

CRETACEOUS PALAEOCLIMATE INDICATED BY THE BIOGEOGRAPHIC DISTRIBUTION OF REEFAL BIOCONSTRUCTIONS IN THE MEDITERRANEAN

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The European and the Adriatic plates moved 5° to 7° latitude northward between Aptian and Maastrichtian times. The biogeography of bioconstructions reflected this change by a relative southward movement of the northern reef line from the Helvetic shelf in the Aptian to southern Spain along the European continental margin in the Maastrichtian. The stable position of the northernmost reef occurrences at 30°N latitude was probably connected with the position of the sub-tropical high there and the boundary between humid and arid climate zones. Negative freshwater balances in marginal basins in the arid zone favoured lagoonal circulation resulting in nutrient poor water, warm temperatures, higher salinity promoting the formation of carbonate platforms and bioconstructions. Case studies of the palaeosituations of different Cretaceous time-slices will be presented to demonstrate reef evolution, reef crises and faunal diversity of the different platform developments as a function of palaeoclimatic changes in the Mediterranean Tethyan realm.