Daily Drilling and Scientific Report for IODP Expedition 347, Baltic Sea Paleoenvironment

ECERD Science Operator

25th Sep 00:00 – 25th Sep 24:00 GMT

1. Location 11° 40.243' E 56° 37.211' N (M0060A) BSB-1 – Anholt Water Depth: 31.2 m

2. Activity Summary

Continue coring operations at M0060A.

3. Science Report

Coring of stiff, glacial clay continued at M0060A, from a depth of 76 mbsf. The clay contained common marine Quaternary foraminifera. Between 82 mbsf and 95 mbsf the piston corer penetrated layers of alternating silt/clay and sand below which the stiff clay continued. The sand layers may constitute the strong reflectors observed on the seismic profile at ca. 85 mbsf and just below. At several depths the sand layer had apparent overpressure and formation water with suspended sand, which shot up through the drill pipe. At 94 mbsf (core 35) a disturbed clay sample was retrieved. Starting at 93 mbsf the diversity of marine benthic foraminifera strongly increased with at least eight species commonly occurring. Interestingly, a clay sample from the core catcher at 98 mbsf contained many shells and shell fragments, including the gastropod, Turritella and different bivalves. Also in the next core below 97 mbsf the sediment was disturbed and consisted of a mixture of clay and sand. This sand horizon also appears to have strong overpressure. The following cores returned clay. At 103-104 mbsf hammer coring obtained a small sample of mixed sand and gravel smeared in clay. At 113 mbsf a core catcher sample was retrieved, which displayed silty clay containing small unidentifiable shell pieces. A sample was retrieved from 114 mbsf displaying several shells and shell fragments such as the gastropod Turritella and the bivalve Portlandia arctica. The latter may indicate early Weichselian age. A hammer sample from 118 mbsf recovered a water saturated silty sandy sample with shell fragments. It was noted that at this level water under strong hydraulic pressure prevented further sampling before the permeable sandy silty layer had been drilled through.

Hole	M0060A
Cores recovered	18
Drilled length	36.9 m
(Coring)	
Drilled length (Open	7.0 m
hole)	
Recovered length	27.01 m
Recovery	73.20%
Depth at Midnight	126.3 m

4. Core Recovery Details

5. Weather

Fair, wave heights of 0.5 m; winds ENE (variable), 12 - 14 kts, gusting 15 -16 kts; 14° C. Next 24 hrs: Fair, wave heights of 0.3 - 0.6 m, winds NE –NNW 12 - 14 kts, gusting 15 - 17 kts. 12° C. Low pressure moving through the area.

6. Planned Activity for the next 24 hours

Continue coring operations at M0060A.

7. Photo of the day



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