

Palaeolithic landscapes of Moravia: A mosaic of occupation strategies

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In order to approach the settlement system of a region and to understand its geographic patterning, the record determined from archaeological excavations should be integrated with data obtained by a complex survey of the related surface sites. In another words, the perspective focuses on the landscapes rather than on the more common one-site level.

Since the late 1980s Palaeolithic materials from Moravia were revisited in the regional museums, listed, and, in collaboration with T. Czudek, located onto maps. Solitary finds and dubious sites were excluded, and the numeration systems of site clusters at certain localities (some of them quite complicated with respect to various surveyors) were avoided. Such a list, naturally, is still far from complete. It shows, nevertheless, that the majority of sites are clustered in 20 regions.

It is presumed that patterns of elevation (with climatological, vegetational and other environmental effects), geomorphology (passages and remarkable elevations such as the Pavlov Hills), riverine network, and game and raw material resources are responsible for the human selection of a particular area. From the viewpoints of geomorphology and resource availability, the regions may be classified into the following four types:

Territorial type A

Karst landscapes located in highlands (the Moravian and Štrambersk Karsts, 300 – 500 m a.s.l.), with minimal contact with the adjacent lowlands areas. The caves provided relatively dry shelters during glaciations, but no control over the lowland passages from the cave entrances is available. The surrounding landscapes include networks of smaller valleys and karstic plains, but no larger rivers are associated (only smaller brooks, partly subterranean). Both karst areas offer limited outcrops of lower quality cherts (the Býčí skála cherts, the Rudice-Olomučany cherts, and cherts from the Štrambersk flysh sandstones) and quartzites.

Territorial type B

Marginal areas between highlands and lowlands (250 – 400 m a.s.l.) along the margins of the Bohemian Massif from Znojmo in the south to Silesia in the north (the Dolní Kounice region, the Brno region, the Vyškov region, the Prostějov region and the Opava region), and penetrating along valleys deeper into the massif (the Mohelno region and the Rosice-Boskovice region), or occupying certain marginal highlands of the Carpathians (the Klobouky region and the Zdouňky region). As exceptions, individual settlements may descend as low as 200 m a.s.l., especially at the foot of the Krumlovský Les Highland. The type B location is preferable for exploitation of two types of environment (highlands and lowlands, both with specific vegetational coverages) and offers control over movements

of game in the lowlands. On the other hand, these regions are usually far from larger rivers. Some of them offer abundant sources of good-quality cherts (the Krumlovský Les, Stránská skála, and Bořitov exploitation areas), quartzites (the Ondratice exploitation area) and glacial flint (the Opava region).

Territorial type C

Valleys of the large Moravian and Silesian rivers, including the Dyje, Morava, Bečva and Odra, when interconnected, form an axial passage through Moravia (the Znojmo-Pouzdrány region, the Pavlov region, the Uherské Hradiště region, the Olomouc region, the Přerov-Hranice region, the Ostrava region) with only one connecting link more distant from the riverine network (the Kyjov region). The settled locations are at lower elevations compared to the other territorial types (200 – 300 m a.s.l.); this is because of the generally lower positions of these valleys. The favourable coincidence of past behavioral patterns (formation of the largest and most spectacular settlement agglomerations) and conditions of preservation (thick loess deposits lower in the river valleys) are responsible for the complex archaeological record at our disposal. Numerous finds of Pleistocene mammals are recorded from regions of this type, usually in higher densities than elsewhere, and the archaeological sites are located so as to control movements of the game. With the exception of the northernmost part (with glacial flints of the Ostrava region), this territory has no local lithic sources. However, the longitudinal passage character opens the whole system to long-distance imports of high quality flints from the north.

Territorial type D

Higher parts of the Bohemian/Moravian Highland, up to 400 – 500 m a.s.l., and the Bučovice region functioned as reserves for colonisation during periods of climatic amelioration. These areas lie far from larger rivers and from important game paths. With the exception of restricted outcrops of crystalline rock, they do not offer usable sources of lithic materials.

Introducing the cultural viewpoint into this analysis demonstrates preferences for certain territorial types and their raw materials by the various cultures. First, cave sites of both Karst regions (territorial type A) were preferentially occupied in the Middle Palaeolithic, in the Magdalenian, and in the Late Palaeolithic (Epimagdalenian). They were preferred during glacial periods due to their dry and sheltered locations.

The "out of the cave" movement at the beginning of the Upper Palaeolithic (beginning Interpleniglacial) may only be explained in terms of human behavior: new hunting strategies involving the control of open landscapes, movements of longer distances, and perhaps,

in the sense of Lieberman and Shea (1994), a change from a radiating mobility pattern centered around a cave to a more circulating pattern. There are several types of landscape selection:

First, regions of type B with dominantly Early Upper Palaeolithic and/or Epigravettian settlements forming scattered clusters over the landscape. A more detailed look into topographies of these regions will demonstrate that the Early Upper Palaeolithic sites are larger, more numerous and more exposed (type B1), while the Epigravettian ones, dating around the Last Glacial Maximum, are more sheltered (valley locations, type B2). The climatic deterioration may be an explanation of this difference.

