

Environmental distribution of post-Palaeozoic crinoids from the Iberian and south-Pyrenean basins, NE Spain

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Post-Palaeozoic crinoids from northeast Spain ranging from the Ladinian (Middle Triassic) to the Ilerdian (lower Ypresian, early Eocene) are documented. Here we provide the first attempt to reconstruct the environmental distribution of these crinoids based on relatively complete material (mostly cups). Triassic forms are dominated by encrinids from outer carbonate ramps. Late Jurassic crinoids are dominated by cyrtocrinids, comatulids, millericrinids, and isocrinids, occurring either on sponge mounds and meadows or on soft substrates within middle to outer carbonate ramps. Aptian (Early Cretaceous) forms include nearly complete isocrinids which are found in extremely shallow environments represented by bioclastic carbonates and interspersed oyster-rich layers. Other Aptian occurrences come from more distal and deep environments and are composed solely of comatulids. Albian forms are dominated by cyrtocrinids and isocrinids associated with coral reefs. Late Cretaceous and Eocene crinoids include mostly bourgueticrinids (Comatulida) that are found either in outer ramp facies or associated with mid-ramp reef complexes. The later corresponds to one of the shallowest occurrence of bourgueticrinids in the Cenozoic. The palaeoecological data for fossil crinoids of northeast Spain contributes to reconstructing the history of the bathymetric distribution of articulate crinoids, supporting the idea that stalked crinoids were able to inhabit a wide range of shallow marine environments in the late Mesozoic and early Cenozoic.

Key words: Crinoidea, Comatulida, Cyrtocrinida, Isocrinida, Millericrinida, Encrinida, Mesozoic, Cenozoic, Iberia.

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