



Permian–Triassic biotic and abiotic facets

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The marine record of the Permian Triassic transition reflects the severest extinction event in Earth history, followed by a phase of continued environmental change and disrupted recovery during the Early Triassic. It is widely accepted since long that there had been a significant mass extinction and even the culprit seem to have been captured - the Siberian trap volcanism.

Currently, the focus of research is centered around the consequential network of environmental changes triggered by the Siberian Traps volcanism. Permian-Triassic environmental changes are reconstructed using a plethora of geochemical proxies such as carbon and oxygen isotope data, calcium isotopes, main and rare elements, mercury, and many more.

A second field of research opened up with increased dating accuracy. Thus, the timing of biotic and abiotic events are progressively unraveled in detail. Obviously, paces and patterns of destruction and recovery differ in among various faunal groups. Furthermore, the patterns of changes in terrestrial ecosystems appear to be different from those in the marine realm, but they are never completely decoupled.

Most plant groups survived the Permian-Triassic extinction event. Despite the taxonomic loss has been mild compared to the marine realm, significant changes are documented in the evenness of certain plant communities. Additionally, malformed sporomorphs gained attention as potential bioindicator for environmental hazards, so far documented by aforementioned geochemical proxies.