

THE MIDDLE JURASSIC EASTERN MARGIN OF THE IBERIAN PLATFORM SYSTEM (EASTERN SPAIN)

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Palaeogeography and facies distribution of the eastern margin of the Iberian platform system during the Middle Jurassic are reconstructed, on the basis of outcrops and well logs data. A system of extensional faults was the major factor determining the differentiation of several shallow, carbonate, epicontinental platforms, which are of utmost importance in interpreting the communication routes between the Western Tethys, the Protoatlantic and the Central Atlantic Ocean during the Middle Jurassic. In the northeastern part of this faulted platform system, the occurrence of a listric fault, dipping towards the east, conditioned the development of a Late Bajocian differentiated subsident area named Catalan Basin. A comparison of the lithostratigraphic units valid for most of the Iberian platforms and the Catalan Basin is shown and its equivalence with the correlative units in Majorca is discussed.

From a sedimentological and palaeogeographical point of view, Middle Jurassic deposits are represented by a thick pile of carbonates with minor marls interbedded. Internal platform facies attach to the Iberian Massif are developed in the western portion of the platform system. This facies are clearly differentiated from oolitic and bioclastic limestones, representing a high energy belt, to lime mudstones and dolomitic limestones, corresponding to confined and low energy environments. External platform facies composed of fine-grained, ammonite-bearing carbonates, and locally

including spongiolitic deposits, are developed in the central portion of the platform system. Facies associated with a palaeogeographical high during the Middle Jurassic are represented mainly by dolomitic deposits in the faulted block of El Maestrazgo, located in the eastern portion of the platform system.

From a palaeobiogeographical point of view, the ammonite recorded associations from this Iberian platform system are taxonomically similar to the associations of several northerly European epicontinental basins. A Sub-Mediterranean zonation can be recognized, although most of the ammonites shells correspond to adult individuals arrived by necroplanktic drift from more open marine or oceanic areas. The ammonite fossil assemblages of the Iberian platforms are composed of Sub-Mediterranean taxa, on which Phylloceratina and Lytoceratina represent less than 1% of the whole Middle Jurassic ammonoids. However, Middle Jurassic Phylloceratina and Lytoceratina are common in Majorca. The Iberian platform system and Majorca were palaeogeographically two separate areas, maintaining diverse biogeographical and taphonomic dispersal ways in the Middle Jurassic.

In terms of Sequence Stratigraphy is noteworthy the development of expanded, outer shelf sections in the Catalan Basin during the *Garantiana* Biochron (Late Bajocian). Along this episode, the Iberian platform system reached the maximum bathymetric values and acted as a biogeographical dispersal area for some taxonomic groups of ammonoids characteristic of the West Tethyan Subrealm.