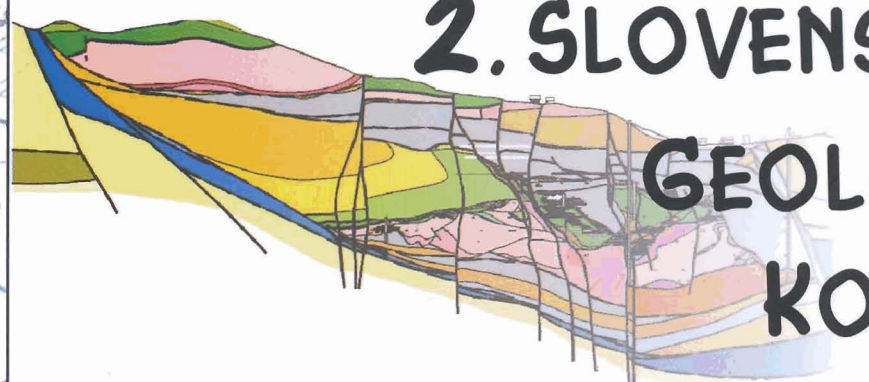
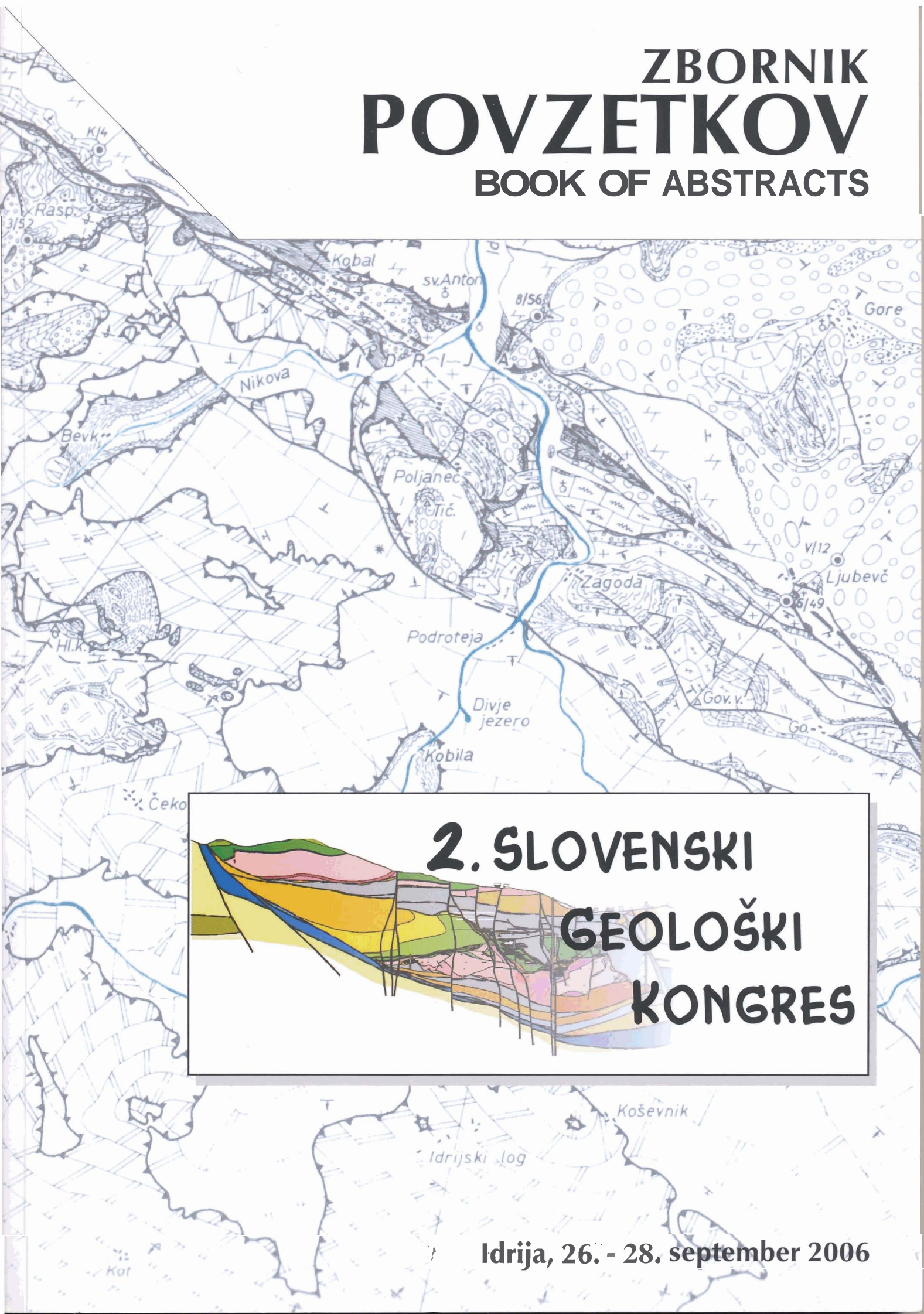


