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BOOK OF ABSTRACTS

Palacký University of Olomouc

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Edited by Ondřej Bábek
and Stanislava Vodrážková

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Seasonal Miocene precipitation pattern recognized in marginal marine deposits of Mt. Medvednica (Croatia)

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Depositional sequence from a small abandoned quarry near the Veternica cave (Mt. Medvednica, vicinity of Zagreb) bears evidence of temporary freshwater input to the marginal Miocene marine environment of the Central Paratethys (Šeparović, 2019 and references therein).

Succession, ca. 5 m thick, comprises nine horizons characterized by interchange of highly fossiliferous layers with dominantly stenohaline biota (mostly foraminifera, ostracods, bryozoans, neritic and pelagic fishes) and those with less diverse euryhaline taxa (e.g. foraminifera Elphidium, small oyster Pycnodonte, gobiid fishes). Abundant gadilid scaphopods and serpulid Ditrupa occur in all horizons. Life flourished in a shallow inner shelf environment, rich in nutrients derived from the river flows. Periods of intensive flooding can be additionally recognized from the decrease of total carbonate content, e.g. from layer 2 with 62.18% to layer 5 with 53.7 %. Amount of carbonates reaches 74.83% in the uppermost layer 9, pointing to the possible drought or diminished erosion of the hinterland. Although the pelagic taxa in the studied samples are scarce and not indicative enough, benthic fauna (foraminifera, ostracods) point to the Langhian (Middle Badenian) Spirorutilus carinatus Zone.

Significant seasonal precipitation pattern was recorded by several authors for the proposed time interval (e.g. Prista et al., 2015).

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