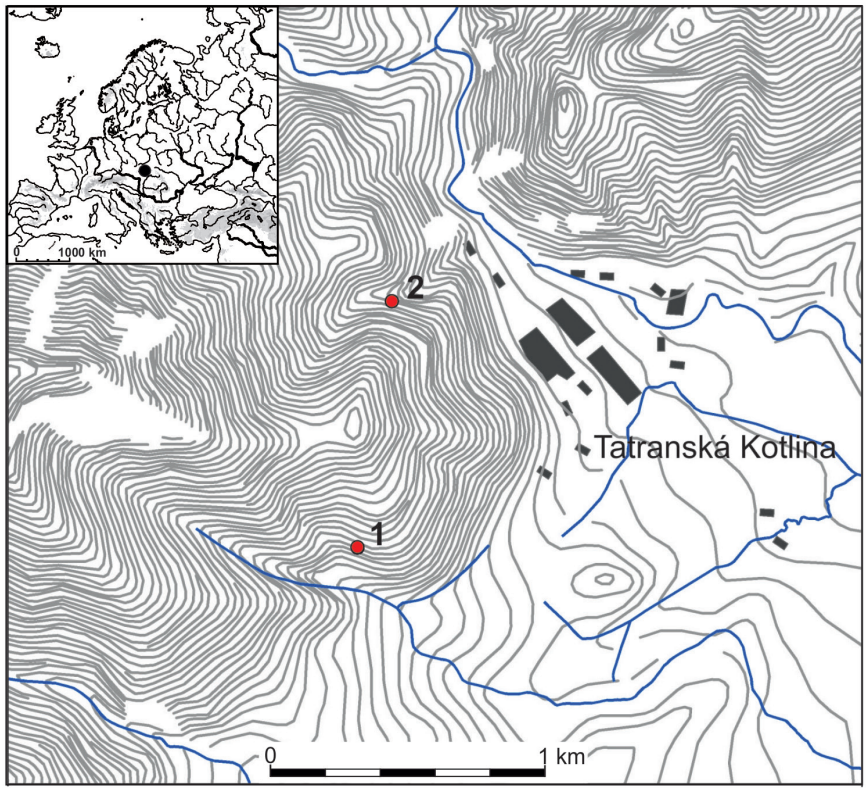

Fig. 1. Location of the caves in the map section. 1 – Hučivá Cave;
2 – Belianska Cave (open to the public)

Fig. 2. Tatranská Lomnica, Hučivá Cave. Triangular entrance (A). Photo: M. Soják.
Area of the terrace (B). Photo: P. Valde-Nowak

minor depressions, formed as the result of seeping water action. Frost mechanical weathering has also significantly contributed to its present form.

III. THE STATE OF RESEARCH IN THE BELIANSKE TATRAS CAVES AS PLACES WITH ARCHAEOLOGICAL POTENTIAL

Hučivá Cave has been known since time immemorial, but has never been systematically surveyed. It was probably also visited during the discovery of Belianska Cave, whose entrance was known to gold prospectors in the first half of the 18th century (Prikryl 1985, 105). In Belianska Cave, Samuel Roth attempted archaeological and paleontological research in the late 1800s, but without success (Roth 1882, 315). Later, a supposedly prehistoric find was revealed "in front of the Belianska Cave", a Neolithic axe, which, at the time of discovery, was seen as suggesting that nearby caves might also have had prehistoric occupations (Soják 2000, 225, Table 14).

In the older literature, there is no information about deliberate archaeological research in Hučivá Cave. Paleontological studies, especially concerning cave bear bones found in the cave during much later speleological activities, also contributed to its preliminary studies, referred to below. Speleologists carried out repeated surveys in the cave to discover further potentially existing underground connections to the Belianska Cave system (Pavlarčík 1974). Those activities were carried out in the 1950s and 1970s by speleologists from Spišská Belá, who determined the cave's length at 16.3 meters (Pavlarčík 1985, 33). During their surveys, they paid close attention to its representation of small fauna, especially butterflies and spiders. According to S. Pavlarčík (oral communication in 2000), individual ceramic fragments that have been since lost were sporadically found in the cave. A brief archaeological rescue project was carried out in the cave in 2005 by M. Soják (2007, 80). In the back of the cave corridor, the wall of a shallow amateur excavation pit was cleaned (Fig. 3) and, in a charcoal stain just below the cave floor, fragments of ceramics dating to the 15-16th centuries were found (Fig. 4). It is assumed the earlier ceramic fragments lost by the speleologists are associated with this settlement.

In December 2018, renewed field verification of the cave by M. Sojak and speleologists took place (Soják, Valde-Nowak, in print). At that time, traces left by destructive visitors were found, visitors who damaged the cave walls with inscriptions and engravings, and who left behind their rubbish. As part of the most recent rescue operation, a few fragments of clay vessels with thin walls and traces of yellow-green enamel on the inside and originating from the 16th century, were found. In addition, small fragments of animal bones, charcoals and four stone artifacts with Paleolithic traits were collected.

