

## Upper Miocene to Pleistocene (Khersonian to Romanian) mollusk assemblages from the Slănicul de Buzău section (NE Dacian Basin, E Romania)

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The mollusks represent along with the ostracods the most diverse benthic fauna in the Dacian Basin, providing excellent paleoenvironmental indicators, as well as stratigraphic and paleobiogeographic markers. Recently, extensive stratigraphical, sedimentological and paleontological studies established the depositional succession along the Slănicul de Buzău valley as a main reference section for the late Neogene in the Dacian Basin. With a total thickness of more than 5 km and covered time interval of about 6 Myr, the succession provides a deep insight into the regional faunal history reflecting the gradual basin filling, freshening and retreat of limnic environments. The latter history backbones the regional chronostratigraphic division comprising the five stages Khersonian, Maeotian, Pontian, Dacian and Romanian, covering the Late Miocene, Pliocene and Pleistocene. From Khersonian to Pontian the Dacian Basin was a northwestern gulf of the Eastern Paratethys, whereas in the Dacian and Romanian it represented a largely endorheic lake. Its paleoenvironmental evolution was forced by the uplift of the Carpathians, loading by adjoining rivers and the water inflow from the Black Sea Basin. The deposition ceased in the Dacian Basin by the end of Romanian due to the Vallachian tectonic inversion.

The Slănicul de Buzău section starts with a striking mollusk interval showing monotypic presence of *Chersonimactra* and consequently supporting a straight-forward correlation with the Khersonian. The onset of the Maeotian is marked by the first and common occurrence of a small sized dreissenid bivalve *Andrusoviconcha panticapaea*. The Maeotian is largely dominated by remarkably diversified fresh water taxa such as the unionid bivalves. The topmost Maeotian shows a common and monotypic presence of *Dreissenomya rumana* pointing to a beginning migration from the Lake Pannon. The base of the Pontian is marked by the first occurrence of *Pseudoprosodacna littoralis*, shared with the Black Sea and the North Aegean basins. The enduring unidirectional migration from the adjoining Lake Pannon is marked by the introduction of some typical species such as *Rhombocongeria rhomboidea* or *Paradacna abichi* during the middle Pontian. The ongoing isolation of the Dacian Basin in the Dacian is marked by an increased endemism of its brackish mollusk fauna. The adaptive radiation gave rise to some typical large-sized cardiid species such as *Psilodon haueri* and *Zamphiridacna zamphiri*. The Romanian, representing the final phase of the Dacian Basin filling is dominated by alluvial depositional settings, reflected by a highly diversified fresh water fauna, mainly the viviparids and the unionids. The ultimate brackish-water, cardiid-bearing level in the Dacian basin results from a short-term flooding by the Black Sea during the mid-Pliocene warming in the middle Romanian.