

LATE VALANGINIAN DROWNING OF THE GETIC CARBONATE PLATFORM (SOUTHERN CARPATHIANS) ASSOCIATED WITH THE WEISSERT OCEANIC ANOXIC EVENT

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The Upper Jurassic–Lower Cretaceous carbonate successions that crop out in the eastern end of the Southern Carpathians reflect the evolution of different palaeosettings of the Getic Carbonate Platform (Patrulius and Avram 1976). The Upper Valanginian–Hauterivian strata reveal a crisis in neritic and pelagic carbonate production, along with changes in fossil assemblages and a $\delta^{13}\text{C}$ positive excursion most probably linked to the Weis- sert Oceanic Anoxic Event. The shallowest settings of the platform are represented by reef limestones, intraclastic/bioclastic-dominated shoals and peritidal deposits, followed by rudstones and grainstones enclosing a foraminiferal assemblage indicative of the Berriasian–Lower Valanginian. At the end of the Berriasian, the structural highs of the platform were emerged, generating a hiatus that is well constrained to the Early Valanginian. The drowning event is documented by the intra-Valanginian discontinuity surface associated with an interval of stratigraphical and taphonomic condensation and specific fossil assemblages containing ammonites, belemnites, brachiopods, gastropods and microfossils (foraminifera, calcareous dinoflagellates, calpionellids). Based on the ammonites and microfossils identified above the discontinuity surface, we have found that the onset of the drowning event was diachronous; it started towards the east during the middle Early Valanginian (*Neocomiensiformis* ammonite zone) and towards the west during the earliest Late Valanginian (*Verrucosum* ammonite zone) (Grădinaru et al. 2016). The deepest setting of the carbonate platform in the Bucegi Mountains is represented by resedimented lithoclasts and shallow-water fossils, mixed with pelagic sediments, indicating

progradation of the platform. The autochthonous background pelagic sediment is represented by bioclastic-lithoclastic packstone-wackestone containing a calpionellid assemblage that indicates a Late Tithonian–Berriasian age. During the Late Berriasian, the slope of the carbonate platform was affected by extensional tectonics, generating normal faulting and tilting of blocks. Relative sea level lowstands and, locally, emersion were followed during the Late Valanginian (upwards of the *Verrucosum* Zone) by a sea level rise that led to the final drowning of the platform. Calcareous nannofossils identified just above the discontinuity surface indicate a Late Valanginian age. The Upper Valanginian–Hauterivian post-drowning pelagic deposits highlight the presence of a dysaerobic episode and record the occurrence of the Late Valanginian nutrification event in the Southern Carpathians. The associated fossil assemblage contains small benthic foraminifera, radiolarians, ostracods, crinoid ossicles, aptychi, ammonite fragments, nautiloids, belemnites and siliceous sponges.

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