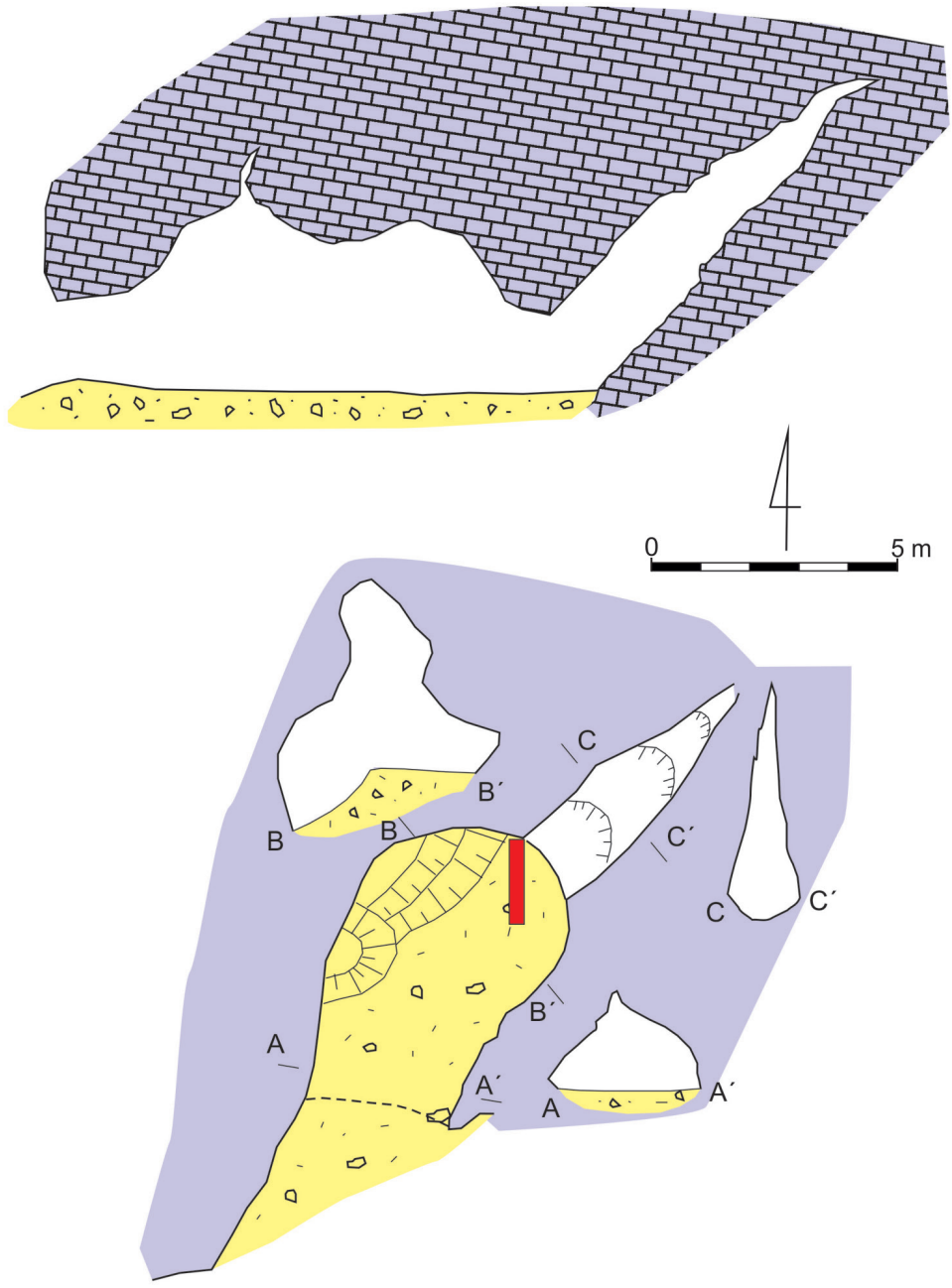

Fig. 3. Tatranská Lomnica, Hučivá Cave. Place of stone artefacts finding – rectangle (elaborated by V. Vadovsky, edited by F. Mihal and M. Sojak)

Fig. 4. Tatranská Lomnica, Hučivá Cave. Profile with frame marked layers: a – 16th century; b – Late Paleolithic. Photo: M. Soják

IV. STONE ARTIFACTS

The stone artifacts came from clay-layer back-dirt material (1 specimen) and from the vandal pit's cleaned profile (3 specimens). They were embedded in the clay cultural layer, visible in the wall, and covered with modern charcoal. Stratigraphy of documented layers is can be seen in the attached photographic documentation. A detailed chronological classification of the layers remains unverified by systematic archaeological research.

