

Re-colonization of *G. menardii* and *G. tumida* into the Atlantic Ocean after the Last Glacial Maximum

Abstract

When Cesare Emiliani conducted his first downcore oxygen isotope analyses he confirmed that the reappearance of *G. menardii* in the Atlantic Ocean indeed corresponded to the shift from glacial to Holocene isotope ratios. However, a few decades later Glen Jones (WHOI) reported that *G. menardii* did not reach the Atlantic till mid Holocene (6.6 ¹⁴C kyrs). In order to unravel this discrepancy we propose to work on core V20-234 (5° N, 33° W 3.13 km). The midpoint of the glacial to Holocene ¹⁸O transition occurs at about 25 cm depth. We have taken samples from the piston core at 2, 5, 10, 13, 16, 19 and 22 cm. On these set of samples we will do the abundances per gram of *G. menardii* and *G. tumida* and also pick samples of *G. menardii*, *G. tumida*, and *G. sacculifer* for ¹⁴C dating. The data produced at this site will establish the basis for a larger scale project that will extend this approach into different cores in the South Atlantic to accurately map the timing of the *G. menardii* and *G. tumida* Atlantic re-colonization from their glacial hideout in the Indian Ocean.