

Carbonate chemistry reconstruction of the South Pacific with implications for deglacial CO₂ degassing

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The importance of the South Pacific in setting the atmospheric pCO₂ has been shown by several studies but the evolution of its carbonate chemistry is not yet entirely understood. Boron isotopes of planktonic and benthic foraminifers from the Chilean and New Zealand margins have been measured to reconstruct the pH change of the last 30 000 years and provide insight into the extension of the glacial carbon pool. We use a multi-species approach requiring a new calibration for *N. pachyderma* for the colder parts of the cores where *G. bulloides* disappears. Benthic foraminifera are very scarce as the carbon pool is corrosive to its own archive. On top of that, the benthic assemblages are discontinuous, differ from core to core and a complete geochemical record is based on connecting different species records. Due to their high boron concentration and epibenthic lifestyle, *C. mundulus* have been widely used in pH reconstructions but their absence at several sites of the South Pacific region calls for new calibrations of other benthic species. $\delta^{11}\text{B}$ of the two epibenthic species, *H. elegans* and *P. murrhina*, were measured and normalized to *C. mundulus*. This multi-species approach allows to evaluate the temporal evolution of the South Pacific carbonate chemistry. First results on planktonic foraminifera from the Chilean margin and from benthic foraminifera from the New Zealand margin will be presented.