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Reconstructed late pleistocene early holocene biodiversity records based on paleobiological data from the Carpathian Basin

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As a result of its unique natural endowments a boreal type of forest-steppe vegetation emerged in the Carpathian Basin during the LGM, which was invaded by numerous thermo-mesophylous elements initiating around 16 kys cal BP. This species-rich forest-steppe characterized by dominance of coniferous elements was transformed into a Subcontinental-Submediterranean oak forest steppe by the beginning of the Holocene. These vegetation changes display strong affinity with the processes observed in the Eastern European Plains at a later period. However, as a result of its geographic location, the Carpathian Basin was characterized by an overlap of strong Atlantic, Submediterranean and Subcarpathian climatic influences not present in Eastern European Plains. The fluctuating interface of these climatic influences numerous elements with Pontian, Balkanic, Atlantic and Subcarpathian affinity are present in the continental forest-steppe yielding an interface and overlap of vegetation zones in the basin similar to the system of climatic influences. According to the Holdridge classification system, the major part of the basin is put to the transitional category found between those of cold, temperate grasslands, cold, temperate humid woodlands and warm, temperate dry woodlands, where the first (steppe) and the last categories (dry woodland) also turn up climatically in the form of scattered patches. This grassy area forming an ecotone between the actual grasslands and dry and humid woodlands corresponds to the Pannonian forest-steppe vegetation of the Great Hungarian Plains. The highly complex mosaic of woodlands, grasslands and intervening transitional ecotones hosted the first foraging Mesolithic and farming Neolithic groups of the basin.

Biography

Dávid Molnár has completed his PhD training in 2012 and is still working on his thesis. Now he works at the Department of Geology and Palaeontology at University of Szeged, Hungary as an Assistant Lecturer. His field of study is Pleistocene palaeoecology based on various examination methods, such as malacology and sedimental analyses.

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