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

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New data concerning the Late Quaternary drainage evolution on the Someş River alluvial fan

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The study area is located in the north-eastern part of the Pannonian Basin, on the romanian teritory, with a surface of over 3,600 square kilometers. With elevations of 20-30 m above the Timiş and Criş plains, is the highest low-western romanian plains (100 – 160 m absolute altitudes), the surface extending on both sides of Someş River.

This study aims to report new information on Late Quaternary evolution of fluvial discharge on the surface of Someş alluvial fan.

Numerous relict fluvial morphologies were recognized on the surface of Someş River alluvial Plain, by analyzing mainly the fluvial morphologies visible on the second austro-hungarian military maps (reference moment: ca. 1860), and on recent ortophotoplans (reference moment: 2005). The identified palaeochannel types (braided, meandering) and morphometry (large scale meanders vs. small scale meanders), the concentration of these relict features on distinct palaeodrainage directions, the relation of them with the recent fluvial drainage of the area (intersected, partly/ totally used by present day misfit channels), suggest a complex Late Quaternary history of the lower course of Someş River.

A series of sedimentological observations were performed along the main relict fluvial features, both in artificial exposures and in 3-6 m deep cores. From the studied sites were collected samples for absolute dating, granulometry and mineralogy. The strategy for sampling the materials for absolute dating, both OSL and 14C, was to obtain minimum ages of the investigated palaeochannels, close to their abandonment. The mineralogic samples were sampled both from the bed of the present day rivers and from alluvial sediments of the investigated palaeomeanders. This investigation intends to give helpful informations on the appartenence of the relict morphologies to different rivers from the area, mainly Someş and Crasna Rivers.

Here we present the working hypothesis and the preliminary results of these investigations.

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