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KAREL VALOCH

CONTRIBUTION TO THE ARCHITECTURE OF UPPER PALAEOLITHIC DWELLINGS

ABSTRACT: At the well-known Upper Palaeolithic campsite at Předmostí near Přerov (Czechoslovakia), the first excavations realised in 1880 to 1896 yielded a large amount of animal bones which are now deposited in the palaeontological collections of the Anthropos Institute in Brno. During conservation work and detailed studies realised in recent years, a number of bones with pits were found, including five remarkable mammoth pelvic bones. Analogically to similar artefacts found at various Upper Palaeolithic campsites in the Soviet Union (at Mezhirich in the Ukraine and at Yudinovo in White Russia) we can say that they served as construction elements for shelters, which were in use for more than one season. It appears that the pelvic bones were sunk into the ground, the earth above them was compacted and the posts being part of the shelter structure were fitted into the pits. The purpose of the use of pelvic bones to support the posts was to prevent the latter from sinking into the ground during spring thaw or after violent downpours of rain, when the surface of the permafrost-affected loess was converted to a muddy mass. This article is a reprint of a previously published article (Valoch K., 1987: Anthropologie (Brno) 25, 2: 115–116).

KEY WORDS: Předmostí (Czechoslovakia) – Upper Palaeolithic dwellings – Mammoth bones with pit

Constructing shelters against various influences of weather is one of the basic behavioural traits of man and, at the same time, manifestation of man's adaptation to a certain natural environment. The shelters may include simple screens or lean to against wind, sunshine and rain, or light transportable tent-like dwellings or even firmly constructed, permanently inhabited habitations. Man constructed simple screens and roofs at the very beginning of the Lower Palaeolithic, perhaps 1,750,000 years ago, and more stable shelters during the Upper Palaeolithic.

Deeper knowledge of this oldest architecture was obtained in Europe and Africa during the past 25–30 years when extensive excavations, permitting exact documentation of all circumstances and relations of the finds, were realised in many sites dating from various phases of the Palaeolithic. However, the first reports on ground plans of Upper Palaeolithic dwellings come from

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the Soviet Union from the nineteen thirties when discoveries and investigations begun in extensive settlement areas (Pushkari in the Ukraine, Kostenki on the middle Don River, Malta near Irkutsk, etc.). Reconstructions made after the interpretation of the finds indicated that tent-like shelters were mostly involved.

Remains of dwellings consisting of large mammoth bones (skulls, jaws, pelvic bones, etc.) were not discovered until the nineteen sixties in the Ukraine, White Russia and on the middle Don River. It was obvious that more firm, permanent dwellings, serving for more than one season (e.g. one spring or one summer)

FIGURE 1. The mammoth pelvis with two pits. Photo by L. Píchová.

were constructed in those places. Some of the Soviet scholars believe that the shelters constructed by using mammoth bones may have lasted several years.

Some of the mammoth bones found at Mezhirich in the Ukraine and at Yudinovo in White Russia were provided with pits or were perforated. Their position in relation to the remaining bones indicated that they formed important construction elements, the pits and holes apparently serving for the insertion of posts supporting the roof construction.

Approximately 100 years ago, in 1880 to 1896, K. J. Maška and Dr. M. Kříž excavated the famous Upper Palaeolithic campsite at Předmostí near Přerov (Czechoslovakia) where they obtained rich collections of animal bones. Besides common bone tools, their attention was attracted by a few perforated bones (a rib, two long and two carpal bones of a mammoth), which represented quite unique objects in the European Palaeolithic. In recent years, during the conservation and detailed studies of osteological material from Předmostí, deposited in the palaeontological collections of the Anthropos Institute, a number of small and large bones bearing pits were set apart (Valoch 1982; *Figure 1*). They include not only mammoth metapodia and parts of long bones but also a radius of a rhinoceros and, above all, five mammoth pelvic bones which have been identified only recently.

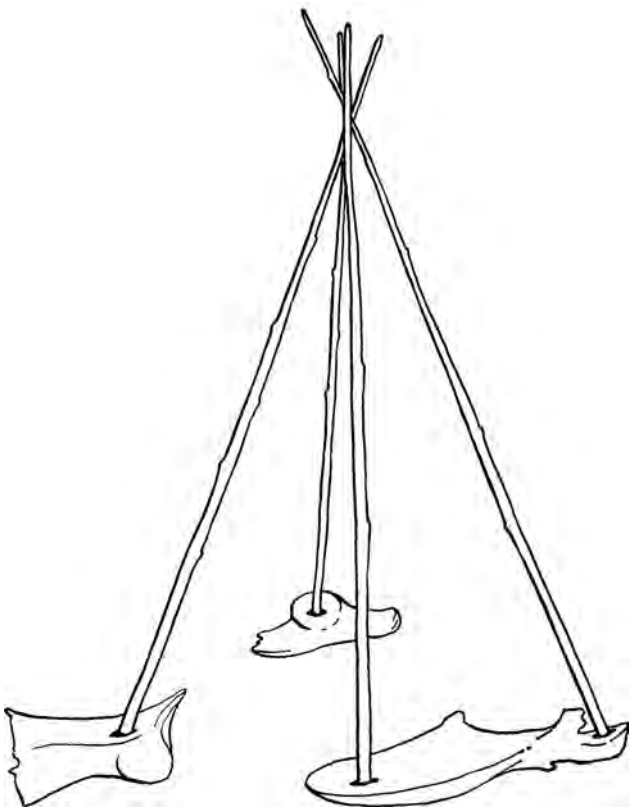

FIGURE 2. Reconstruction of Palaeolithic dwelling using the mammoth hipbones for anchoring the supporting posts. Drawing by L. Píchová.

Whereas only various guesses existed previously on the purpose of the perforated bones from Předmostí, one can now conclude with considerable probability that they served, together with the bones showing artificial pits, for construction of dwellings for prolonged use (*Figure 2*). Larger bones, particularly the pelvic ones, may be thought to have been sunk into the ground, the earth covering them was rammed down and poles or posts supporting the roof were inserted in the pits. Moreover, they provided indirect evidence of the presence of dwelling constructions at Předmostí, which could not have been obtained 100 years ago due to the then status of knowledge and methods of investigation.

The question remains of the importance of anchoring the supporting posts in the bones and of the advantage against simply driving them into the ground. At that time, between 30,000 and 20,000 years BP, when those mammoth hunter settlements existed, adverse ice climate prevailed in central and eastern Europe. Extensive regions were covered with permafrost the surface layer of which thawed only during summer. The settlements were built on loess soil which, during each spring thaw and also during summer rainstorms, would turn into slush which would flow down any ever so gentle slope. Posts driven not very deep into the ground could hardly withstand such solifluction and would certainly collapse. However, heavy mammoth bones could withstand, and with them the whole structure of the dwelling which, moreover, was reinforced with such bones on the outside. Thus, such constructions of dwellings can be considered as an ingenious adaptation to living conditions in the open landscape of the periglacial region.

REFERENCES

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Dr. Karel Valoch, CSc.
Anthropos Institute
Moravian Museum
nám. 25. února 6
659 37 Brno
Czechoslovakia