

## **Paleogeography and Sea-Level History Forcing Eco-Sedimentary Contexts in Late Jurassic Epicontinental Shelves (Prebetic Zone, Betic Cordillera)**

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The Prebetic Zone of the Betic Cordillera (southern Spain) represents part of the epicontinental shelf system developed in the South Iberian palaeomargin during the Mesozoic. Analyses of abiotics (mainly lithofacies) and biotics (foraminifera and macroinvertebrates fossil assemblages), together with taphonomic observations, were performed to evaluate palaeoecologic and depositional conditions throughout the Middle Oxfordian to Earliest Kimmeridgian p.p. (Transversarium to Planula Chrones) sections. Differences in the studied parameters are clearly determined by palaeogeography and sea-level history.

Comparatively distal sectors (outer shelf) were characterized by lower sedimentation rates (resulting in lumpy lithofacies), with higher proportions of ammonoids, planktic foraminifera, corrasion degree, microboring and encrustation. Towards the mid-shelf, eco-sedimentary conditions resulted in spongiolithic limestones and marly-limestone rhythmities with local microbial-sponge buildups.

Increasing distance from shore during relative sea level highs accords with higher: (i) stratigraphic condensation; (ii) abundance in ammonoids, planktic foraminifera and nubeculariids; and, (iii) corrosion, microboring and encrustation. These features agree with shelf retrogradation, increasing ecoespace and relatively longer exposition of shelly remains on the sea bottom.

Decreasing distance from shore during relative sea level lows reveals opposite trends in the studied features with: (iv) increasing terrigenous input and decreasing stratigraphic condensation; (v) impoverishment in ammonoids and planktic foraminifera; and, (vi) diminution of corrasion, microboring and encrustation. These trends accord with shelf progradation and sediments aggradation, reduction of ecoespace for nektoplanktic organisms, and comparatively rapid burial of shell remains.

Key words: Paleogeography, Sea-level, Eco-sedimentary conditions, Upper Jurassic, Prebetic Zone (Betic Cordillera)