Ostracod faunicycles in the Mid-Cretaceous carbonate platform from the Central Tunisian Atlas (North African margin): Biostratigraphic and paleoecologic implications

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High-resolution sedimentary records across the Aptian–Albian transition from the Central Tunisian Atlas (southern Tethyan margin), precisely in the Jebel Koumine locality, were investigated for their ostracods contents. Detailed taxonomic studies allows us to describe about 60 ostracods species and subspecies belonging to freshwater, brackish and marine groups. The analysis of the structure of the ostracod assemblages and information provided by other groups (foraminifers, echinoderms, gastropods, charophytes) as well as sedimentological features, evidences a shallow inner platform sporadically emerged. Indeed, notably during the Lower Albian interval the ostracods are represented by higher specific diversity but variable density, and are adapted to a higher energy environment and detrital influx. Biostratigraphic analysis of the vertical distribution of the ostracods species throughout the studied Koumine section allows us to establish a tentative biozonation of the Aptian–Albian strata, with the description of three well distinguishable ostracod biozones attached to the Early Aptian, Late Aptian and Early Albian ages. Correlated and supported by the charophyte biozonation recently described by TRABELSI et al. (2016) in the same section as well as in the Jebel Kebar section, the ostracod biozonation provides us a new tool for a more accurate chronostratigraphy of the mid-Cretaceous strata of the Central Tunisian Atlas. The main result arising from both ostracods and charophytes study is the evidence of the presence of the Early Albian in Central Tunisia, a time interval that had previously been considered as lacking in this area. Hence, the Aptian–Lower Albian stratigraphic correlations as well as the paleogeographic reconstruction of the Tunisian Atlas should be revised taking into account these new important findings.

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