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Late Pleistocene and Holocene climatic variability in the Carpathian-Balkan region. Abstracts volume



**Late Pleistocene and Holocene Climatic Variability
in the Carpathian-Balkan Region**

ABSTRACTS VOLUME



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Assessing anthropogenic impact on soil genesis through archaeological data

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The purpose of our work is to analyse soils properties and their evolution related to prehistoric settlements (Neolithic to Bronze Age) from Ruginoasa-Strunga saddle, located in western part of the Moldavian Plateau.

Although the actual climatic conditions favor the development of forest soils in this area, the morphology and chemical proprieties show soils characteristics much closer to those of Cambic Chernozems. Therefore this soils were termed in the former Romanian soil classification systems *forest chernozemic soils*, *chernozemic black soils*, *pratozems*, *brunizems*, typically having chernozemic aspect but which are not encountered under a specific forest-steppe environment. Currently, these soils are classified as Cambic Phaeozems according to the Romanian Soil Taxonomy System (2012).

Through the computation of zonal statistics, it was found that these soils are characterized by higher values of humus content, higher thickness of *Am* horizons and higher values of mobile phosphorus than the other soils in the study area. Concerning the mobile phosphorus content, several spatial anomalies were detected, which may prove the continuity of settlements and agricultural practices in the area. In this respect, seven profiles were identified displaying gradual increase of phosphorus values with soil depth, which are situated in the proximity of archeological sites. Moreover, the maximum phosphorus value (450 ppm) is located in the proximity of such a site.

Although the archaeological data covering this area are limited and fragmentary, a clustered settlements distribution is observed in both northern and south-eastern extremities of the saddle. The axis of the saddle appears to have been an open, unforested space which was used for agricultural purposes and probably as a travel corridor. The presence in the same area of several Bronze Age tumuli, support this hypothesis. There is considerable evidence to suggest that barrows tended to be built in cleared areas of landscape. The ancient land cultivation which maintained a "steppe-like" soil climate can be seen as an anthropogenic factor may have influenced the evolution of these soils by preserving their properties.