

Preliminary results in larger benthic foraminifera assemblage in a mixed siliciclastic-carbonate platform from the Upper Cretaceous of the External Prebetic Domain (Valencia province, SE Spain)

Raquel Robles-Salcedo and Vicent Vicedo

Museu de Ciències Naturals de Barcelona (Paleontologia), Barcelona, Spain (raquelroblesalcedo@gmail.com; vvicedov@bcn.cat)

In the External Prebetic Domain (Betic Mountain Range, Valencia province, SE Spain) it is difficult to find good outcrops to study larger benthic foraminifera (LBF), particularly in the Upper Cretaceous deposits, because of three main reasons. During the Upper Cretaceous, the complex paleogeography in the northern Prebetic Domain developed a complex system of shallow-water platforms. This is directly linked to the complexity in the distribution of the facies observed nowadays, which may change drastically in lateral, closely related outcrops having a special negative impact in the lateral extension of stratigraphical levels containing LBF. The second reason is the nature of the shallow water environments in which the larger foraminifera lived. The local continental influence derived in the establishment of very complex mixed platforms. Thus, there is not a complete register through carbonate rocks, but an alternation of microconglomerates, sandstones, calcarenites and carbonates that can be observed in the stratigraphic series of the Upper Cretaceous. This affects negatively in observing changes in the evolutionary trends of taxa. The third reason difficulting the study of LBF in northern localities of the Prebetic Domain is diagenetic. Dolomitization affects a huge part of the Mesozoic rocks deleting all fossil microfauna in the affected rocks. Such three reasons are behind the difficulty in developing correlations and having a comprehensive understanding of the biostratigraphy and phylogeny of the taxa involved. However, after several field trips developed in the northern Prebetic area, an excellent reference section for the study of the LBF in the Prebetic Domain has been identified in the surroundings of the Pinet village (Valencia province). Here, a relatively continuous section with scarce dolomitization and good conditions of accessibility exists. The larger foraminifera assemblages appearing in the Pinet section will be compared with other paleobiogeographic areas such as the Pyrenees (S France and NE Spain) or Salento (SE Italy) regions.

The Pinet section measures about 150 m, with coarsening upward sequences consisting, from bottom to top: 56 m of fine sandstones; 25 m with several coarsening upward, well-stratified limestones; 36 m with fine to coarse dolomitic sandstones intercalated with calcarenites; 15 m with fine and well-stratified limestones and, 20 m of dolomitic massive limestone at the top. Finally, the stratigraphical succession is completed by continental deposits. An abundant content of lamellar-perforate foraminifera (siderolites, orbitoidiforms, clypeorbids) and agglutinated foraminifera (dicyclinids) has been identified in the preliminary studies. From bottom to top, in the fine sandstone deposits abundant specimens identified as *Praesiderolites* sp. occur. The coarsening upward limestones provide *Praesiderolites* sp., *Pseudosiderolites* sp., “*Orbitoides*” cf. *concauatus*, *Orbitoides* spp., *Lepidorbitoides campaniensis* and *Sirtina* cf. *orbitoidiformis*. The calcaretinic deposits contain rounded bioclastic fauna with *Orbitoides* spp. and cf. *Wannierina*. The fine limestones display abundant ostracods, miliolids and *Dicyclina* sp. and there are wackestone limestones deposits with carophytes at the top of the sequence. No larger benthic foraminifera have been identified in the massive dolomitic limestone.

The results obtained after a first analysis, considering the LBF assemblage, indicate that the Pinet section deposits can be dated as earliest to middle Late Campanian, contrarily to the Campanian-Maastrichtian age suggested by previous studies.