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PROBLEMS OF DWELLING STRUCTURES IN THE PALAEOLITHIC OF WESTERN SLOVAKIA

ABSTRACT — The present paper summarizes the knowledge so far on the dwelling function of caves in the Palaeolithic of western Slovakia as well as the overemphasis placed on them as compared with open-air sites. The occupation of caves in the Palaeolithic in Slovakia is in most cases of episodic character due usually to the difficult accessibility of the caves. Caves were occupied by man especially in relation to seasonal hunting of cave bears. Some more accessible caves (Bojnice, Radošina, Plavecký Mikuláš) contained other inside constructions for protection against the climate.

In western Slovakia, shelters were found even in open-air settlements coming from the Lower Gravettian period from the PK I interstadial (Nemšová, Svodín). Unfortunately, being mere rescue excavations, they were not explored in a sufficient way. Clear is the existence of shelters from the Upper Gravettian period on the basis of the Würm 3 horizon (Moravany nad Váhom, Žakovská and Lopata).

KEY WORDS: Palaeolithic dwelling structures — Slovakia — Bojnice — Radošina — Plavecký Mikuláš — Nemšová — Svodín — Moravany nad Váhom — Žakovská — Lopata.

CAVES

The importance of caves as dwelling places, overestimated due to uncritical application of the knowledge of western European Palaeolithic to the territory of Slovakia, is being gradually corrected by new data on caves but also on settlements in the open landscape. The primary reason for preferring cave dwellings during Palaeolithic period in our territory was seen in an endeavour to escape from the cold periglacial climate. The adversity of this climate changed with the distance from the front of the mountain glaciers.

In Slovakia, however, the protective importance of caves is minimal as the cold inside them is affected even by the relative height of the caves in the western

Carpathian Mts. where hardly accessible divers limestone areas predominate. Only the caves found in the plains of the Slovakian Karst in SE Slovakia are more readily accessible and warmer. Spelaeo-archaeological investigations of Slovakian caves, intensified after World War II, have shown that Palaeolithic finds, which are incomparably scarcer than evidence of settlements in later ages, represent mostly prehistoric temporary stays of Palaeolithic hunters who obtained food by hunting mainly for cave bears in higher situated caves. They brought part of their quarry back to settlements in the open valleys and foothills of Slovakian mountains.

Contrary to the accessible Bohemian and Moravian limestone areas, the situation in the rugged Slovakian Karst was less suitable for prolonged cave dwelling. The latter was only ascertained at Bojnice I, in the low-lying Prepoštská jaskyňa Cave, in a unique travertine formation. This Middle Palaeolithic cave locality, dating from the peak of the warm phase of

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the Würm I stadial, is so far the richest cave dwelling in Slovakia (Bárta 1969). It was inhabited by the makers of the Levallois-Mousterian tools, who made their implements of local andesite tuffites and quartz as well as limnoquartzites imported from the Žiarska kotlina Valley. The varied paleontological material indicates organised collective hunting of big mammals (Bárta 1970) which were the sources of food of a probably prolonged winter base camp with adapted interior, to which Neandertal hunters returned from other (temporary) camps in the open landscape of the Upper Nitra region (Bárta 1980). The largely overhanging portal and the small space of the rear part of the Prepoštská jaskyňa Cave was probably supplemented, by lean-to's made of wood and skins. Unfortunately, the locality was badly damaged by solifluction as well as by the early explorations which were on a low professional level at that time (Babor 1936) and, later, also by interference of amateurs. All this made it impossible to find evidence of such screens in the form of post pits in the sediments beneath the overhanging rock.

Further knowledge of the use of Slovakian caves so far indicates that they served in an easy way as temporary shelters with the firm cave ceiling giving the protection and feeling of safety. In some cases, our Palaeolithic ancestors also must have built, in several limestone formations, shelters against the wind, the remains of which, however, have not been concretely evidenced. Such a situation may be assumed, first of all, in the most readily accessible Slovakian cave, the Čertova pec Cave near Radošina in the Povážsky Inovec Mountains (Bárta 1972).

The threefold Palaeolithic occupation yielded scant remains of material culture despite the generally favourable environment, moreover with a source of light coming through a "window" created by a rock that had fallen out. This tends to evidence only a temporary character of the stay of Neandertal hunters from the peak phase of the Eem interglacial as well as of the Szeletian people from the PK II interstadial.



FIGURE 1. Plavecký Mikuláš — Deravá skala Cave. A cave site with a Gravettian dwelling remains.