Furthermore, there are regions with dominating Gravettian settlement, seemingly organized into a longitudinal (axial) communication system (type C). This settlement geography functioned from the middle Interpleniglacial to the Last Glacial Maximum. The divergence in preferential site location between the Early Upper Palaeolithic and the Epigravettian on one side, and the Gravettian on the other, is remarkable. Chronological studies, showing partial contemporaneity (between the Upper Aurignacian and the Gravettian) suggest that it may have been this type of variability in landscape use that enabled the coexistence of various Upper Palaeolithic cultures.

Finally, certain cultures demonstrate tendencies towards colonisation of the Moravian/Bohemian Highland (territorial type D): marginally the Szeletian, and, more profoundly, the Late Paleolithic groups such as the Tišnovian. Another example is the Bučovice region, probably not attractive enough for an earlier systematic settlement. In the regions which have been settled previously (the Pavlov region) the sites are moving to higher locations (top of the Pavlov Hills). The plausible explanations seem to be population pressures and favourable environmental changes by the end of the Pleistocene opening the highlands for more permanent settlement.

References:

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Tab. 1. Characteristics of the individual territorial types

Type	A	B1	B2	C	D
Altitude	300-500 m a.s.l.	250-400 m a.s.l.	250-400 m a.s.l.	200-300 m a.s.l.	up to 500 m
Character	Highland/karst	Lowland/highland	Lowland/highland	Valleys	Highland
Lithic	Available	Abundant	Abundant	Mostly absent	Rare
Use	Caves as shelters	Strategic positions	Sheltered valleys	Rivers, passages	Colonisation
Culture	Mousterian Micoquian Magdalenian Epimagdalenian	Bohunician Szeletian Aurignacian	Epigravettian	Gravettian	Szeletian LIP

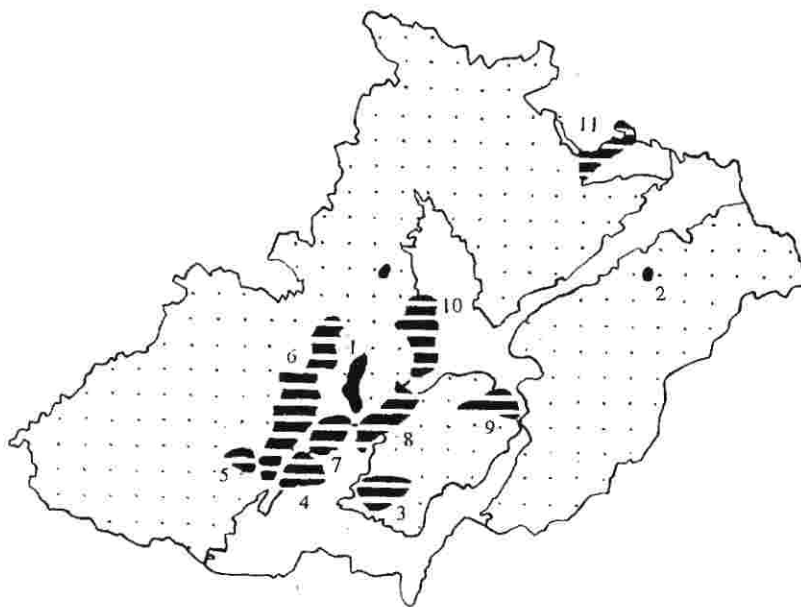


Fig. 1. Map of territorial types A (black) and B (horizontally hatched). 1 - Moravian Karst, 2 - Štramberk Karst, 3 - Klobouky region, 4 - Dolní Kounice region, 5 - Mohelno region, 6 - Rosice-Boskovice region, 7 - Brno region, 8 - Vyskov region, 9 - Zdounky region, 10 - Prostějov region, 11 - Opava region

