



Pannonian fluvial-lacustrine clastic sediments of marginal area of Žumberak Mt (NW Croatia, Central Paratethys)

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Detailed geological columns of Pannonian sediments are recorded at Krnežići and Kazići locality. The columns are located at southeast slopes of Žumberak Mt, approximately 10 km east from Krašić settlement, and approximately 50 km SW from Zagreb. In restricted area of Žumberak Mt clastic Pannonian sediments directly and unconformably overlies Triassic dolomites and/or Cretaceous limestone's. Upper parts of Pannonian sediments are consisted of marls, silts and sands which are Pontian age and conformably overlies Pannonian sediments. At the Krnežići locality the total thickness of 7 m. In lithological succession sands and sandstones are dominant with trough cross-bedding. Sands are originated at proximal to medial part of delta fan, which indicates assorted fluvial to lacustrine mollusks and ostracods association and sedimentary structures. Abundant association of mollusks is detected in sands and sandstones, and can be correlated with Papp zones C and D. Detected gastropods are members of genus *Melanopsidae* (total 25 species and subspecies) and 4 taxons from genus *Theodoxus*. Most common species are: *Melanopsis fossilis*, *M. vindobonesis*, *M. impressa*, *M. pygmaea* and *m. bouei*. Bivalves are represented with reduced number of specimens, and are members of the following genera: *Congerina*, *Dreissenomya* and *Lymnocardium*. The following ostracods genera are detected in sand layers: *Hungarocypis*, *Amplocypris* and *Cyprideis*. The total thicknesses of Pannonian sediments of the Kazići locality are approximately 13 m. In the lower part of the geological column alterations of sandstones, sands and marls was noticed, while in the upper part there was registered domination of marls and silts layers with occasional centimeters

thick layers of sandstone. Vertical sequence of sediments suggests at medial to distal parts of the delta facies. Ostracod assemblage collected from marls consisted of genera *Hungarocypris*, *Amplocypris*, *Loxoconcha*, *Hemicytheria*, *Cyprideis* and *Candona* (*Lineocypris*), and gastropod of genus *Orygoceras*. In sand intervals rare gastropod specimens of genus *Melanopsidae* were found. Total assemblage of mollusks and ostracods from two chosen localities defines the affiliation of examined sediments from middle to upper Panonian. Sedimentation environments are fluvial to lacustrine and the progradation of delta system to northeast along the slopes of Žumberak Mt can be assumed