CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE, LOWESTOFT, SUFFOLK, ENGLAND

2007 RESEARCH VESSEL REPORT

PROGRAMME: RV Endeavour: CRUISE 10/07

STAFF:

Dave Sivyer (SIC)	Stephen Dye
Karema Warr	Swier Oosterhuis (NIOZ)
Lorna Teal (Aberdeen University)	Paul McCloghrie
Helen Lees	Ben Kurten (Newcastle University)
Naomi Greenwood	Laura Bristow (UEA)
Ruth Parker	Elke Neubacher (Queen Mary College)
Ole Mikkelsen (UCNW)	Alida Villa (UEA)
Emma Lane	Gary Fones (Portsmouth University)
Job Baretta (Noctiluca)	

DURATION: Wednesday 16th May – Wednesday 23rd May
LOCALITY: Southern Bight, Oyster grounds and Central North Sea, Dogger Bank region

Overall aims of this series of cruises were to investigate:
1. Pelagic food webs, water column measurements
2. Hydrography and seawater chemistry
3. Community structure
4. Phytoplankton and microbial production
5. Grazing impacts
6. Mesozooplankton secondary production
7. Vertical flux and budgets of carbon
8. Benthic food webs, sediment processes, exchanges across the interface
9. Sediment Profile Imagery
10. Advection in coarse sediments
11. Resuspension events

All times GMT

Sail from Lowestoft at 18:00 and collected first water sample for Laura. Made good time to the West Gabbard site. Attempt to collect a CTD but the Surefire is not working. Collect 270, 200 and 50um ring nets, then 2 x 200 m nets for Ben. Head for the Sean Gas Field site (SG). Collect water and nets en-route. Arrive SG at 05:00 16th May, start using Granton trawl to recover lander. 08:00 Disturb the lander to release the recovery rope but collect the guard buoy and drag it NE. Release the guard buoy and start SPI drops at 09:00. CTD (Surefire has been fixed) to collect large volume of bottom water for Elke's sediment incubations. Start NIOZ coring just before lunch and carry on until 14:00. Two minor injuries were sustained to staff using the springs on the NIOZ shoes. The 24hr water cycle was started at approx 14:30, with subsequent near hourly CTD casts for LISST profiles and 6 hourly "full stations". The profile at 19:30 was missed as we successfully recovered the lander and guard buoy instead. 22 CTD casts (water at a minimum of 3 depths) and 4 SBS water samples were collected 1m from bottom, during the 24hr period. The lander was re-deployed at 12:15 (53 09.97N 02 48.46E) and the guard buoy at 13:15. Many nets were hauled and the Satlantic profiler was deployed a few times too. Between 15:00 and 17:00, we collected phyocystis soup in the 2m ring net for Ben. After tea 5 x 2m beam trawls for Karema, then 3 x 2m beam net hauls for Ben. We left the Sean Gas field at 19:00 heading for the start of scanfish line 1, picking up a couple of steam through stations for Laura en-route.

The scanfish behaved well and we got to the end of the line at 06:00. SPI drops commenced after breakfast after which the Cefas instrument was converted to time-lapse mode for 36hr deployment. Recovery of the lander was more of a problem as we couldn't talk to it with the PAM. We grappled for it and caught the ground wire on the 1st attempt. The entire mooring was recovered successfully but the OBS sensor on the ESM2 logger was broken at some point. The Aberdeen SPI was deployed after lunch, followed by the CTD for bottom water and then the Cefas SPI. NIOZ coring followed with ~25 drops finishing at 16:20. The 24hr CTD station started at 17:00 with the first full station with nets at 18:00. The lander was re-deployed (without the Menai Bridge LISST 100) at 21:00.

Saturday 19th - hourly CTDs continued with 2m ring net for Ben at 22:30. Another full station CTD with nets at 01:00 and again at 08:00. 5 x 2m trawl (5 min hauls) for Karema between 10:50 and 12:00. CTDs continuing hourly until 17:00. The first SPI camera was recovered safely – to a standing ovation from the wings! The 2nd SPI was also retrieved without incident. The Aberdeen unit collected a full set of photos, but the Cefas flash needs adjustment and no useful data was collected. The 2nd scanfish line commenced at around 19:30, heading north west towards the Dogger Bank.

Sunday 20th – finished Scanfish line 2 at 02:30, arrived at North Dogger site and did SPI survey at 06:00. After breakfast, we recovered the SmartBuoy, mid-tether frame and lander. The acoustic release on the lander worked but the buffs did not appear until we grappled for the ground wire and picked it up. The ADCP appears to show that the lander was upside down, the logger has collected a full set of data. The SmartBuoy logger also collected a full set of data with all instruments still clean. The

mid tether logger only ran for 7 days and it appears that the memory card has become corrupted. The 2 SPI cameras were deployed before a late lunch.
The bottom water was collected using the CTD directly after lunch, followed by NIOZ coring until tea. The 24hr CTD station started at 17:00 with the 1st full station at 18:00. Further "full stations" were at 02:00, 09:00 and 15:00 on Monday 21st. The 2m net was hauled during the night. The 2m beam trawls were fitted around the CTD casts in the morning and the SmartBuoy was similarly deployed at 12:30. After the final CTD, we recovered both SPI cameras and deployed the lander. The start of the final scanfish leg was started at 22:00 and ran for 45 miles finishing at 04:45 on the 22nd. The route home was modified slightly to include samples in a chlorophyll bloom which had been noted on satellite images and positions e-mailed to the ship.

We arrived off Lowestoft at around 22:00 and docked at 01:00 on Wednesday 23rd May.

Overall, we collect 41 Net hauls, 22 x 2m beam trawls, 74 CTD casts, 28 steam thru stns, 66 NIOZ corer drops, 30 SPI drops and 145 miles of Scanfish data.

D Sivyer

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BASIC LIST+ all those on cruise.