

Geomorphology and early Neolithic migration routes into the Transylvanian Depression

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In this paper we discuss the geomorphological conditioning of the migration routes of the early Neolithic communities into the Transylvanian Depression (Carpathian Mts., East Central Europe), as reflected by the spatial and temporal distribution of the Starčevo – Criş archaeological sites in the western part of Romania.

The inventoried archaeological sites are located along rivers, preferentially positioned in the floodplain and low fluvial terraces; between 70 – 450 m asl, with few sites at higher elevations along rivers in the mountainous areas. The main access route across the Carpathian Mts was eastward from the Pannonian Basin, along the Mureş River. During Starčevo – Criş I and II, the communities were present only in the western part of the Transylvanian Depression, at the edge of the Apuseni Mountains. They have split along the main rivers and some small tributaries, and moved to the north, along Someşul Mic River and its right side tributaries. Starting with Starčevo – Criş III, the number of the early Neolithic communities has increased, mainly along Mureş River and its main tributaries (Târnavă Mică, Târnavă Mare, Arieş), associated with a slow eastward movement.

A secondary eastward route was along the low alluvial plains (known as The Western Romanian Plain) of Mureş, Criş and Someş Rivers. Here too, the peoples moved from the area of Mureş alluvial plain to the NE. They arrived in the perimeter of the Someş alluvial plain only during Starčevo – Criş III and IV. From there, further to the east, neolithic sites are generally absent along the main (1-5 km wide) floodplains but present in the hilly area (crossed but smaller and narrower valleys), suggesting a possible geomorphologic control on the spreading routes.

The third route was along Olt River and seems to have occurred only during Starčevo – Criş III and IV. These communities moved to the east, along the main river and occupied Braşov Depression and other small scale intramountain basins, at the eastern edge of the Transylvanian Basin. However, it is controversial whether Neolithic populations have crossed the Carpathians south to north to reach this route, or have spread eastwards, branching off route I above.

Based on these observations, the authors discuss the natural condition in some specific case studies, in order to offer answers to some key questions:

- (1) Why Someşul Mare – Someş Valleys seems to had been avoided by the early Neolithic communities?
- (2) (2) Were the Carpathians crossed only along the Mures river, west to east, or did Neolithic populations used two routes, the second along the Olt river, south to north?
- (3) Are there preferential routs in the western alluvial plains, being known the complex fluvial relief in the area (abandoned palaeomeanders, extended wet zones, isolated fluvial relicts, low fluvial terraces)?