

MEĐUNARODNI ZNANSTVENI SKUP
INTERNATIONAL SCIENTIFIC MEETING

100-TA OBLJETNICA ROĐENJA AKADEMKINJE
VANDE KOCHANSKY-DEVIDÉ

100th BIRTH ANNIVERSARY OF VANDA
KOCHANSKY-DEVIDÉ, FULL MEMBER
OF ACADEMY

KNJIGA SAŽETAKA / ABSTRACTS
Zagreb, 9. – 11. travnja 2015. / 9th – 11th April 2015



Zagreb, 2015.

MIDDLE MIOCENE DEPOSITS IN THE AREA OF SVETA NEDELJA SREDNJOMIOCENSKE NASLAGE SVETE NEDELJE

Ana Majstorović Bušić^(a), Jasenka Sremac^(b) & Martina Pekčec^(c)

^(a) INA-Oil industry, Oil & Gas Exploration and Production, Šubićeva 29, HR-10000 Zagreb, e-mail: ana.majstorovic@ina.hr

^(b) University of Zagreb, Faculty of Science, Department of geology – Division of Geology and Paleontology, Horvatovac 102a, HR-10000 Zagreb

^(c) Pavla Lončara 26, HR-10360 Sesvete

Key words: microfossils, laminated marls, palaeoenvironment, Middle Miocene, Sveta Nedelja
Ključne riječi: mikrofosili, laminirani lapori, fosilni okoliš, srednji miocen, Sveta Nedelja

Studied sequence of 1.4 m thick laminated marls is located at Svetonedeljski breg 20 km southwest of Zagreb. Three lithologically different samples were processed by sieving method. The lowermost part of the section is 22 cm thick, with 2 – 3 cm thick light-coloured beds (Facies A). These lime-rich marls contain rich and diverse fossil assemblage of small benthic foraminifera, ostracods and macrofossil remains (fish teeth, molluscs). Foraminiferal association is dominated by rotaliids, with small number of miliolids. Central part of the section (Facies B) is ca. 41 cm thick and represented by argillaceous brown thin bedded marls (bed thickness 0.5 – 2 cm). Fossil assemblage is less abundant and diverse, but better preserved. Ostracods are absent, and *Elphidium* species dominate. Uppermost part of the section, 99 cm thick, is again composed of lime-rich marls (Facies C) (3 – 5 cm thick beds). Fossil association is poorly preserved, but it contains diverse fauna of foraminifera, ostracods, fish (teeth and scales), molluscs and serpulids. Spiny *Elphidium* species, and the presence of *Anomalinoidea dividens* suggest the deposition during the Badenian/Sarmatian transition (FILIPESCU, 2004; VRSALJKO et al., 2005; FILIPESCU et al., 2014). Marls were deposited in inner shelf marine environment, with phreatic conditions in Facies A and C (dissolution and/or cementation traces). Deposition of argillaceous marls (Facies B) took place during the increased input of terrigenous material. Mode of deposition possibly reflects seasonal changes.

References

- FILIPESCU, S. (2004): *Anomalinoidea dividens* bioevent at the Badenian /Sarmatian boundary – a response to paleogeographic and paleoenvironmental changes. – *Studia Universitatis Babeş-Bolyai, Geologia*, XLIX /2, 21–26.
- FILIPESCU, S., MICLEA, A., GROSS, M., HARZHAUSER, M., ZÁGORŠEK, K. & CĂTĂLIN JIPA, C. (2014): Early Sarmatian paleoenvironments in the easternmost Pannonian Basin (Borod Depression, Romania) revealed by the micropaleontological data. – *Geol. Carpatica*, 65/1, 67–81.

VRSALJKO, D., PAVELIĆ, D. & BAJRAKTAREVIĆ, Z. (2005): Stratigraphy and Palaeogeography of Miocene Deposits from the Marginal Area of Žumberak Mt. and the Samoborsko Gorje Mts. (Northwestern Croatia). – *Geol. Croat.*, 58, 2, 133–150.

STRATIGRAPHIC AND PALEOGEOGRAPHIC SIGNIFICANCE OF LACUSTRINE MOLLUSCS FROM THE PLIOCENE *VIVIPARUS* DEPOSITS OF NW CROATIA

STRATIGRAFSKI I PALEOGEOGRAFSKI ZNAČAJ JEZERSKIH MEKUŠACA PLIOCENSKIH *VIVIPARUS* NASLAGA SJEVEROZAPADNE HRVATSKE

Oleg Mandić^(a), Tomislav Kurečić^(b), Thomas A. Neubauer^(a) & Mathias Harzhauser^(a)

^(a) Geological-Paleontological Department, Natural History Museum Vienna, Burgring 7, A-1010 Wien, e-mail: oleg.mandic@nhm-wien.ac.at

^(b) Croatian Geological Survey, Sachsova 2, HR-10000 Zagreb

Key words: Lake Slavonia, Pliocene, *Paludina* beds, mollusc taxonomy, stratigraphy

Ključne riječi: Jezero Slavonija, pliocen, Paludinske naslage, taksonomija mekušaca, stratigrafija

Coincidence of climate and geodynamic settings during the Pliocene provided conditions facilitating settlement of extended lacustrine environments in southeastern Europe. Conspicuously, the resulting long-lived paleolakes such as Lake Slavonia, Lake Kosovo, Lake Transylvania and Lake Dacia, were all characterized by explosive adaptive radiations of viviparid snails (HARZHAUSER & MANDIĆ, 2008). This phenomenon allowed NEUMAYR & PAUL (1875) in their famous, pioneering study on Lake Slavonia molluscs the establishment of regional phylostratigraphy, enabling up to recent an excellent stratigraphic control of that deposits stretching over more than 500 km along the southern margin of the Pannonian Basin.

The present samples originate from the region of Kravarsko in Vukomeričke gorice, a low hill-range north of the Kupa River in the area between the towns of Zagreb, Sisak and Karlovac in NW Croatia. Representing the W margin of the Lake Slavonia the freshwater deposits alternate there with alluvial series, providing altogether about 400-m-thick, Pliocene continental succession, known in literature by the informal name "*Paludina* beds" (acc. to a junior synonym of *Viviparus*). The samples comprise 2 bivalve and 11 gastropod species. Expectedly, the most species-rich are viviparids (4 taxa), followed by melanopsids and hydrobiids (each 2 taxa). Further families (valvatids, neritids, bithyniids, unionids, and sphaeriids) are represented by only one species