PATTERNS OF THE BIOTIC RECOVERY AFTER THE END-PERMIAN EXTINCTION: A CONODONT?S MULTI-SCALE PERSPECTIVE

Seminario
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Abstract:

The end-Permian extinction was the most severe extinction in the history of animal life: it wiped out more than 90 percent of all marine species. Various scenarios have been proposed for the end-Permian event, all implying global environmental changes. The most recent advances actually suggest that this 250 million year old crisis ?*may serve as an important ancient analog for twenty-first century oceans*? (Payne and Clapham, 2012). Identifying the causes of the end-Permian mass extinction and controls on subsequent biotic recovery will shed light on the factors that shape biodiversity and ecosystem structure over geological time. They may also aid decision making regarding the current human-driven climate change and associated ecological impacts. Understanding the end-Permian event relies on answering the following, mutually related questions:

(**1**) What was the global sequence of abiotic/biotic events before, during and after the crisis?

(**2**) in particular, how did the environmental conditions in the oceans evolve?

(**3**) What were the structure and dynamics of trophic webs during this critical interval? and

(**4**) what can the differential responses of various groups of organisms (for instance nekton vs. benthos) tell us about the abiotic/biotic interactions at play, the causes of the crisis and the mechanisms during the recovery?

I will show how conodonts are critical to answering these questions.

http://www.unipd.it/ilbo/content/patterns-biotic-recovery-after-end-permian-extionction-conodonts-multi-scale-perspective

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