



Benthic foraminifera from Hole 1341B on Bowers Ridge, southern Bering Sea, IODP Expedition 323

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Hole U1341B was drilled at a depth of 2177 m, just below the modern oxygen minimum zone, on the western flank of the Bowers Ridge in the southern Bering Sea. The hole recovered about 600 m of cores, mostly composed of diatom ooze, and the bottom age of Hole U1341B is estimated between 4.1 and 5.0 Ma (Onodera et al., 2013). This study presents the record of calcareous benthic foraminifera from 186 samples collected at 3 m resolution in Hole U1341B.

The Pliocene–Pleistocene calcareous benthic assemblages include about 100 taxa, and consist of species known from other Pacific regions including *Globobulimina pacifica*, *Islandiella norcrossi*, *Melonis barleeanum*, *Nonionella labradorica* and *Uvigerina peregrina*. In the interval below 14H, CC (ca. 132 mbsf, ca. 1 Ma), the occurrence of calcareous benthic foraminifera is very patchy, and the assemblages are relatively poorly diversified and contain small numbers of specimens, except for some samples in which a few species dominate, for example *Melonis barleeanum* in sample 36H, CC (ca. 326 mbsf) and *Uvigerina senticosa* in core section 30H-3 (ca. 270 mbsf). Assemblages composed exclusively of agglutinated foraminifera are recorded, and the preservation of calcareous specimens is also generally variable in this interval. This may be due to fluctuation of the regional calcium carbonate compensation depth, or elevated pore water acidity due to high organic matter flux.

The abundance and diversity of the assemblages increase, and the preservation of calcareous specimens improves, upsection above 14H, CC, especially above 11H, CC across the mid-Pleistocene transition as at Sites U1340, U1343 and U1344. The assemblages from the interval above 14H, CC contain abundant infaunal and low-oxygen/high organic carbon flux tolerant forms, such as *Globobulimina*, *Islandiella*, *Melonis*, *Nonionella* and *Uvigerina*, indicating low oxygen bottom-water environments in the intermediate water with high organic productivity for the last one million years. Additionally, no acme of opportunistic, photodetritivore species, such as *Alabaminella weddellensis*, is recorded in Hole U1341B, which is in a region where seasonal blooms of phytoplankton are expected. Our findings suggest a stable and permanent existence of a low oxygen/high organic flux environment in this area in the Pliocene and Pleistocene.