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Oligocene fish fauna and sedimentological particularities of the Bituminous Marls of the Vrancea Nappe, Eastern Carpathians, Romania

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Abstract

The study was conducted in the Bistriţa Half-Window, Vrancea Nappe, in the Bituminous Marls, which is an intriguing entity, both ichthyological and sedimentological. Formally considered a monotonous lithostratigraphic unit, at a closer look, this organic matter rich formation contains numerous lithofacies such as current and wave ripples, cross-bedding, hummocky and swaley-like cross-stratification, clastic dykes, intraformational slump folds among others. Therefore, the high level of bottom current activity seems somehow in contradiction with previous ideas about the cause for preservation of organic matter. In this study, we present the taxonomy of 13 fish fossils species. The palaeoecology of the fish assemblage is reconstructed based on present-day fish fauna bathymetrical comparisons. Furthermore, some palaeobathimetric observations were made in conjunction with sedimentary features.

Keywords: fish fossils, Bituminous Marls, Oligocene, Vrancea Nappe, Eastern Carpathians.

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