

15th Oct 00:00 – 15th Oct 24:00 GMT

1. Location

18° 15.260 E 58° 37.350' N

BSB-9 Landsort Deep

2. Activity Summary

Continue coring operations at Hole M0063D.

3. Science Report

A fourth hole, Hole 63D, in the Landsort Deep is currently being drilled to secure a continuous stratigraphy and varve record of both the Holocene sequence and of the glacial clay. The Holocene sediment consists of a dark greenish-black gyttja-clay. At 19 mbsf the core included a transition over about half a meter from the black gyttja-clay to more greenish-greyish clay. Foraminifera were generally abundant both above and below this transition. Diatoms occur in the upper 25 mbsf while ostracods are infrequent. Low numbers of diatoms re-appeared in the depth interval of 29-34 mbsf.

From this depth foraminifera and other fossil groups became less abundant. At 29 mbsf barren homogeneous dark greenish-grey clay was recovered. This homogenous clay became increasingly darker grey and at some levels small amounts of silt and sand were detected to 39 mbsf where weak varves were recognized. The transition from homogenous glacial clay into varved clay is never easy to recognize and it is even harder in a small core catcher sample where the clay can have been mixed. However, from 47 mbsf the varves became visible through the core liner displaying a thickness that varied between 5 and 50 mm and a colour that was clear grey with darker winter layers. Both summer and winter layers consisted of pure clay with very little difference in grain size down to 59 mbsf.

4. Core Recovery Details

Hole	M0063D
Cores recovered	27
Drilled length (Coring)	52m
Drilled length (Open hole)	0.2
Recovered length	73.59m
Recovery	141.52%
Depth at Midnight	61.2m

5. Weather

Overcast, wave heights of 0.4 – 1.1 m; winds W, 12 - 16 kts, gusting to 28 kts; Max 13°C.

Next 24 hrs: Fair with possible fog towards the end of the day, wave heights of 0.2 – 1.1 m, winds from NE to SSE, 7 –19 kts, gusting to 23 kts. 12°C.

Moderate winds decreasing on the 16th but rising again on the 17th as a low pressure system moves across the North Sea.

6. Planned Activity for the next 24 hours

Complete coring operations at BSB-9, Hole D and begin operations on Hole E (microbiology)

7. Photo of the day

Various birds using the vessel as a staging post on their winter migration south through the Baltic Sea, including this Horned Owl.



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