Artifact found in the vandal's pit back-dirt:

– the central part of a chip or flake, with functional retouching on the edge; made of an undefined, dark gray-black, translucent siliceous rock (Fig. 5: 1).

Artifacts found in layer "b":

– a borer with a slightly sloping end, with local retouching of its upper and lower right edges, and having a beak formed by a bottom-up impact shaping the beck; made of patched flint(Fig. 5: 2);

– a tool with a double truncation made on a regular blade - with a broken base and broken off end, with diagonal and straight retouching; made of welded limnic-quarzite (Fig.5: 3);

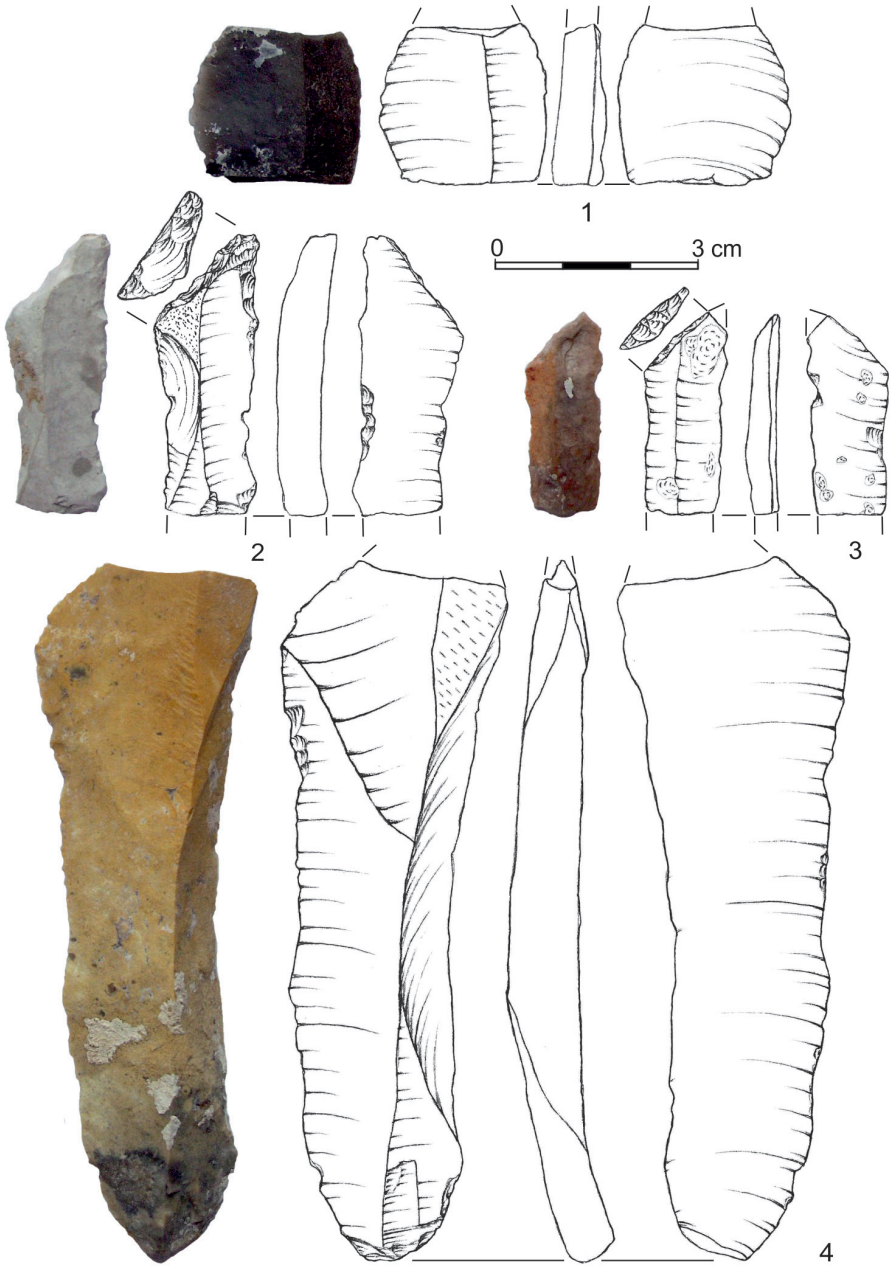

Fig. 5. Tatranská Lomnica, Hučivá Cave. Set of stone industry from rescue exavation in December 2018. 1 – survey; 2–4 – profile, layer "b". 1 – radiolarite (?); 2 – unidentified flint; 3 – limnosilicite; 4 – radiolarite.

– a massive blade made from a core with two platforms and having a broken apical part; made of yellow-pink radiolarite (Fig. 5: 4).