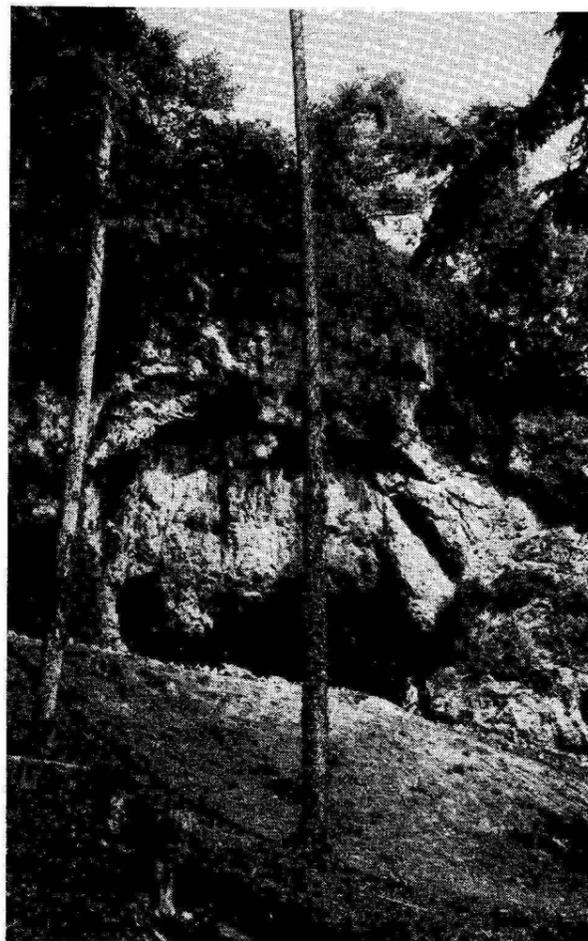


FIGURE 2. Bojnice — Prepoštská jaskyňa Cave. The basis of Levallois Mousterian culture.

Nor the scarce flaked artifacts of the Gravettian culture suggest their prolonged stay in the spacious cave although it was also a kind of workshop where necklaces were produced. This is evidenced by perforated as well as unperforated Tertiary shells and their fragments of the genera *Melanopsis* and *Lithoglyphus* in an identical stratigraphic position at the boundary between the PK I interstadial and the Würm 3 stadial. With its length of 27 m, the Čertova pec Cave is in fact an eroded part of a stream cave which has thus become a tunnel the rear part of which was blocked in the Holocene when its weather-worn ceiling crumbled down. Assuming a draught in that cave in the Pleistocene, the rear entrance must have been closed by probably organic screens, as no remains of a stony wall have been found.

In Slovakia, only one case of a Palaeolithic combination of a shelter in a cave to increase protection against cold weather is known so far. Basing on results of systematic investigations in the easy accessible Deravá skala Cave near Plavecký Mikuláš in the Malé Karpaty Mts., F. Prošek (1961) found a cultural layer situated in a place closed by a solid wall. This place shows a conspicuous accumulation of flaked Gravettian stone artifacts in an area 6×11 m (the

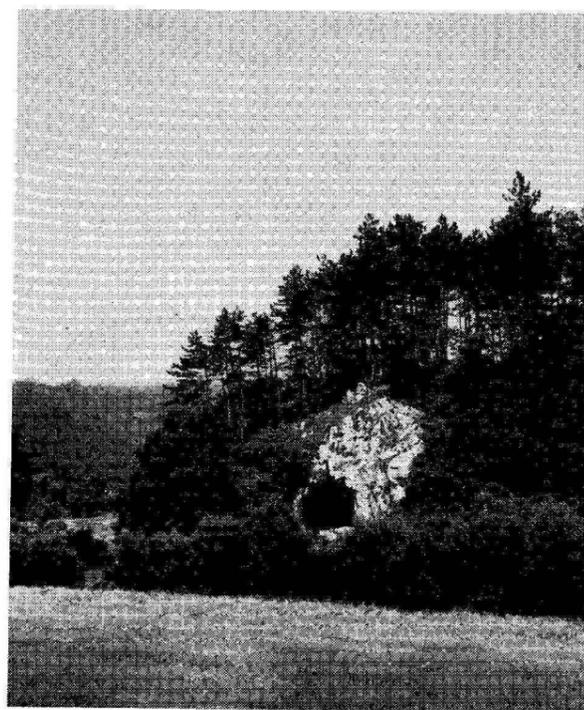


FIGURE 3. Radošina — Čertova pec Cave. of Mousterian, Szeletian site and Gravettian workshop where necklaces from Tertiary shells were produced.

shape of which was distorted by solifluction in the rear part of the locality which occurs in only a thin layer on the surface of the PK I interstadial). The layer, being 2 cm only, suggests that the Gravettian settlement was not of long stay. Traces of production of stone and bone tools inside the cultural layer indicate rather a temporary winter settlement, since such work had to be done in a dwelling, in warmth and at firelight.

