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Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Clupea*

Cruise 0596C

REPORT

21-26 March 1996

Personnel

| | |
|-------------|-----------------|
| R Payne | HSO (in charge) |
| J McKie | HSO |
| E Armstrong | SO |

Objectives

1. To deploy current meter moorings at two locations in the North Channel, in an area to the north-west of Corsewall Point, near the entrance to Loch Ryan.
2. To collect seabed sediment samples in the vicinity of the current meter mooring locations for particle size and chemical analysis.
3. To undertake side-scan sonar trials.
4. To map the seabed in the vicinity of the current meter mooring locations, using RoxAnn^o.
5. To undertake a side-scan sonar survey in the vicinity of the current meter mooring locations.
6. To collect water samples for toxic dinoflagellate investigations.

Out turn-days: BEA1; four days, BEB1; one day.

Narrative

Clupea sailed from Fraserburgh at 1130 on Thursday 21 March, and in good weather conditions made a passage to the Firth of Clyde, arriving in the survey area at 0630 hours on 23 March. The two current meter moorings were deployed, and 24 grab samples and six water samples were taken, before the vessel anchored for the night in Loch Ryan. The side-scan sonar trials took place early on 24 March, and the side-scan sonar and RoxAnn^o surveys were then commenced. At 2300 hours the vessel anchored again in Loch Ryan. The surveys were completed on the following day, and an opportunity was taken to test the side-scan sonar at depth, with good results obtained in 160 metres of water. Nine further grab samples were taken to the south and east of the original survey area. *Clupea* then proceeded to Ardrossan, mooring alongside at 1815 hours on 25 March. The scientific staff left the vessel at 0845 hours on 26 March and returned to Aberdeen.

Results

All the objectives were achieved, helped by the excellent prevailing weather conditions. Preliminary visual examination of the grab samples revealed considerable variation in sediment type across the current meter survey area, with sediments ranging from fine muds in the north to coarse sand and stones in the south. This was supported by the side-scan sonar record, revealing considerable evidence of trawl and dredge scars on the seabed to the north-west, north and north-east in the fine mud and little sign of fishing activity in the southern sector of the survey area. Extra grab samples were taken to confirm the change in sediment type to the south. The side-scan data, the RoxAnn[®] data, and the grab and biological samples, were returned to the Laboratory for analyses.

R Payne
25 April 1996

Seen in draft: M Beedie