

Dr. Kenneth De Baets, Erlangen

Body size dynamics of cephalopods across the Pliensbachian-Toarcian crisis (J-body)

The reduction of body size within lineages is suggested to be one of the most important responses in the face of temperature-related stressors. Despite common suggestions of similar size changes around mass extinction events, the global significance as well as the mechanisms of this Lilliput effect are still controversial. This project aims at understanding the role of warming and associated stressors (anoxia) in driving body size changes of marine organisms in the Early Jurassic (Toarcian) crisis. We focus on cephalopods along a N/S-gradient of western Europe and northwestern Africa to explore patterns of body sizes from individual taxa to entire assemblages. Patterns will be explicitly analysed in the context of sedimentary facies, physico-chemical proxies and physiological predictions to test the correlation of body size with environmental parameters such as temperature, oxygenation and productivity/burial of organic carbon.