



Universitatea Stefan cel Mare Suceava

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## **Climate Change in the Carpathian-Balkan Region During Late Pleistocene and Holocene**



## Medieval accumulation in the Upper Dnister river valley and its connection with colonization of the Eastern Carpathians Foreland (Western Ukraine) Gębica Piotr<sup>1\*</sup>, Jacyšyn Andrij<sup>2</sup>, Starkel Leszek<sup>3</sup>, Krapiec Marek<sup>4</sup>

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Study of the Holocene terraces and alluvia filling the Dnister river valley and its tributary Strwiaż river, between the Carpathians' margin and graben of the Upper Dnister Basin and covered by the extensive peat-bogs, has been performed for slightly more than last ten years. Within the Dnister valley, below the gravel terrace-fan 10-11 m high, the terrace 5-7 m high occurs. They are formed of channel sediments of various age (from the Late Glacial to the Neo-Holocene) and overbank sediments which top parts, often separated by peat layers are dated at the last millenium. In the outlet of the Upper Dnister Basin these sediments are usually younger. Covers of the lower terrace levels, bearing older, redeposited black oaks are inserted into this main terrace. In the valley outlet from the Carpathians, in the vicinity of Sambor town, the terrace 3-4 m high, formed of gravels and sands was deposited during frequent floods during the 9-10th centuries. In the valley of the left tributary of the Strwiaż river the youngest datings obtained from the tree trunks buried within the top of the terrace 5 m high range the 12th century. In the same time in the Upper Dnister Basin at the Krużyki site, the cut-off channel sediments were covered with silt-sand flood alluvia after 890±70 BP, whereas in the proximity of the Strwiaż river outlet overbank alluvia were deposited upon the peat layer around 620±110 BP. Deforestation and the increase of agricultural activity in the 14-15th centuries stimulated the overbank deposition. At the Krużyki site, at the bottom of the younger insert within the main terrace cover, the oak trunk processed by man and dated at 400±35 BP was buried. It is accurately correlated with dendrochronologically dated sequence of trunks felled or cut during the floods in the 14th century in the Wielki Łukawiec stream valley (tributary of the Bystrzyca Sołotwińska river). Downstream the Upper Dnister Basin, deposition of overbank alluvia of the terrace 3 m high at the Żurawno site took place also during the Medieval flood phase and intensification of colonization in the 12-14th centuries, which is confirmed by earlier datings of trunks obtained by German reaserchers. The youngest datings of the trunks felled during floods within the Dnister cut-off maender near Żurawno range from 18th to the beginning of the 19th century.