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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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Influence of environmental stress on Early Triassic biota; example from Central Dalmatia, Croatia

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Lower Triassic clastic and carbonate deposits crop out at several localities in Central Dalmatia, and have been well studied, especially in the area of Muć (Herak et al., 1983). The 230 m thick study succession is well exposed along the local road between Muć and Ogorje villages and comprises reddish micaceous sandstones, siltstones and mudstones in its lower part and yellowish-grey carbonate deposits interbedded with siltstones and mudstones in the upper part. The occurrence of slumps and storm deposits in the lower, siliciclastic part of the succession suggests deposition in offshore transition and shoreface environment on a broad and relatively stable shelf (Aljinović, 1995; Aljinović et al., 2018).

Frequent changes in lithology are noted in the upper, carbonate-dominated part of the succession, in which fossil remains include mostly gastropod, bivalve, rare ammonite remains and bioturbations (Vudrag & Sremac, 2015; this study). However, barren limestones are also common in this part. Clastic influence seems to be stronger than previously thought, indicating significant and frequent relative sea level fluctuations, probably stemming from enhanced tectonic activity – resulting in carbonate production during transgressions and its suffocation due to siliciclastic input during regressive stages.

Our aim is to discuss and determine changes throughout the studied succession, with emphasis on the carbonate part due to the presence, but also very common absence of fossil remains, variations in Total carbonate content (50.1 to 99.1%.), frequent occurrence of thin dark laminae and presence of pyrite. These findings will help in determination of environmental conditions during the Early Triassic and of the ongoing influence of stress to already stressed biota.

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