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FRV *CLUPEA*

Cruise 1197C

REPORT

14 July - 21 July 1997

Loading: Fraserburgh

Unloading: Oban

Personnel

R Payne	HSO In charge
G Slesser	HSO
R D Adams	SO

Objectives

1. To recover seven current meter moorings from the Minches.
2. To obtain continuous records of T, S and Fluorescence from the pumped sea-water supply and take SeaBird CTD casts at selected stations.

Out-turn costs per project: 8 days BKF1

Narrative

The scientific staff joined *Clupea* in Fraserburgh at 1000 hours on Monday 14 July 1997. The vessel sailed immediately to be on position at Mooring 2 the following morning to commence recovery operations. Moorings 2 and 1 were recovered and part of the line NM1 of CTD stations was worked before the vessel put in to Kinlochbervie to discharge the recovered equipment. The following day the vessel recovered Moorings 3 and 4 and finished the North Minch line of CTD stations and proceeded to anchor overnight. The western part of the Little Minch line of CTD stations, LM4, was worked the following morning and the moorings were discharged in Mallaig later that day. Moorings 6 and 7 were recovered on Friday 18 July and these were landed at Oban late the same day. *Clupea* left Oban on Saturday morning and worked the SM5 line of CTD stations to the west and recovered Mooring 5 that evening before anchoring overnight. The vessel then proceeded to work the SM4 line of CTD stations to the east and moored in Oban late that evening. CTD casts were also made prior to recovering each mooring. The Thermosalinograph and Fluorometer were run throughout using the pumped sea-water supply. Equipment and scientific staff left the ship for Aberdeen at 1000 hours Monday 21 July.

Results

The seven current meter moorings were recovered successfully. Only Mooring 6 had been interfered with by a fishing vessel, leading to considerable loss of data from the damaged current meters. The sub-surface buoy suffered propeller damage. Other data was lost due to the

current meters being fitted with batteries from a faulty batch supplied to us by the manufacturer. Some records were either short or non-existent.

Currents at Moorings 1 and 2 were to the north-east while Mooring 3 showed southerly flow. Mooring 4 revealed southeasterly flow at the bottom and no surface record. The flow at Mooring 7 was easterly, while the flow at Mooring 6 was north-westerly. No records were obtained from Mooring 5.

Thirty six profiles were obtained with the SeaBird CTD. The CTD profiles showed deep structuring in the water column only in the centre of the North Minch and also in the centre of the South Minch. The margins consisted of well-mixed water. The calm, sunny weather caused shallow thermoclines to form at 5-10 meters. Fluorescence was generally higher in the North Minch than the South Minch. Forty samples of water were filtered for Chlorophyll analysis and Fluorometer calibration.

Dolphins and porpoises were common throughout the trip. Two medium sized whales (Minke) were sighted north-west of Coll, and a number of Basking Sharks were seen west of the Sound of Mull.

R Payne
28 August 1997

Seen in draft: A Simpson, OIC *Clupea*