ZBORNIK POVZETKOV BOOK OF ABSTRACTS



2. SLOVENSKI GEOLOŠKI KONGRES

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PRESERVATION, ABUNDANCE AND ARCHITECTURAL VARIATIONS OF OSTRACODS IN DIFERENT MIOCENE PALEOENVIRONMENTS OF NORTHERN CROATIA

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During the Neogene period North Croatian Basin was a part of the south-western margin of the Pannonian Basin System. The investigation area extends from the Medvednica Mt. up to the Slavonian Mts. The different type of palaeoenvironments in the Early Miocene (freshwater, brackish and marine) and Middle Miocene (marine) results with different ostracode assemblages. The chemistry, architectural variations, abundance and perseverance of ostracode shells can provide useful information's about the environment in which the animal lived.

In total, 24 freshwater and brackish-freshwater genera of the Early Miocene (Ottngian, Karpatian?) and 39 Early to Middle Miocene (Karpatian, Badenian) marine genera have been determined.

The oldest Miocene sediments in Northern Croatian Basin are alluvial sediments without ostracod fauna. They are generally covered with lake sediments. In the history of the Early Miocene - Ottngian Lake it is possible to recognize oligotrophic and eutrophic phase. During the eutrophic phase of the Lake we noticed marine ingression, documented with specific assemblages of ostracods: subspecies *Cyprideis heterostigma* sublittoralis (with specific nodulation on shells in juvenile stages and sharp of sieve pores on adult species) together with marine ostracod genus *Aurila* and foraminifer *Ammonia*. The stable lake phase results with abundant, very well preserved, adult ostracod fauna. On surface and marginal edge of some valves of adult lacustrine species *Cypria dorsalta* and *Amplocypris* sp. it was possible to recognize bacterial activities.

The first marine transgression played a great role during the Karpatian age. Influx of the sea water into the lake caused the extinction of freshwater-brackish ostracods and appearance of the new marine fauna. In the lowermost part of marine sediments ostracods were represented only with younger instars and small number of adult individuals.

Ostracod distribution closely follows regional geological events. Transgressive phases resulted in a very diverse fauna, while regressive phases are characterized with small number of opportunistic taxa, but with a great number of specimens.

THE HOLOCENE OSTRACODS FROM VRANA LAKE (CRES ISLAND - CROATIA)

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Lake Vrana (Vransko jezero) is a deep and large freshwater karst lake on the northern Adriatic Island of Cres, Croatia. Lake surface area is 5.73 km², the maximum length is 5.5 km and the maximum width is 1.5 km. The lake is situated in a depression, with maximum depth of 75 m. A recent multi-proxy study (Schmidt et al., 2000) of a 5 m dated core from the central part of the lake showed the considerable lake-level changes during the last 16.000 years. The lake is low in productivity, and the phytoplankton composition indicates oligotrophic character (Tomec et al., 1996). Samples were collected during the year 2001. The total of 13 cores 85 to 90 cm long were obtained by scuba diving from the flat bottom (50m +/- 2 m) of the lake. The present study is based on three drilling cores located on different locations and water depths.

The first study on the Holocene ostracods of the Lake Vrana documents the distribution of 9 freshwater species: *Candona candida* (O.F. Muller), *Pseudocandona hartwigii* (G.W. Muller), *Ilyocypris bradyi* Sars, *Metacypris cordata* Brady & Robertson, *Darwinula stevensoni* Brady & Robertson, *Cypria ophthalmica* (Jurine), *Cypridopsis vidua* (G.W. Muller), *Cytherissa lacustris* (Sars) and *Herpetocypris brevicaudata* (Kaufmann).

The determined species could be divided in two main types of assemblages: littoral-sublittoral assemblage and a profundal assemblage.

The littoral-sublittoral assemblage is rich in species. It contains species which either swim between the macrophytes or creep on/in the substrate: *Darwinula stevensoni*, *Herpetocypris brevicaudata*, *Metacypris cordata*, *Cypridopsis vidua*, *Candona candida* and *Ilyocypris bradyi*.