

194-10 - SHALLOW MARINE PALEOECOLOGY OF HALOBIA OF THE NORIAN (LATE TRIASSIC) IN OWAKA, NEW ZEALAND

Tuesday, 24 September 2019
9:00 AM - 6:30 PM

• *Phoenix Convention Center - Hall AB, North Building*

Booth No. 172

Abstract

The genus *Halobia* is a globally distributed biostratigraphic index fossil group confined to the Late Carnian and Early to Middle Norian (~235-208.5 Ma); the time ranges of *Halobia* species are largely well-defined. *Halobia* are known from deeper, dysoxic deposits, but in New Zealand they appear to have thrived in relatively normal shallow marine conditions, making up the base of the benthic community. Their paleoecology in shallower environments is not well understood. This study on the paleoecology and diversity of *Halobia* and other benthic taxa focuses on the Owaka region of New Zealand from the early and middle Norian (Oretian and Otamitan NZ substages).

Bulk samples were collected from across the Owaka area of New Zealand (southeastern South Island) in order to assess *Halobia* diversity and abundance through time and over a broad geographic region. Bulk sample ages were determined biostratigraphically using *Halobia* and *Manticula* occurrences. Oretian assemblages exhibited relatively low biodiversity with high dominance by *Halobia* with other rare epifauna including brachiopods and gastropods. The persistent dominance of *Halobia* suggests that the success of *Halobia* is not controlled by depth but perhaps by ecological factors. Otamitan bulk samples largely have higher diversity but are still primarily composed of immobile epifauna, including *Manticula* and *Hokonua*, and in younger samples, brachiopods. Thus, these assemblages are unique not only for their endemic fauna, but for the high degree of *Halobia* dominance in an apparently oxic shallow marine system.

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