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MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1999 RESEARCH VESSEL PROGRAMME

REPORT: RV Corystes: CRUISE 6

STAFF:

D LIMPENNY (SIC part 1)
W MEADOWS (SIC part 2)
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DURATION:

6TH – 13TH July

LOCALITY:

English Channel

AIMS:

1. To carry out an intensive sidescan aand Questor Tangent survey of an area of seabed off Shoreham, and another off Dungeness.
2. To carry out ground truth sampling of the acoustically surveyed areas using a Hamon grab and video drop camera.
3. To run the online laser particle sizer and datalogger on deck throughout the acoustic survey.
4. To deploy a CTD micrologger inside a lobster pot at the start of the acoustic survey at Shoreham, and to recover it on completion of the survey.

NARRATIVE:

Corystes left Lowestoft at 03:00hrs on the 6th July and sailed for the survey area off Shoreham, reaching the site late afternoon on the same day. The Datasonics sidescan system was successfully wet trialled en route to the site. The CTD loggerpot was deployed at a site near the centre of the acoustic survey area, in an area considered hydrodynamically typical of the region.

At 20:30 the sidescan and Questor Tangent survey was commenced. However the sidescan fish was damaged on an uncharted underwater obstruction soon after deployment and the towfish was recovered and repaired. On completion of the repair the towfish was redeployed and the survey was recommenced. Northern lines were shortened to minimise the risk of fixed gear observed in the area. The acoustic survey was carried out on a 24hr basis over the next three days and completed by 24:00 hrs on 9th. During the 1oth a short break was made to land the SIC, who was urgently required at Burnham.

A hamon grab/video drop camera survey was undertaken at selected points showing definite acoustic differences throughout the survey area and further small infills of sidescan were made to complete the sidescan mosaic of the area. The logger pot was recovered and operations were completed at Shoreham by 23:00 on 11th.

Corystes then sailed to Dungeness to perform a similar survey, starting at 08:30 on 12th and completing at 19:00. Again an area had to be avoided due to the presence of fixed gill nets. Ground truth Hamon grab samples and video footage were taken again before leaving for Lowestoft to dock at 10:00 on 13th.

RESULTS

1. The areas successfully surveyed amounted to some 900 kilometres (500 nautical miles) of digital sidescan data in a 400m swathe giving 100% coverage of the site. This marked the first successful survey using the new combination of Datasonics Chirps digital sidescan sonar, and Triton Isis survey software. All sidescan lines were simultaneously surveyed with a Questor-Tangent C-View seabed classification system, running in unsupervised mode, to provide acoustic reflectance and bathymetric data.
   A 13-hour ADCP survey of the currents over the Shoreham survey area was carried out overnight. This data will provide the basis for developing maps of maximum velocity. A smaller 50% coverage survey was performed at the Varne.

2. A total of 64 Grab samples were taken, with PSA subsamples. The >10mm fraction was photographed and a description of the geology recorded. The sample was then processed for Benthos. Colour video seabed imagery was recorded of transits across ground truth stations.

3. A Minilogger was run continuously in the deck tank during the sidescan sonar surveys. However, the online particle size developed a fault and will require further work ashore.

4. A Minilogger was deployed in a "Loggerpot" at the start of the Shoreham sidescan survey and recovered at the end of the ground truth survey.

Bill Meadows/Dave Limpenny
12 July 1999

SEEN IN DRAFT: B Chapman (Captain)

A Lincoln (SFM)

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