

FLORAL AND PALEOENVIRONMENTAL CHANGES DURING THE END-TRIASSIC: NEW DATA FROM EUROPEAN KEY SECTIONS

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The Triassic-Jurassic boundary extinction event is still subject to many controversies. There were major changes during the end-Triassic in both the terrestrial and marine realm, but the cause, timing and pattern of the extinction is not clear yet. Palynology is a very useful biostratigraphic tool for land-sea correlation because events in terrestrial microfloral assemblages preserved in marine sediment successions can be integrated in a marine (bio)stratigraphic framework. Another application of palynology is the reconstruction of past changes in vegetation and climate. We present the results of a high resolution palynological study from two European Tr-J boundary key sections: the Hinteriss section in the Northern Calcareous Alps (Austria), and the St. Audrie's Bay section in the UK. The main objective is to document floral changes and infer palaeoenvironmental changes throughout the Late Triassic. In the Hinteriss section, the palynomorph assemblages (e.g., *Ovalipollis*, *Rhaetipollis*) still show a Rhaetian age for the lowermost part of the Kendlbach Formation (i.e., Schattwald Beds of the Tiefengraben Member). Based on palynological evidence, the Tr-J boundary may be drawn in the middle part of the Tiefengraben Member, where also the oldest Jurassic ammonite enters the record. In both the Tethys realm and St. Audrie's Bay, pollen assemblages below the initial negative carbon excursion show a vegetation dominated by conifers (e.g., *Cheirolepidiaceae*) and seed ferns. Just after the initial shift both sections show a distinct increase in fern spores and a decrease in the amount of pollen from *Cheirolepidiaceae*. It seems that this change in vegetation occurs earlier in St. Audrie's Bay. At the start of the main negative isotope shift (lower part of the Blue Lias Fm), the St. Audrie's Bay pollen record indicates a vegetation almost completely consisting of *Cheirolepidiaceae*, which persists throughout the section. The contemporaneous pollen record from the Alpine realm consists, in contrast, of continuously high amounts of fern spores, while *Cheirolepidiaceae* pollen occur at significantly lower abundances.