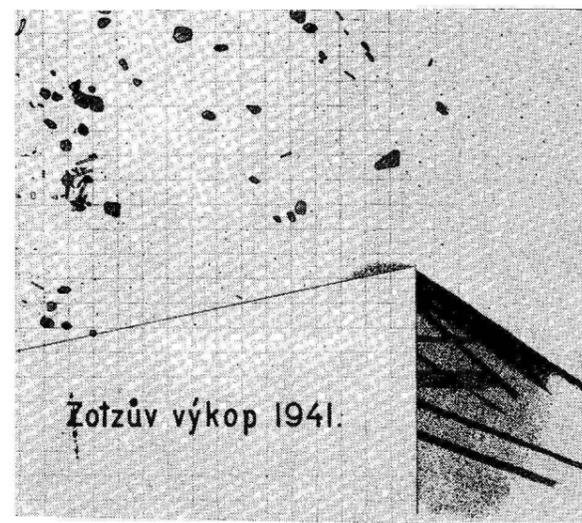


FIGURE 4. Moravany nad Váhom — Žakovská. F. Prošek's documentation from 1949, showing remains of carbonised beams belonging to the construction discovered by L. Zotz in 1941.

SETTLEMENTS IN OPEN LANDSCAPE

In 1941, during the first modern systematic investigations into the Palaeolithic in Slovakia, at Moravany nad Váhom — Žakovská (erroneously denoted as Žarkovská), L. Zotz (1942) recognised a ground plan of a rectangular shelter 1.4 × 2.5 m in dimensions, dug 40 cm deep into the ground. The centre of this habitation, excavated in the loess soil of the Würm 3 stadial, contained bones of one young and also tusks and molars of adult mammoths, as well as Gravettoid stone artifacts made mostly of radiolarite. Zotz reported his discovery as the first of its kind in central Europe. The truth was different, however. Already in 1919, J. Bayer discovered, in an Upper Palaeolithic settlement at Langmannersdorf, Austria, a similar Upper Palaeolithic shelter the function of which was later reevaluated by W. Angeli (1952—1953). Similarly, in 1932, J. Böhm discovered, at Lubná in Bohemia, another living site feature which was subsequently acknowledged to represent a shelter (Prošek 1961).

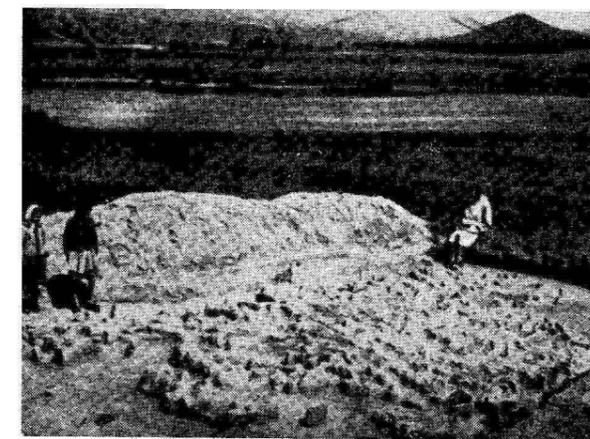


FIGURE 5. Moravany nad Váhom — Lopata. Reproduction of a view of the excavations of L. Zotz in 1943.

The settlement at Žakovská is also the locality of perforated Tertiary shells of *Conus ventricosus* and *Cypraea sanguinolenta* and of a cylindrical bony pearl. The local iron ore can only be considered as raw material for the production of red pigment by burning (Bárta 1970b). A revision investigation carried out by F. Prošek in 1949 revealed, however, that the shelter illustrated by Zotz was not an independent dwelling but part of a larger structure. A detailed removal of the cultural layer revealed remains of carbonised beams, 7—10 cm thick, placed obliquely one over another on its bottom. Since the archaeological finds rested only on top of these beams and not beneath them it is necessary to assume that the beams are remains of some kind of a grate-like floor. Unfortunately, the considerable damage caused by Zotz's digging does not permit any more precise conclusions nor a reconstruction of this remarkable dwelling structure (Prošek 1961).

