



Sarmatian (Middle Miocene) Coastal Deposits in the Wedge-Top Depozone of the Eastern Carpathian Foreland Basin System. A Case Study

Crina Miclăuș¹, Constantin Grasu¹, Angelica Juravle²

¹ "Al. I. Cuza" University of Iași, Faculty of Geography and Geology, Department of Geology, 20A Carol I Blv., 700505 Iași, Romania

² Independent geologist

Abstract

The deposits studied crop out in the Piemontan Hills south of the Vicovu de Jos village (Suceava County). For the first time, the sedimentological characteristics of these deposits (mainly sands with minor interlayers of gravel and mud), belonging to the undeformed sedimentary cover unconformably resting on the folded Pericarpathian Nappe, are described based on a sedimentary facies analysis. The sedimentary succession was accumulated in the wedge-top depozone of the Eastern Carpathian foreland basin system after the Moldavian tectogenesis (Early Sarmatian, i. e. Middle Miocene) and can be an important tool to constrain the timing of this last tectonic event. Twelve sedimentary facies were identified and grouped into three facies associations interpreted as lower, middle and upper shoreface depositional sub-environments of a prograding fair-weather wave-dominated coastal environment with periodic storms. The stratigraphic organization of the facies associations reveals that this sedimentary succession consists of at least five shallowing upward parasequences, three of which are detailed in the present paper. The parasequences are bound by flooding surfaces, the lowest one possibly being a sequence boundary reworked by a maximum flooding surface. The general trend of the parasequence set is a progradational one, characteristic for high-stand system tracts.

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