

The use of rock cavities in prehistory and the Early Middle Ages in Central Europe, with special respect to the Bohemian Karst

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Speleoarchaeology is a special sub-discipline of archaeology which is closely connected with other natural history disciplines. Speleoarchaeology came into being parallel to archaeology in Europe at the beginning of the 19th century. The methods and objectives of speleoarchaeology were initially influenced by a number of factors. They included at first the older antiquarian and later patriotic – romantic traditions closely connected with interest in the past and national cultural heritage. They were also influenced by natural history disciplines, particularly physical anthropology, geology, and palaeontology, and later on by Darwin's theory of evolution. An important role in the study and research of caves was also played by the revived medieval idea of troglodytes, or cave dwellers. This thesis was formulated in the 19th century into a discipline concerned with the civilization of caves as the earliest stage of human culture. It survived during the early 20th century, and some of its ideas can still be recognized today.

In the Bohemian Karst, the initial stage of speleoarchaeology is represented, for example, by the first scientific research initiated by Kašpar Count of Šternberk, founder of the National Museum, and conducted by F. Auge in four caves on the banks of the Berounka River in 1824. Another typical representative of the early interest in caves was amateur archaeologist V. Krolmus (1790 – 1861): Krolmus did not actually excavate in the caves, but he collected information and data about archaeological finds and folklore concerning the region of the Bohemian Karst.

Starting in the 1880s, we can find in Central Europe actual systematic scientific research of rock cavities, which followed either purely natural history orientation or only archaeological orientation, or in some cases, a combination of both. Specialized archaeological research was conducted in the Bohemian Karst in the 1920s and '30s by a number of outstanding professional and amateur Czech archaeologists (e.g., J. Böhm, A. Stocký, J. Axamit, J. A. Jíra, L. Hájek). A qualitative change in the development of speleoarchaeology came with the appearance of the paleo-environmental approach to research, which is based upon the careful study of cave sediments. In the Bohemian Karst, the beginning of this approach to research was associated with amateur natural historian and archaeologist J. Petrbok (1881 – 1960), who was introduced to the Bohemian Karst in 1916 by amateur archaeologist J. Axamit. In a short time J. Petrbok gathered around him an informal group of young archaeologists and natural historians, including archaeologist F. Prošek (1922 – 1958) and malacozoologist V. Ložek (b. 1925) who were especially successful in their research.

The palaeoenvironmental approach to research reduced the role of archaeological materials to a mere dating aid in the correlation of natural and cultural phenomena. A natural reaction to this extreme approach is a complex cultural-anthropological or palaeoecological research program that understands the use of caves as a specific

cultural phenomenon based upon, and influenced by, both cultural and natural factors.

At the present time, two research methods are applied side by side in the research of rock cavities in Central Europe:

- 1) The palaeoenvironmental approach, which is initiated and supported mainly by natural historians. The aim of this research is, in the first place, the reconstruction of natural processes, complemented by information about the evolution of human society and the effects of human activities upon the development of the natural environment. The outcome of this kind of research is the theory of climatic determinism, which is based upon the observation of time coincidence of some periods of increased interest in caves and extremely dry spells of climate. This theory is based particularly upon the situation in the sub-boreal, or the period of the Urn Fields Culture between 1250 and 700 B.C., as well as other dry climatic spells during the Neolithic and Eneolithic.
- 2) The palaeoecological / cultural anthropological approach is initiated primarily by archaeologists. It does not deny the influence of natural conditions upon the behaviour of humans, but the main cause of alternating waves of interest and disinterest in rock cavities is seen in the cultural development and in the effects of human activities on nature, or, more specifically, in ecological processes. The periods of increased interest in rock cavities are connected by this theory with:
 - a) periods of relatively extensive and long-term cultural spheres, i.e., periods of relative cultural stability both in time and space. In Central Europe, these are spheres of the cultures with linear, incised and Lengyel pottery in the Neolithic, the Lengyel and Baden cultures in the Eneolithic, the culture of Urn Fields in the Later and Late Bronze Age, and partly with the Hallstatt and La Tene cultures in the Iron Age.
 - b) cultural peripheries, i.e., local cultural units, living during whole centuries in the stable conditions of cultural isolation. This concerns, for example, some regions in Styria, North Slovakia, or the Crakow region during the Roman Period.

Decrease of interest in rock cavities was caused either by periods of cultural instability or by local ecological crises.