In the same year, as well as in 1943, L. Zotz continued excavating a shallow depression on the loess ridge Lopata east of the village of Moravany nad Váhom. There, in an area 8×10 m, L. Zotz discovered another structure, resembling the preceding one but more oval, 1.3×2.6 m in dimensions, also containing a fireplace in its middle. The longer axis of the object followed roughly the N-S direction. In the north but mainly at the south-western edge and then on the southern side of the uncovered area there were several accumulations of bones, remains of young mammoth and reindeer predominating with single bones of cave bear, polar fox, horse, hare, lion and birds. The centres of several bone accumulations contained perforated tertiary shells of *Macra* sp., a fragment of a marl sculpture of an animal head, and a fragment of a baked earthen sculpture of a female sex as well as broken bone smoothing tools made of animal ribs.

War circumstances prevented L. Zotz from publishing graphic and other documentation of the shelter at Lopata. A plan of the excavations at Lopata in 1941 and 1943 and thus also an idea of the shelter were obtained from a rescued part of galley proofs of the periodical "Altböhmen und Altmähren". The shelter and its surroundings yielded numerous Gravettian artifacts, made predominantly of northern flint but also of amorphous quartz. Even though the locality Lopata is stratigraphically identical with the Žakovská it differs typologically and in the material used for the stone artifacts. A similar situation is found in simult-

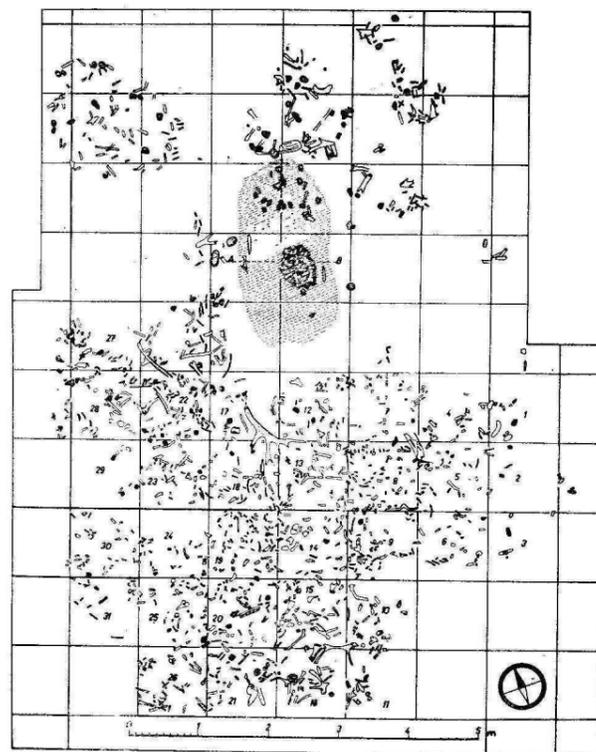


FIGURE 6. Moravany nad Váhom — Lopata. Plan of a Gravettian dwelling and paleontological finds excavated by L. Zotz in 1943.

aneous localities at Podkovicica and Noviny. Due to a more numerous occurrence of indented spear points of the Kostonky type, they represent another variant of the Gravettian culture in Slovakia.

The conspicuous concentration of Upper Palaeolithic settlements on the left bank terrace of the Váh River in the environs of Piešťany thermal springs is probably due to the specifically favourable environment of that region. The hot springs caused the river to be free of ice in winter, offering Pleistocene animals optimum watering places which were accessible all year round. The animals increased in numbers, which fact was reflected in the development of a rich hunting ground supplying food throughout the year. This also conditioned the development of long-term Upper Palaeolithic settlements which contained rather stable shelters, as indicated by the mentioned localities in the environs of Moravany nad Váhom. Limited migrations and prolonged stay in an environment offering favourable hunting conditions provided more time for the productions of nonrational art objects.

On the other hand, one cannot even exclude the knowledge and use of thermal springs at Piešťany for personal hygiene and because of their therapeutic effects. The most numerous Palaeolithic settlements in the environs of Piešťany, from several facies of the Gravettian, date from the rather cold phase of the last glaciation, which fact may have affected the occurrence of diseases of the locomotory apparatus of the Upper Palaeolithic hunters (Bárta 1970b).

Single findings of mammoth remains in the clay pit of the now disused brick-works at Nemšová I in the SE mouth of the Vlárský priesmyk Pass have been known since 1925. However, it was not until the rescue excavations in 1956 when it was found that the local finds of hammer stones, cores, blade-shaped flakes and further remains of radiolarite tools with groups of charcoals in the soil of the PK I interstadial are connected with the existence of a workshop of early Gravettian culture dated by the C^{14} method to 28 570 ± 1 345 years B.P. (Bárta 1965). The general character of the saved material culture indicates the presence of Gravettian prospectors engaged in searching for radiolarite in the Biele Karpaty Mts. and working it roughly to facilitate transport of the blanks artifacts to the Palaeolithic settlements in the wider interior of western Slovakia and probably even Moravia.

