Benthic Foraminiferal Mn/Ca as Low-Oxygen Proxy in Fjord Sediments

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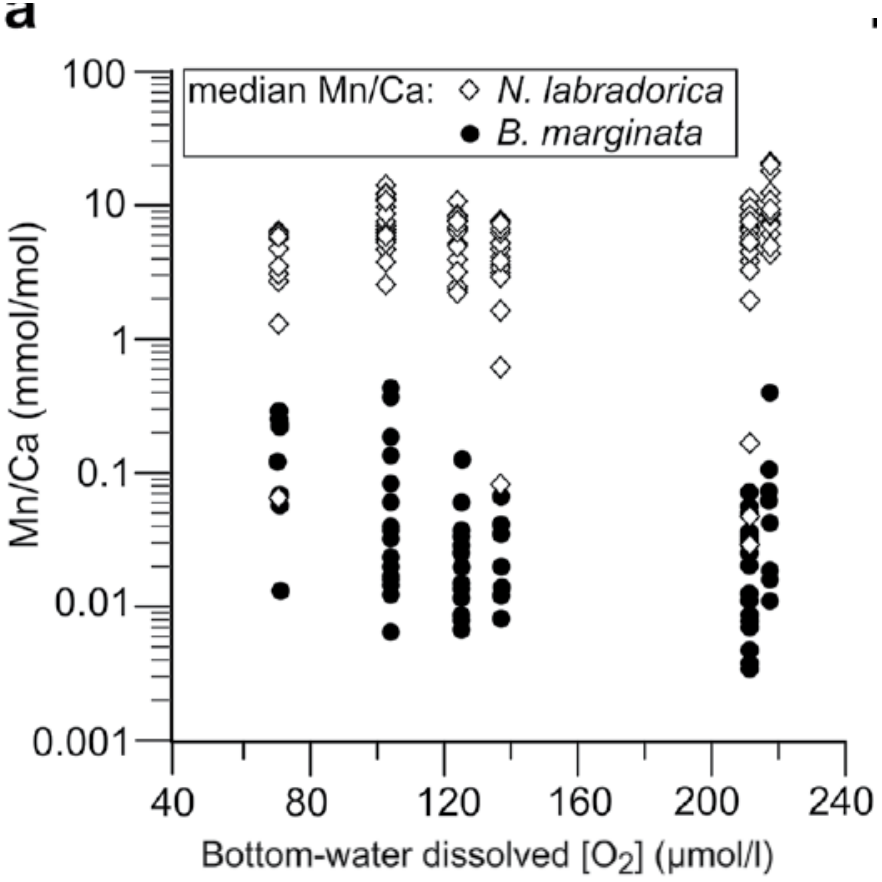
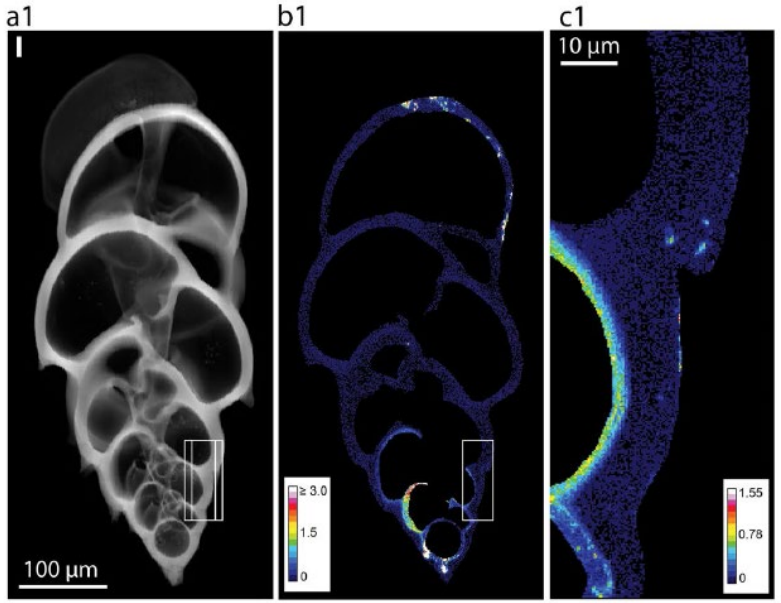


1) Mn/Ca of *B. marginata* = potential proxy of low oxygen conditions below 130µmol/l [O_2]

2) Species specific Mn/Ca (100 times higher Mn/Ca in *N. labradorica* compared to *B. marginata*)

- Not link to biomineralisation pathway since Mg and Sr incorporation ~ similar
- Microhabitat effect?
- Biological effects (i.e. chloroplasts, cyst, denitrification)?



X-ray fluorescence (XRF) trace elemental maps of a cross-section of *B. marginata*

3) Ontogenetic trend in *B. marginata*: very high Mn signals in the proloculus reflect precipitation under high ambient Mn concentrations

- Seasonal O2 variations?
- Reproduction and calcification of first chambers deeper in the sediment?