Geophysical Research Abstracts, Vol. 9, 06268, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-06268

A palaeochannel evolution history from Hajós-kaszálók Mire in Danube alluvial plain in the southern part of Hungary

G. Jakab (1), P. Sümegi (1,2) and G. Timár (3)

(1) Dept of Geology and Palaeontology, University of Szeged, Hungary (sumegi@geo.u-szeged.hu/ Fax: +36 62 544893 / Phone: +36 62 544893), (2) Archaeological Institute of Hungarian Academy of Sciences, Budapest, Hungary, (3) Space Research Group, Institute of Geography and Earth Sciences, Eötvös University of Budapest, Hungary (timar@ludens.elte.hu / Fax: +36 1 3722927 / Phone: +36 1 2090555 6651)

The Hajósi-kaszálók Mire (46˚23' 22,54" N, 19˚09'33,18" E) is the southern unit of the mire system of the Danube-Tisza Interfluve running south in the former watercourse of the river Danube. The peatland area of the Hajósi-kaszálók Mire is 4 ha. The mires situated at the border of two significantly different regions on an area. The Solti Plain belonging to the Danube floodplain is covered with the network of abandoned watercourses of the river Danube. The watercourses are in different step of infilling. The Solti Plain and the adjoining Sand Dunes of the Danube-Tisza Interfluve are separated by an approximately 10 meters high, steep loessy high-bluff. Groundwater springs rise from the base of this high-bluff system. Peat cores were retrieved using a 5 cm diameter Russian corer. In the Hajósi-kaszálók Mire the four boreholes were placed along a geological cross-section. Borehole HPI was gained from the deepest part of the basin and was used for macrobotanical, malacological, pollen analytical and radiocarbon analysis. This quantitative plant macrofossil analysis technique together with pollen, molluscs, and radiocarbon analyses have been used to reconstruct the lateglacial lake and postglacial mire development of the recent eutrophic peat bog in S Hungary. The analysis of the Holocene peat sequence was used to reconstruct the development of a filling up spillstream of Danube. The reconstructed palaeohydrological and hydroseral changes were compared with the coincident terrestrial vegetation alterations. The radiocarbon and palaeoecological data suggest that the analysed filled up palaeochannel cut down from active river system of Danube under one

of the neotectonic subsidence processes thus a long, uncommon oxbow lake developed at the transition phase of Late Glacial/Upper Weichselian boundary. Therefore different palaeoassociations and sediments developed in the palaeochannel from the Late-Glacial and Early-Holocene. Wide range of hydrophyte vegetation and habitat emerged in the channel from the living water to the rich fen communities depending on the water supply and geomorphological position. This late-glacial long canal-like oxbow lake fragmented under the filling process of Holocene. The sediment composition and the fossil assemblage changed at about 7300 year BP. Peat accumulation started in every part of the channel and 4 m thick peat layer developed in the deepest part of the palaeochannel.