The raw materials compositions in the artifacts is not uniform but rather reflects their variability. The first artifact, is made of a greenish raw material with fine white spots, probably representing a radiolarite from the area of Pieniny. Also made of radiolarite is a massive blade with a broken end, although it is a rare variety of cream radiolarite, perhaps also from the Pieniny area. Limnosilicites, on the other hand, are a common raw material, both in eastern Slovakia and in the central Slovak mining area (Žiarska Valley) (Přichystal 2009, 106 Fig. 69). A fine white patina on the fourth artifact excludes unambiguous identification of its flint material, defined as patinated silicite.

The closest analogies to the described type, with its truncations and an obliquely retouched end, can be found in studies of the second entrance to the Obłazowa Cave in Nowa Biała 2, in a late Magdalenian culture layer dated to 14 120-13 704 calBP (Valde-Nowak et al. 2018, 179, Fig. 5: 1-3). This culture phase, although in an earlier Magdalenian phase, is also associated with stone artifacts found in the main chamber of Obłazowa Cave in its the 3rd layer, including a schematic Venus made from a sandstone tile, representing the Lalinde-Gönnersdorf style (Valde-Nowak et al. 2003; Valde-Nowak et al. 2017). In addition to Obłazowa Cave, findings from Hučivá Cave are associated with Magdalenian culture materials at Podczerwone by the Czarny Dunajec River (Valde-Nowak 1991) and the site of Rydno II/59 north of the Carpathians (Schild 2011, 124-125, Fig. 10.3). A typological analogue for double oblique truncations can be found in the Krucza Skała Cave artifact inventory (Cyrek 1990; 1994a; 1994b; Sudoł, Cyrek 2015) as well as that of Etzdorf in Thuringia (Pasda et al. 2011).

The list of Magdalenian culture finds on the northern border of the Slovak Carpathians is constantly growing. Older finds from Aksamitka Cave near Haligovce were the first evidence of a Magdalenian culture presence in this region (Bárta 1981). In addition to finds from the Orawa-Nowy Targ Basin, discovery of the open camp in the Low Beskid (Uście Gorlickie – Valde-Nowak 1996) and in the foreground of Bieszczady Mountains (Hłomcza – Valde-Nowak, Muzyczuk 2000) can be added to the list. And, for some time, they have been known from Northern Slovakia (Stará Ľubovňa - Sojak, Valde-Nowak 2007; Valde-Nowak et al. 2007; Toporec – Cheben et al. 1999; Soják 2002). In chronological terms, Magdalenian settlement in the Western Carpathians developed in Hłomcza at the end of GS-2a (Dryas I), then at most sites in the Bølling (GI-1e) as well as during the older part of the Allerød - GI-1c (Obłazowa west entrance). Looking at recent comprehensive approaches to the Magdalenian colonization (Maier 2015, 224 fig 7.34), we find that the Hučivá Cave discoveries are part of a general tendency of its territorial range to expand to the south.

V. CONCLUSIONS

The entrance of Hučivá Cave is directed to the south and is relatively easy to access. Its setting seems ideal for setting up a camp. The value of the cave's finds lies, among other things, in its preserved stratigraphy. Further planned research will help clarify the character of its Magdalenian's settlement, in particular, a more accurate chronology and the intensity of its occupation. Evidence of prehistoric and later occupations show the need to study caves in the Tatras (Bella et al. 2018, 269). In many caves, there are significant traces of treasure hunters from several centuries, both in the Slovak and Polish sides of the Tatra Mountains (Pavlarčík et al. 2010, 187-230). The analyzed artifacts at Hučivá Cave are the first prehistoric finds from Tatra caves. It is the first cave in Slovakia with a well-documented inventory of Magdalenian cultural occupation. From Slovakian Spisz, we know of open camps of that culture in Stará Ľubovňa (Soják, Valde-Nowak 2007, Valde-Nowak et al. 2007) and in Toporec (Soják 2002, 270) where some artefacts are made of a specific variety of raw material – flint from Bircza. That raw material is characteristic for Magdalenian inventories in the area north of the Carpathian Ridge – well represented, among others, in Hłomcza (Valde-Nowak, Muzyczuk 2000). Small finds from Aksamitka Cave in Haligovka, referred to as either Aurignacian or Magdalenian (Barta 1981; Kaminská 2014, 289), are problematic and difficult to verify. Slovak remains of Magdalenian culture discussed here is the most southern extension of that culture so far. They testify to the penetration of groups hunting, probably seasonally (see Brunswig, Valde-Nowak 2018 - in this volume). In this context, Hučivá Cave, situated south of the Tatra Mountain Divide, it should is located outside the area covered by glaciation during LGM in the Tatra Mountains (Zasadni, Kłapyta 2014). This means that even during the Late Glacial maximum cold period, the cave was available for habitation.

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