



Sarmatian vertebrate marine fauna assemblage from Dacian Basin with Paratethyan affinities – a comparative case study between Buzău Land (Carpathian Foredeep) and South Dobrogea, Romania

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At the Badenian/Sarmatian boundary (12.7 Ma), the Paratethys domain experienced a new moment in its evolution. Restricted connections between the Paratethys and the open seas (Mediterranean or/alternatively Indian Ocean) that occurred at this boundary interval led to the decreasing of water salinity, strong faunal endemism and the onset of anoxic/dioxenic conditions in the internal parts of Paratethyan Basins (like the actual Black Sea). The low oxygen bottom conditions in the Volhynian – Early Bessarabian favored the preservation of fish and mammal marine fauna like Cetaceans, Pinnipeds and Sirenids. The purpose of this study is to compare both areas – Buzău Land and South Dobrogea, Romania taking into account the palaeoecological changes in the Eastern Paratethys Basin.

This aspect can be very well noticed in the Carpathian Foredeep zone (Buzău - Râmnicului – Milcov Valleys, Buzău Land) where fish and cetaceans (*Cetotherium* sp.) remains are frequent in thick sandstone and blackish shale deposits. Several terrestrial mammal remains were also found in Kheressian (the late Sarmatian – sensu lato) terrestrial deposits, related to a regressive moment.

In South Dobrogea we have studied Lower Bessarabian deposits formed in shallow marginal facies, close to the shoreline or around small islands. The littoral sandy facies preserved a rich fossil assemblage composed of seal and marine birds remains. Vertebrate marine fauna dominated by pinnipeds - *Phoca pontica*, cetaceans – *Delphinidae*, *Cetotheriidae*, teleost fish and pelagic birds were also found near Credița and Ciobănița localities.

Based on the fossil assemblage found so far in the Lower Bessarabian formations from Buzău Land and South Dobrogea, the environments were similar in both areas.

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