8th International Workshop

Neogene of Central and South-Eastern Europe

Abstract Volume

Field Trip Guidebook

27th – 31st May, 2019, Chęciny, Poland

The terminal interval of the well (3356–3259 m) is occupied by a 3 m-thick carbonate para-conglomerate. Its provenance is local and it is assumed to be deposited directly above the pre-Neogene basement.

Within the Blatné Depression similar new stratigrahic results have been obtained from the Dubové-2, Špačince-5, Ratkovce-1, Trakovice-1, Trakovice-4 wells which spread all round the depocenter. All of these wells have peneterated the complete Miocene sequence and so far no evidence for the lower Miocene strata was found. Of course, this dataset is not yet sufficient to role occurrence of these sediments out, but carefull consideration is advised in the future.

Acknowledgement: This research was supported by the Slovak Research and Development Agency under the contracts No. APVV-15-0575, APVV-16-0121. The authors wish to express their gratitude to the management of NAFTA l.t.d. for providing access to well core repository.

References

Biela A. 1978. Deep wells in inner Western Carpathians, p. 1–224 (In Slovak). Regional geology of Western Carpathians, Geological Institute of Dionýz Štúr, Bratislava.

Vass D. 2002. Lithostratigraphy of Western Carpathians: Neogene and Buda Paleogene, 1–200 (In Slovak). Geological Institute of Dionýz Štúr, Bratislava.

New findings of middle Miocene (Badenian) bony fish otoliths in Northern Croatia

Jasenka Sremac[1], Petra Husain[1*], Sanja Japundžić[2], Antonia Šeparović[1*], Marija Bošnjak[2], Davor Vrsaljko[2] and Anja Jarić[2]

1) Department of Geology, Faculty of Science; University of Zagreb; Horvatovac 102 a ([1*]students), 10 000 Zagreb, Croatia; jsremac@geol.pmf.hr
2) Croatian Natural History Museum; Demetrova 1, 10 000 Zagreb, Croatia

Fine to medium-grained Miocene clastic deposits (dominantly marls) exposed around the western slopes of the Medvednica Mt. near Zagreb (NW Croatia) comprise rich assemblages of marine biota, including the fish scales, teeth and otoliths. The most abundant otoliths were found at localities Dubravica and Veternica (Husain 2018; Šeparović 2019). Diverse small otoliths of shallow-water gobiid fishes, together with neritic-pelagic clupeiform *Etrumeus* and codlets of the genus *Bregmaceros* dominate at the locality Veternica, while pelagic genera of cods, lanternfishes and silvery lightfishes (*Gadiculus*, *Physiculus*, *Diaphus*, *Valencienellus* and *Maurolicus*) dominate at the locality Dubravica (Husain 2018) (Fig. 1). Associated fauna at the locality Veternica comprises solitary corals, numerous gadilid and some dentalid scaphopods, small oysters, foraminifera, ostracods, decapod crustaceans and echinoids. This fossil assemblage points to the temporarily increased input of fresh water into the basin, therefore a shelf environment with a nearby river-mouth is presumed for this locality (Šeparović 2019). Otoliths and the associated fauna at the locality Dubravica (foraminifera, ostracods, sponges, diverse scaphopods, bivalves, gastropods, crustaceans) represent a mixture of shallow-marine and pelagic taxa, probably deposited on the upper continental slope. Badenian age of these deposits is determined on the basis of the foraminifera, while the associated nannoplankton is scarce, poorly preserved and points to the wide stratigraphic range (NN4 to NN6 Zones).

