

The Middle Jurassic dinoflagellate cyst biostratigraphy of the Lusitanian Basin, Portugal

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A mainly Middle Jurassic composite succession with 129 samples was examined palynologically. This spans the Toarcian–Aalenian transition to the lowermost Bathonian, exposed at Cabo Mondego (includes the GSSP and the ASSP for the Bajocian and Bathonian stages respectively) and São Gião in the northern Lusitanian Basin, western Portugal. The main goal was to establish a biostratigraphical scheme based on dinoflagellate cysts bioevents. The major results are represented in the Figure 1.

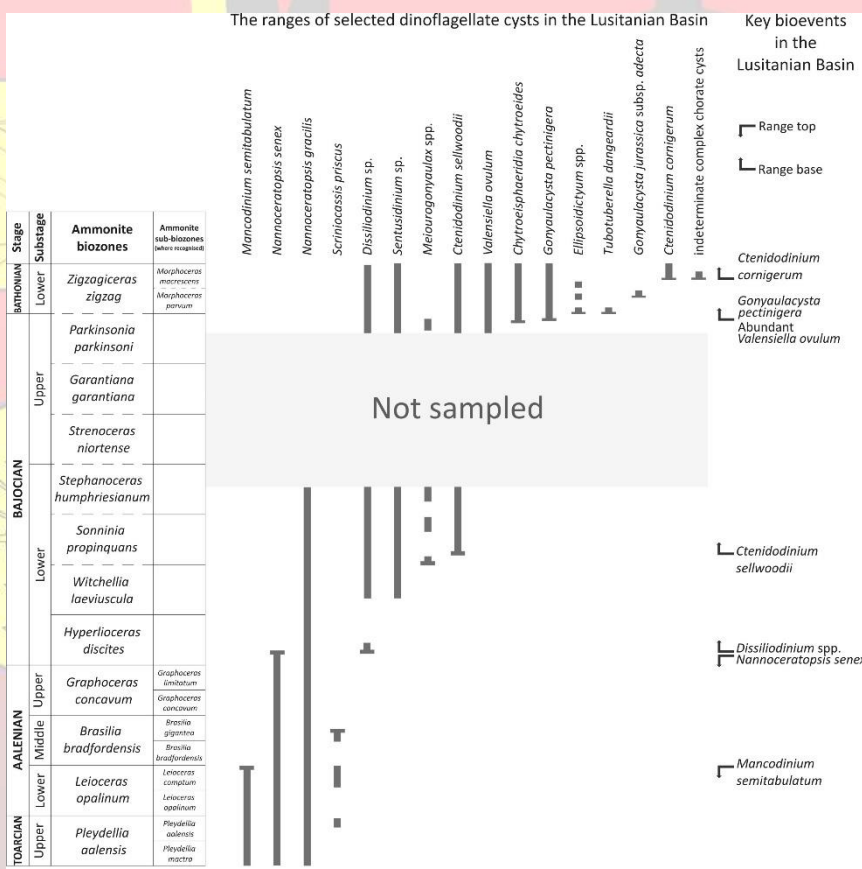


Fig. 1. The ranges of 15 stratigraphically significant dinoflagellate cysts and selected bioevents plotted against the ammonite biozones (AB) from the uppermost Toarcian to lowermost Bathonian of Cabo Mondego, Lusitanian Basin. The dotted ranges indicate the scarcity of the respective form. The Middle Jurassic dinoflagellate cyst of the Lusitanian Basin are markedly less diverse than coeval basins further north and east in the northern hemisphere. Nevertheless, at *Witchellia laeviuscula* AB is recorded an influx of species, which is the manifestation of the evolutionary early Bajocian radiation. Dinoflagellate cyst richness continued to increase at the Bajocian–Bathonian transition.