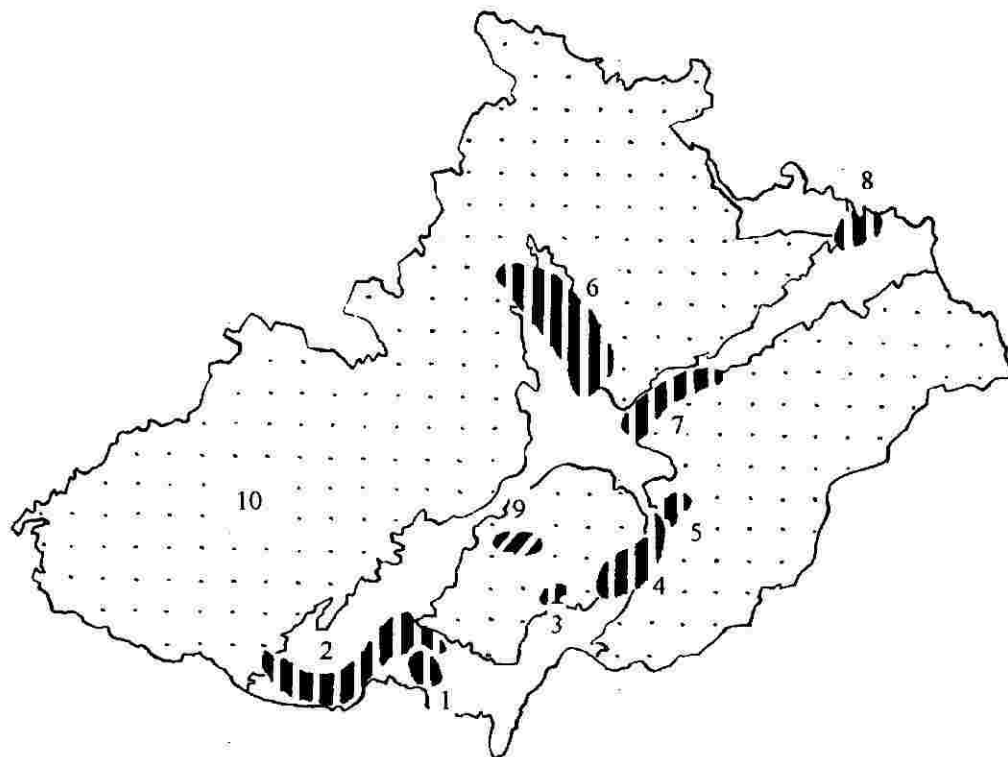


Fig. 2. Map of territorial types C (vertically hatched) and D (diagonally hatched). 1 – Pavlov region, 2 – Znojmo-Pouzďřany region, 3 – Kyjov region, 4 – Uherské Hradiště region, 7 – Prerov-Hranice region, 8 – Ostrava region, 9 – Bučovice region, 10 – Bohemia-Moravia Highland.

Revision of Plio-Pleistocene quails of the Western Palearctic

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Fossil birds still belong among relatively poorly known faunal groups. In Europe this is due to the fact that between the 1930s and 1970s, this group was neither regularly nor thoroughly studied. Nevertheless, other palaeontologists gathered a large quantity of skeletal remains of birds that can be studied today. Dr. V. Ložek is one such person who still maintains an outstanding role in Bohemia. Thus, it is also to his credit that this paper, dealing with the revision of the Plio-Pleistocene quails of the Western Palearctic, could come into being.

The history of Pleistocene quail research is surprisingly rich. Fossil quails were described for the first time from the Middle Pleistocene locality of Perpignan by Depéret (1892) under the name *Palaeocryptonyx donnezani*. Three decades later, several bones of small fossil rasorial birds from the Hungarian Early Pleistocene locality Püspökföld, which is presently called Betfia and belongs to Romania, were inspected by the Hungarian palaeornithologist Kálmán Lambrecht. He considered them to be the remains of francolinids and described them as *Francolinus capeki*. Due to this, mysterious francolinids were introduced to the European Pleistocene avifauna; every Quaternary palaeontologist has surely encountered the name. They are mysterious for the reason that they would have inhabited the biotopes that do not suit recent francolinids, and that they did not possess calcars whereas other francolinids do. The myth of European francolinids was reinforced in the 1970s

by another Hungarian palaeontologist, Dénes Jánossy, who described two new species, *Francolinus minor* and *Francolinus subfrancolinus*, from localities of Southern Poland. However, a revision by Mlíkovský proved that the bones of these three bird species do not resemble those of the francolinids, but instead they belong to quails of the genus *Palaeocryptonyx*.

Small rasorials have also been found in Middle Pleistocene deposits at the well-known catacombs of Odessa, Ukraine. From that locality the Russian palaeontologist Tugarinov described part of the remains as a fossil hen, *Pliogallus coturnoides*, and the rest as the fossil quail *Ammoperdix ponticus*. The revision carried out by Bochensky and Kurochkin (1987) showed that all of the remains belong to fossil quails. The unhappy history of these quails was completed in 1980 by Israeli palaeontologist Eitan Tchernov. He studied skeletal remains from the Early Pleistocene locality Ubeidiya and considered them to belong to a fossil partridge, and he named them *Alectoris baryosefi*.

The present author carried out the revision of the Palearctic rasorials of the Late Cenozoic and discovered that all the three of the above mentioned fossils belong to quails of the genus *Palaeocryptonyx*, first described in 1908 from the Middle Pleistocene of France. Morphological comparisons and morphometric analysis proved that only a single species is involved, which should be referred