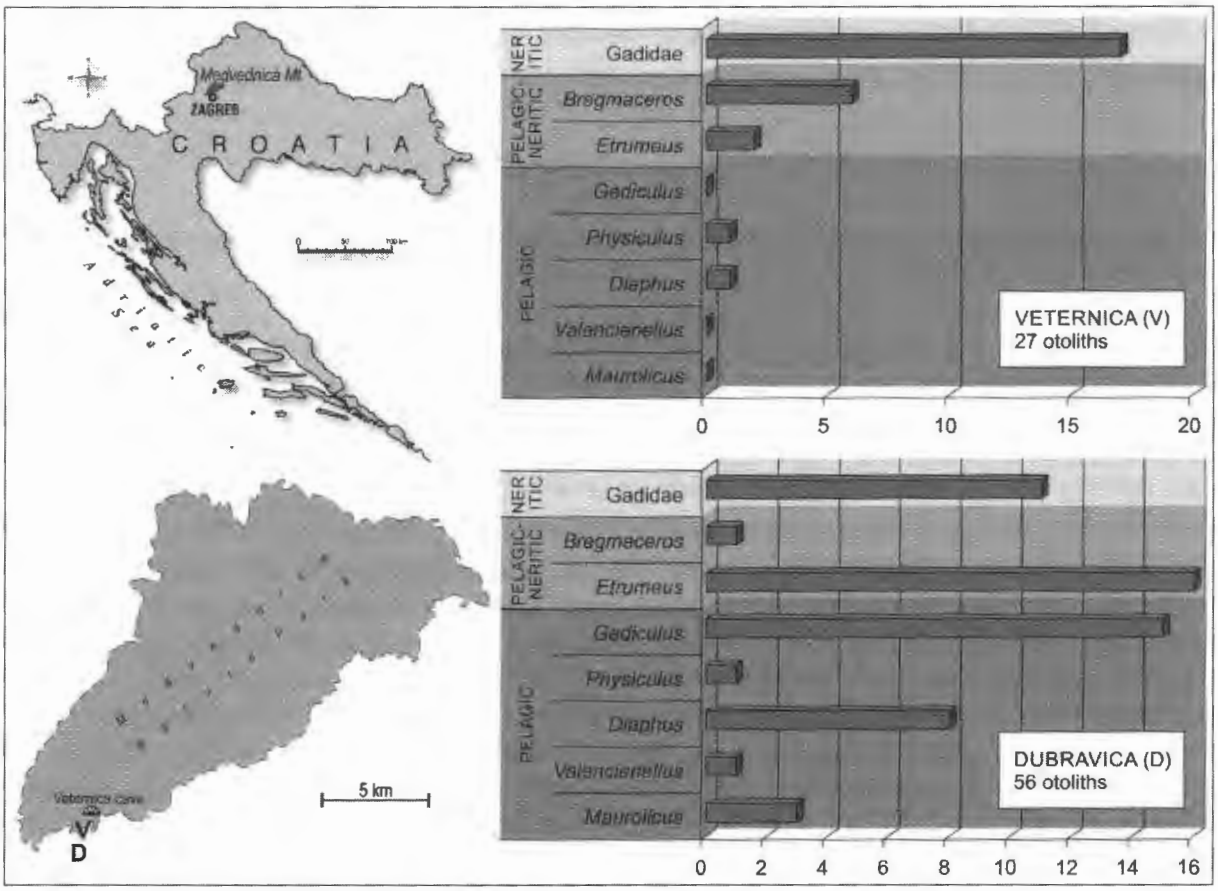

Fig. 1 Position of localities Dubravica and Veternica (SW Medvednica) and number of determined otoliths

Fish fauna shows similarity with the Badenian assemblage from the borehole LOM-1 situated in Lomnice/Tišnov denudational relict (Carpathian Foredeep, Czech Republic; Holcová et al. 2015), and, partly, Badenian to Sarmatian ichthyofauna from the vicinity of Belgrade (Schwarzhans et al. 2015).

This research highly improves the knowledge on the Badenian teleost fauna from northwestern Croatia, regarding the only two taxa (*Chrysophrys* sp. and Acanthuridae gen. et sp. indet.) previously determined from fossil teeth found in this area (Kochansky 1944; Tripalo et al. 2016).

Rerefernes

Holcová K., Brzobohatý R., Kopecká J. and Nehyba S. 2015. Reconstruction of the unusual Middle Miocene (Badenian) palaeoenvironment of the Carpathian Foredeep (Lomnice/Tišnov denudational relict, Czech Republic). Geological Quarterly, 59: 654–678.

Husain P. 2018. Fish remains (otholiths) in Badenian deposits from the southwestern part of the Medvednica Mt. MSc Thesis (in Croatian), University of Zagreb, https://urn.nsk.hr/urn:nbn:hr:217:628572

Kochansky V. 1944. Miozäne marine Fauna des südlichen Abhanges der Medvednica, Zagreber Gebirge (in Croatian, with German summary) Geol. Vjesnik Hrv. drž. geol. zav. Hrv. drž. geol. muz., 2/3: 171–280.

Schwarzhans W., Bradić K. and Rundić LJ. 2015. Fish-otoliths from the marine-brackish water transition from the Middle Miocene of the Belgrade area, Serbia. Palaeontologische Zeitschrift, 89: 815–837.

Šeparović A. 2019. Miocene deposits with scaphopods south from Veternica Cave (Medvednica Mt.). MSc Thesis (in Croatian). University of Zagreb (unpublished).

Tripalo K., Japundžić S., Sremac J. and Bošnjak M. 2016. First record of Acanthuridae (surgeonfish) from the Miocene deposits of the Medvednica Mt. Geologia Croatica, 69/2: 201–204.

Organizers

University of Warsaw,
Faculty of Geology

Polish Academy of Sciences,
Museum of the Earth in Warsaw

ISBN: 978-83-945216-8-4