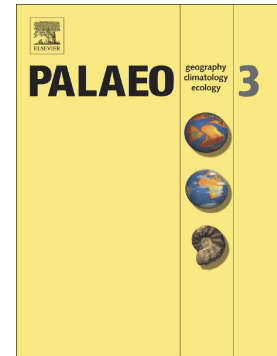


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A new correlation of Triassic–Jurassic boundary successions in NW Europe, Nevada and Peru, and the Central Atlantic Magmatic Province: a time-line for the end-Triassic mass extinction

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Abstract

Understanding the end-Triassic mass extinction event (201.36 Ma) requires a clear insight into the stratigraphy of boundary sections, which allows for long-distance correlations and correct distinction of the sequence of events. However, even after the ratification of a Global Stratotype Section and Point, global correlations of TJB successions are hampered by the fact that many of the traditionally used fossil groups were severely affected by the crisis. Here, a new correlation of key TJB successions in Europe, U.S.A. and Peru, based on a combination of biotic (palynology and ammonites), geochemical ($\delta^{13}\text{C}_{\text{org}}$) and radiometric (U/Pb ages) constraints, is presented. This new correlation has an impact on the causality and temporal development during the end-Triassic event. It challenges the hitherto used standard correlation, which has formed the basis for a hypothesis that the extinction was caused by more or less instantaneous release of large quantities of light carbon

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