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PLENARNA IZLAGANJA / PLENARY PRESENTATIONS

Zoran Stevanović

NAJZNAČAJNIJI KARSTNI IZVORI BOSNE I HERCEGOVINE I NJIHOVO MESTO I PROMOCIJA U VELIKOM MEĐUNARODNOM PROJEKTU MIKAS (NAJZNAČAJNIJI KARSTNI IZVORI SVETA)

MOST IMPORTANT KARST SPRINGS IN BOSNIA AND HERZEGOVINA AND THEIR POSITION AND PROMOTION IN LARGE INTERNATIONAL PROJECT MIKAS (MOST IMPORTANT KARST AQUIFERS' SPRINGS)

Bruno Tomljenović

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VAREŠ PROJECT - GEOLOGICAL RESEARCH OF A POLYMETALLIC DEPOSIT



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TYPE SECTION OF THE “PONTIAN” OSTRACODS IN MISLODJIN (OBRENOVAC, SERBIA)

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Key words: Lake Pannon, "Pontian", ostracods, taxonomy, Mislodjin, Obrenovac

Introduction: Study of caspiabackish ostracods of Paratethys i.e. Lake Pannon has a long tradition. The microfauna of ostracods from the former southern rim of that lake was type described from Mislodjin, along the right bank of the Kolubara River, in the famous monograph of the Hungarian geologist B. Zálányi (1929). The ostracods collected in the last few years from the mentioned site are presented here, with comment onto certain problems in their taxonomy.

Methods: A section up to 10 meters high and over 100 m long is located 3.5 km south from Obrenovac, and about 29 km southwest of Belgrade, on the right bank of the Kolubara River near the Bačevica Hill (44°36'47"N, 20°12'36"E - Figure 1). The lower part of the section is made of brown and blue-gray silts, and over them lie yellow-brown sands up to the very top.

On surface, smaller or larger debris of the macrofauna of bivalves or gastropods can be observed. 10 samples for ostracods (ca. 400g each) were taken from the section. Laboratory preparation of ostracods included wet sieving through a 0.6-0.2 mm diameter sieve system, H₂O₂ treatment, and fine cleaning of fossils in an ultrasonic bath for up to 2 minutes. Determination of ostracods was done on a Carl Zeiss Citoval 2 binocular magnifier (magnification up to 100x) with support of the referent literatures (see a list).

Results and discussion: The lower part of the section is made of brown and blue-gray silts with a large fauna of endemic caspiabackish shells (*Congeria zagradiensis*, *C. croatica*, *Limnocardium riegeli*, *Paradacna okrugici*, *Didacna otiophora*, etc.) and numerous lake-type ostracods (*Bakunella dosrsoarcuata*, *Hemicytheria dubokensis*, *Zalanyiella venusta*, *Amplocypris* sp., *Loxoconcha schweyeri* and others). Upwards, a series of gray argillaceous silts and brownish-yellow sands alternate, which dominate up to the very top of the section. The sands contain a similar fauna of molluscs (e.g. *Limnocardium (Budmania) histiophora*, *Congeria rhomboidea*) and numerous ostracods (e.g. *Amplocypris baceviccae*, *Pontoleberis pontica* etc.). Yugoslav ostracodologists N. Krstić, N. Gagić, and A. Sokač made the taxonomic revision of ostracods that were originally separated by B. Zálányi (1929). Many new genera, subgenera and species were described (e.g. *Pontoniella*, *Zalanyiella*, etc.). However, today it is believed that there are many confusing and problematic criteria that have been used. And the main criteria were the morphology of the carapace, central muscle scar pattern and the type of the marginal pore channels. Sometimes phenotypic modifications on carapace were used to distinguish new taxa.



On the other hand, the method of geometric morphometric analysis and scanning electron microscopy contributed to a better knowledge of the shape and ultrastructure of the ostracod carapace and a more objective approach to taxonomy issues.

Conclusion: The "Pontian" ostracods was described from the type section at Mislodjin, in the well-known monograph of the Hungarian geologist B. Zálányi (1929). New findings of ostracods collected in recent years are presented here. The main reason is the fact that famous Yugoslav ostracodologists gathered their own assemblages of ostracods from the section and comparatively processed the original collection kept in the Mining and Geological Survey of Hungary (Budapest). Subsequently, they made revisions of the original material and introduced new taxonomic categories. Today, when the methods of geometric morphometry and SEM analysis are used, the question of the validity of some of the used criteria is raised.

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