



## **High-resolution and continuous reconstruction of the lower-middle Triassic pelagic sequence (Inuyama, Japan): Implication for the productivity recovery process from end-Permian mass extinction**

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The end-Permian mass extinction is the largest extinction event in the Phanerozoic. The Early to Middle Triassic period is considered as the interval of delayed biotic recovery characterized by the lack of pelagic chert, shallow marine reef, and terrestrial coal deposits (Here we will call Coal-Reef-Chert Gap). However, it is uncertain that such delay in the recovery of biological productivity was due to the delay in recovery of environment, or due to the internal factor of the ecosystem itself. Additionally, the interrelationships among environmental and biotic recovery processes in the terrestrial, shallow marine, and pelagic settings during the Early to Middle Triassic is unknown.

In this study, we reconstructed the continuous pelagic sequence of the lower-middle Triassic Panthalassa ocean with high-resolution, and correlated this sequence with the terrestrial and shallow marine sequences of the same age. The lower to middle Triassic pelagic sequence is exposed in the fragmented manner within the Jurassic accretionary complex in the Inuyama region, Japan. Because this sequence was intensely faulted and folded during the accretionary process, bed-by-bed reconstruction of the lithostratigraphy has never been attempted. We made bed-by-bed-scale columnar sections for each fault-bounded block and spliced into a continuous columnar section covering the early to middle Triassic. We then correlated this pelagic sequence with terrestrial and shallow marine sequences based on the carbon isotope stratigraphy and biostratig-

raphy. Finally, we will discuss the productivity recovery process of terrestrial, shallow marine, and pelagic realms and assess the interrelationship among them during the early to middle Triassic.