



New Rotaloideans from the Campanian of Central Tethys (Italy)

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Warm and oligotrophic waters and wide, flat or gently inclined, inner shelf morphology are the key features for sustaining high carbonate production within the photic zone in large platform areas. Such conditions dominated the Mesozoic carbonate platforms of the peri-Tethyan area and provided suitable environments for the settling and evolution of rich and diverse communities of larger benthic foraminifera (LBF). They have been used for more than one century to interpret palaeoenvironments and for dating shallow-water platform deposits. However, direct correlation with the standard bio-chronostratigraphic scales, based on ammonoids, planktic foraminifera and calcareous nannoplankton, has been established only for some groups of LBF dwelling in platform margin and open shelf areas, like the Late Cretaceous orbitoids and allied taxa. The problem of high-resolution dating and precise chronostratigraphic correlation within the shallowest inner platform areas remains unsolved. The Rotaloideans seem to be the perfect candidates to tackle this problem because they show high diversification rate and rapid colonization of wide areas.

The aim of this work is to present new data from the Campanian interval of central and southern Italy, where a rich and diverse Rotaloideans fauna is found in shallow-water carbonate environments together with the biostratigraphic markers *Keramosphaerina tergestina*, *Cuvillierina salentina* and the well known rotaliid *Rotalispira scarsellai* (commonly cited as *Rotorbinella scarsellai*). The chronostratigraphic age of the Rotaloideans levels has been calibrated by means of strontium isotope stratigraphy, using as a material well-preserved shells of rudists. The Rotaloideans presented here show strong differences with their Pyrenean coeval counterparts, suggesting the existence of an ecological barrier dividing the two palaeo-bioprovinces, as testified also by the associated assemblages of porcelaneous and agglutinated LBF.