EGU Galileo Conferences
GC5-Mass-58, 2019
Mass extinctions, recovery and resilience

Palynofloral turnover across the Triassic–Jurassic transition in the Sichuan Basin, southwestern China

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The end-Triassic mass extinction is considered as one of the five largest Phanerozoic extinction events, major biotic turnover occurred in both the marine and terrestrial realms. Here we present results from detailed palynological studies on the Late Triassic–Early Jurassic successions from the Sichuan Basin, China, revealing palynofloral changes across the Triassic–Jurassic transition. Based on palynological analyses, the Late Triassic flora was dominated by ferns mainly represented by Dipteridaceae/Mantoniaceae together with conifers. During the latest Triassic, a change to a flora dominated by cycads/bennettites/ginkgophytes and conifers occurred, while ferns decreased in relative abundance. The earliest Jurassic assemblages were dominated by fern spores, so-called fern-spike, and the Cheirolepid-conifers began to develop. The fern-spike is accompanied by common occurrence of *Classopollis* tetrads, some of which exhibit possible polyploidy, indicating an end-Triassic terrestrial ecosystem. This study presents data on changes within the terrestrial palynoflora across the Triassic–Jurassic boundary in the Sichuan Basin, providing important evidence for vegetation changes and ecosystem collapse within the eastern Tethys.