

Abstract Book



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Editors:

Attila Ciner, Haroun Chenchouni, Jesús Rodrigo-Comino, Deepak Singh Bisht, Jasper Knight, Maurizio Barbieri, Mourad Bezzeghoud, Ahmed Radwan, Zhihua Zhang, Zeynal Abiddin Ergüler, Mahesh Kumar Jat, Veysel Turan, Helder Chaminé, Matteo Gentilucci, Md Firoz Khan, Dionysia Panagoulia, Ilker Ugulu, Amjad Kallel, Roohollah Kalatehjari, Stefano Naitza, Zakaria Hamimi, Mingjie Chen, Arkoprovo Biswas, Federico Lucci, Ciro Cucciniello, Santanu Banerjee, Afroz Ahmad Shah, Carla Candeias, Vinciane Debaille, Hasnaa Chennaoui, Domenico M. Doronzo, El Hassane Chellai, Mehdi Eshagh, Imran Ali

Abstract **B**ook

2nd Mediterranean Geosciences Union Annual Meeting (MedGu 2022)

Editors

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Middle Miocene chemosymbiotic bivalves from the SW margin of the Central Paratethys (Medvednica Mt., N Croatia)

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Abstract. Chemosymbiotic bivalves are rare and specialized biota, able to survive in hostile environments. We recorded their presence in the Middle Miocene (Badenian – Langhian/Serravallian) deposits of Northern Croatia.

Bivalve specimens, representatives of the families Solemyidae (11 specimens) and Lucinidae (998 specimens) are in most cases preserved as casts and molds. Newly collected specimens (10 lucinids and 2 solemyids) were cleaned up, determined and housed at the Croatian Natural History Museum and the University of Zagreb, Faculty of Science.

Lucinid bivalves are widely dispersed and comprise several taxa, including the most numerous *Lucinoma borealis* (Linnaeus, 1767), particularly common *Lucina (Eomiltha) polymorpha* Kochansky, 1944 and *Megaxinus ellipticus* (Borson, 1825). They were found in deposits of different lithology, varying from argillaceous marls to limestones.

Lucinids are generally considered as the most diverse among the chemo-symbiotic bivalves, and are widely distributed in various habitats. Some of the collected lucinids lived in the shallower marine, oxygen-depleted environments, and we also recorded solemyids and lucinids together with planktic molluscs (pteropods) pointing to the deeper marine environments. The age of the deposits comprising these findings coincides with the Langhian opening of the marine corridors between the Paratethys and the Mediterranean during the highstands, major faunal turnover event in the Central Paratethys and Miocene Climatic Optimum.

Records of chemosymbiotic bivalves and accompanied fauna in the investigated area could point to further diversification of the Badenian marine environments in this part of the Central Paratethys, and their correlation with similar contemporaneous environments and fauna in the Mediterranean.

Keywords: Chemosymbiotic Bivalves, Middle Miocene, Central Paratethys, Croatia.



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