
First results of geoarchaeological studies in the southern part of the Sandomierz Basin near Kraków: environmental-man interaction

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Abstract

This research is focused on the paleo-environmental dynamic of the Niepolomice-Bielcza Upland, the most southern part of the Sandomierz Basin at the border with Carpathians Foreland (southern Poland near Kraków). An upland relief of the area (low foothills) has the Tertiary (Miocene) foundations. Hills and uplands, separated with valleys of small rivers, formed in the Quaternary, mostly through sheet wash, piping, leaching, landslides and creep, deflation and aeolian accumulation (loess), as well as fluvial erosion and accumulation at the bottoms of the valleys. During extensive archaeological excavations, the rich remains of settlements dated from the Late Palaeolithic to Modern Times were documented there.

The aim of the interdisciplinary project is a reconstruction of the environment-man interaction at different points along the time horizon. Different geological and geomorphological methods such as Quaternary geology and geomorphology mappings, sedimentological analysis; palaeobotanical (macrofossil, pollen data) and palaeozoological (malacological) analyses; radiocarbon, OSL and dendrochronological dating, as well as archaeological methods (chronological determination, functional and spatial analysis) were used. *On-site* and *off-site* studies were realized.

According to study results the biggest changes in loess relief in the upland occurred during the Subatlantic. Some phases of increasing morphogenetic process activity were distinguished. This was caused by climatic fluctuations, especially by clustering of catastrophic events, and/or human activity.

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Keywords: Sandomierz Basin, Carpathians Foreland, geoarchaeology

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