

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

1992 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES, CRUISE 3C/92

STAFF: S J Lockwood (SIC)
B E Spencer
E G Shreeve
M J Kaiser
D B Edwards
R P Flatt
Ms M Bergman (Netherlands)

DURATION: 8 March-16 March 1992 (Overall Cruise 3 14 February-16 March)
All times GMT

LOCALITY: Irish Sea, North Wales coast

- AIMS:
1. To survey sites along the North Wales coast which might be suitable for long-term monitoring and research on the impact of fishing on the seabed.
 2. To test a variety of fishing, grabbing and acoustic gears and methods, including: sector scanner, side scan sonar, ROXANNE, which might be used during the long-term programme.

NARRATIVE:

Messrs Shreeve, Flatt and Ms Bergman joined the ship at Langton Dock, Liverpool, Saturday 7 March while the staff from Conwy joined at 0940h Sunday 8 March. CORYSTES sailed 1320h the same day. Once clear of the Mersey a familiarisation acoustic survey of an assemblage of wrecks commenced immediately north of the dredged navigation channel. Clear images were identified on the sector scanner which were matched subsequently with signals received by side-scan sonar.

Work began Monday 9 March by defining two potential sites for the long-term programme, each approximately one mile square. The first was close inshore (20+ m deep) between the Great Orme and the Constable Bank; the second was in deeper water (35+ m deep) 9 miles NNW of the Great Orme. A grid of five Day grab stations was worked within each rectangle before beam trawling on the offshore ground. Three replicate tows were made diagonally across the rectangle to establish an identifiable trawl track. This was surveyed acoustically later the same day. A similar programme of trawling and acoustic survey was carried out on the inshore ground Tuesday 10 March until 1420h, by which time a deterioration in sea conditions prevented further work.

A third trial rectangle was established Wednesday 11 March with Day grabbing, beam trawling and acoustic survey 4 miles off Dulas Bay, Anglesey, also in 30+ m of water. In this instance, in addition to the three principal beam trawl tows, a pattern of two tows were fished at three positions at right angles across the principal tows.

The programme closed Thursday 12 March with a single beam trawl haul across the principal Dulas Bay track before collecting soil samples for particle size analysis. Three samples were collected along the principal trawl tracks on each trial rectangle. Plans for a final acoustic survey of the Orme offshore rectangle were abandoned as westerly gales and a heavy swell rendered deployment of the side scan inadvisable. The programme complete, CORYSTES set course for Lowestoft 1615h Thursday 12 March and docked at 1800h Sunday 15 March.

RESULTS:

1. Day grab samples on the inshore Orme rectangle indicated that this is a hard pebbly ground with a relatively poor benthic community. This impression was reinforced by the beam trawl samples which contained few fish and relatively little epi-benthos.
2. Successful Day grab samples were taken more readily on the offshore Orme rectangle. These indicated an abundant bivalve and polychaete in-fauna while the beam trawl catches included good numbers of flatfish (sole, plaice, dab and flounder) as well as epi-benthos.
3. Day grab samples were obtained without difficulty off Dulas Bay and indicated an in-fauna no less rich nor diverse than the Orme offshore rectangle. This rectangle, however, yielded the richest beam trawl catches in terms of both benthic species abundance and diversity. Flatfish catches were also good.
4. Despite obtaining good images of wrecks at the start of the cruise, the sector scanner did not contribute detailed information to subsequent acoustic surveys. In contrast, the side scan performed well and beam trawl tracks were identified on both the Dulas Bay and the offshore Orme rectangles.
5. ROXANNE was not available for installation on this cruise and adverse sea conditions prevented deployment of underwater TV equipment.
6. A sample of flounders was frozen and returned to Mr A Franklin (AEP 2) for heavy metal and organo-chlorine analysis.
7. Three specimens of the butterfly blenny (*Blennius ocellaris*), a species rarely recorded north of the south coasts of Devon and Cornwall, were taken off Dulas Bay.

S J Lockwood, SIC
17 March 1992

SEEN IN DRAFT: M J Willcock, Master
R Graham, Senior Fishing Mate

INITIALLED: CEP

DISTRIBUTION: Basic List+ D B Edwards
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