

Land ecosystem collapse followed by marine environmental stress spanning the Permian-Triassic mass extinction

*Raman Kumar Biswas¹, Kunio Kaiho¹, Ryosuke Saito¹, Zhiqiang Shi²

1. Graduate School of Science and Faculty of Science, Tohoku University, 2. Chengdu University of Technology, Chengdu, China

Abstract

The Permian–Triassic mass extinction was the most devastating extinction in the Phanerozoic Era. We investigated the biomarkers from the Shangsi section, South China, to identify changes in the biosphere and marine environments. We show that the collapse of land vegetation occurred before the latest Permian marine extinction at the Shangsi section. The stressful environmental conditions were persisted during the earliest Triassic rather than the latest Permian marine extinction. The second phase of stressful environmental conditions occurred in the late Griesbachian.

Keywords: Permian-Triassic, Mass extinction, Land plant, Environmental stress, Shangsi, Organic geochemistry