

172-8 - LATE TRIASSIC FAUNAL AND PALEOECOLOGICAL SUCCESSION IN NEW ZEALAND AND IMPLICATIONS FOR GLOBAL PREDATOR-PREY DYNAMICS

Tuesday, 24 September 2019

10:00 AM - 10:15 AM

• Phoenix Convention Center - Room 227ABC, North Building

Abstract

The Late Triassic represents a critical interval for the development of marine ecosystems that functions more similarly to those in modern oceans. In order to characterize the environmental and biological factors contributing to these transitions, diversity and ecological structure of high-latitude shallow marine deposits from New Zealand are characterized and compared with comparable deposits from lower latitudes and discussed in the context of predator diversity through this interval.

Here, we present preliminary results of a shallow marine macrofauna sampling effort from Norian (Oretian-Warepan, Late Triassic) volcanoclastic sedimentary deposits in South Island, New Zealand. Faunal assemblages contained lower diversity relative to lower latitude deposits in Nevada and Italy, and were typically dominated by *Halobia* and *Monotis* bivalves that rarely reach high abundances in oxic, shallow environments. Four faunal phases were recognized, as successive intervals of ecological dominance by *Halobia*, *Manticula*, various endemic brachiopods, and finally *Monotis*. The four taxa likely utilized a similar ecological niche (sessile epifauna), although size and generic morphological diversity increased during the stage. *Monotis*, in particular, underwent a dramatic taxonomic radiation that resulted in morphological characters not seen in coeval *Monotis*-bearing deposits elsewhere.

Norian benthic fauna from New Zealand differ from lower-latitude assemblages in their lack of mobile or infauna taxa, but similarly exhibit multiple phases of turnover. The extent to which these taxonomic shifts are driven by environmental or biological influences are further discussed.

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