

Does late Khersonian and early Maeotian Bukovo delta belong to the same river system?

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DOES LATE KHERSONIAN AND EARLY MEOTIAN BUKOVO DELTA BELONG TO THE SAME RIVER SYSTEM?

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During Late Miocene to Meotian Age the deltaic sediments were deposited along the coastline of former Dacian Basin - respectively Eastern Paratethys. These sediments cover large areas in vicinity of Serbia-Romania border. There are many studies about Upper Miocene delta sediments in Central Paratethys, while most of Eastern Paratethys research were oriented to Black Sea region. Nevertheless, in last fifteen years plenty of papers were published about Dacian Basin Late Miocene delta sediments (Lazarev et al., 2020, Palcu et al., 2015, 2019; ter Borgh et al., 2013; Van Baak et al., 2017; Vasiliev et al., 2004, 2005, 2010).

The Late Miocene Age tectonic movement caused intensive shifting of Dacian Basin western coast toward east and southeast, while during Upper Khersonian Age the sea completely regressed from the area. The intensive sea ingression from central parts of Dacian-Euxian area toward west marks the Meotian Age and its influence also could be seen in Eastern Serbia. Probably the most prolific evidence of two deltaic systems of different age (Khersonian and Meotian) and period of subareal exposure between them could be found in Bukovo stream near Negotin (Стеванович и Парамонова, 1983). Both delta systems are settled in Bukovo stream valley generated by existing fault.

The Khersonian delta section is exposed at left bank of Bukovo stream. The euryhaline and freshwater mollusk and ostracod representatives are found in sand and gravel-sandy beds. Most numerous are remnants of *Mactra* and *Congeria* shells damaged by abrasion during the transport. The deltaic sequence ends up with caliche horizon pointing toward supratidal-pedogenic environment.

Above the Bukovo stream along the local road the second Meotian Age deltaic cycle could be seen (Krstić et al., 1992). The sedimentological characteristics are very similar to older Khersonian with sandy-gravel sediments and pronounced foresets. The further expansion of Dacian Sea joint with increased water inflow from land caused change in sedimentation regime which shifted to more dynamic environment and deposition of thick packages of predominantly sandy sediments. These delta foresets beds besides brackish, euryhaline genus of *Pirenella*, *Hydrobia* and *Congeria* also have a lot of freshwater forms of *Unionids*, *Anodontas*, *Viviparus*, *Valvates* etc.

The result of both, Khersonian and Meotian Age sedimentation are foresets of thick-layered coarse and very coarse – grained deposits. Between these two delta systems there is obvious sedimentation break – Khersonian drying event. Nevertheless, the strata position and its stratigraphic relations within Bukovo stream suggest that both delta environments are related to the same river system.

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POSTER PRESENTATION

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