

## Stratigraphy and paleoclimate of non-marine deposits of the Jurassic/Cretaceous boundary interval in northern Germany

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Non-marine Purbeck and Wealden type deposits of latest Jurassic (Tithonian) and earliest Cretaceous (Berriasian) age characterize the Jurassic/Cretaceous (J/K) boundary interval in northwest Europe. A stratigraphic correlation of the non-marine strata throughout northern Germany, northern France and southern England is difficult, because appropriate index fossils are missing. Sporomorph data and ostracods have provided a rough biostratigraphic scheme allowing to correlate the non-marine J/K boundary beds in the past. Calibrations with the marine successions of Boreal Realm and the Tethys are even more problematic, due to a distinctive provincialism of marine floras and faunas.

New palynological (spores, pollen, dinoflagellate cysts) and micropaleontological (ostracods) data from three sections in northern Germany are complementing the existing biostratigraphic scheme. Terrestrial palynomarkers (*Classopollis* decline, last occurrence of *Pilasporites couperi*, first occurrence of *Aequitriradites spinulosus*, first common occurrence of *Cicatricosisporites purbeckensis*) and brackish-marine palynomarkers (first occurrences of *Cantulodinium speciosum*, *Muderongia simplex*, *Muderongia simplex microperforata*) are used for intra- and interbasinal correlation. Additionally, seven marine flooding events, characterized by abundant dinoflagellate cysts, have been recognized in northern Germany; two of them were correlated with marker horizons in England and Sweden. Correlation with the marine successions of the Boreal Realm and the Tethys is possible via the Purbeck type section in England. The palynological data yield clear evidence for a climatic change from a semi-arid setting in the latest Jurassic to more humid conditions in the earliest Cretaceous. The paleoclimatic trends, reconstructed from our findings in northern Germany, are compared with published data from southern England and the North Sea.