Measuring the geological section and removing further artifacts from the clay pit mentioned, the local workers reported that about 1952, when mammoth bones and teeth were found in the same layer as in 1956, they were surprised by the occurrence of two conspicuous stains, each about 3×5 m in dimensions, allegedly containing fireplaces surrounded by flat stones. These data seem to indicate a possible existence of Palaeolithic shelters.

Today it is a question whether the flat stones found near the fireplaces mentioned above were used for roasting, as stated in the case of similar finds in the settlements at Langmannersdorf, Ságvár or Tibava by the respective authors. However, one cannot exclude that they were used as anvils in working the cores, such as were found at Napajedla and especially



FIGURE 7. Nemšová I. The clay pit of a deserted brick-works in which early Gravettian features (?) were found in 1952.

at Pavlov (Bárta). In such case, they could evidence the working of radiolarite in the firelight in the huts in winter. Unfortunately, the destruction of the objects and of the site changed into a cemetery prevents us from solving these problems.

An unsolved problem of the possible existence of an Upper Palaeolithic construction is posed by stratigraphic observations at Svodín in the Hronská pahorkatina Hills. In 1960, workers found a Palaeo-

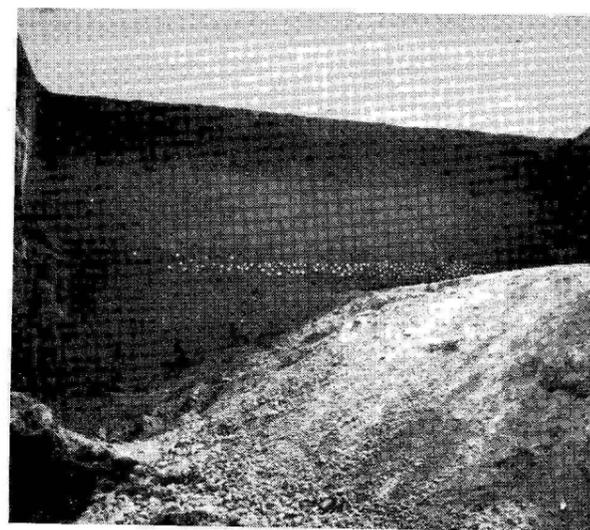


FIGURE 8. Svodín — Faratik. Section of a clay pit with an accumulation of early Gravettian artifacts.

lithic artifact in the wall of a not very high common clay pit Faratik at the SE of the village. In the following year, when cleaning the section of the clay pit in a length of 7 m, J. Bárta found, in the upper part of poorly defined PK I interstadial soil, a conspicuous dish-shaped accumulation of flints from single radiolarites, rather numerous weathered limno-quartzites and silicified limestones in a length of 4 m. Besides smoothing tools and blades there were numerous flakes, indicating production of artifacts in that place. In a trial trench adjacent to this accumulation, remains of two fireplaces and two poorly preserved animal bones were also found. The accumulation of over 400 flints in that place allows a consideration of the presence of a habitation damaged by exploitation of clay.

The fact that the outlines of this object in the section did not differ in colour from their surroundings may be due to the secondary fading of the contours of the habitation during the soil formation process of the PK I interstadial. Unfortunately, the rescue excavations were not continued and thus even this case, paralleling the age of the finds at Nemšová, is only an incomplete evidence of the existence of earlier Gravettian habitations in western Slovakia.

Probable habitations also exist in the locality Trenčianske Bohuslavice in the Biele Karpaty Mts. The original rescue excavations changed into systematic investigations in difficult depth conditions in 1981. There, on the basis of the Würm 3 stadial, numerous accumulations of paleontological material are found together with numerous and distinct younger Gravettian artifacts, resembling those found at Předmostí in Moravia. For the time being, it seems that it is a facies of Gravettian culture which is somewhat different from that known from the environs of Moravany nad Váhom, as indirectly suggested



FIGURE 9. *Trenčianske Bohuslavice — Pod Tureckom. Trench No. 25 with an accumulation of paleontological material and late Gravettian artifacts.*

by the chronological dating by the C^{14} method, from 23 700 \pm 500 years B.P. (Gd-2490).

Even though the early Upper palaeolithic habitations mainly from settlements in an open landscape sites from eastern Slovakia (Bánesz 1969) are known, the above review indicates that even the investigations into Palaeolithic settlements in western Slovakia have provided new data on these socio-historical features.

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