

R1/6

Not to be cited without prior reference to the Laboratory

FRV *CLUPEA*

Cruise 1993C

REPORT

19-25 October 1993

Ports

Loading: Fraserburgh
 Unloading: Fraserburgh

Personnel

W R Turrell SSO (in charge)
 R D Adams SO
 L Campbell SO
 B Rowe ASO

Objectives

1. To service five current meter moorings (Numbers 1, 2, 4, 5 and 6 - Tay series)
2. To undertake a hydrochemical survey of the northeast coast.

Out-turn Days per Project

7 days BGE1

Narrative

Scientific staff joined *Clupea* at 1000 GMT on Tuesday 19 October. Equipment was loaded, set up and secured. *Clupea* sailed at 1230 and proceeded to the work area. *Clupea* anchored in St Andrews Bay at 2300. The anchorage was left at 0600 the next day, and *Clupea* proceeded to mooring 2 (St Andrews Bay). On arrival it was discovered that the surface pick up line holding the S4 current meter was not visible. *Clupea* then proceeded to mooring 6 (Fifeness Outer). This mooring was also found to have lost the buoyant pick up line, and the surface buoy had to be recovered. While hauling the first anchor, a chain link parted and the mooring was lost.

At this point it was decided that *Clupea* should proceed to mooring 4 (Bell Rock). This mooring was intact and servicing commenced at 0915 and was completed by 0947. *Clupea* then returned to mooring 6 and commenced "creeping" for the remainder of the mooring. This was successfully hooked at 1200 and the repaired and serviced mooring was relaid by 1510. *Clupea* then proceeded to Lunan Bay and was at anchor by 1830.

Clupea sailed at 0600 the following day, Thursday 21 October. She proceeded to mooring 1 (Arbroath), where servicing commenced at 0725 and was completed by 0820. On arrival at mooring 5 (Fifeness Inner) at 1100 the weather had significantly

deteriorated, and recovery of this mooring was no longer possible. *Clupea* proceeded to Largo Bay, and was at anchor by 1230. Scientific work continued with data processing and analysis.

Clupea left her anchorage at 0600 on Friday 22 October and returned to mooring 5. This mooring was completely recovered by 0700 and was serviced and relaid by 0900. She then proceeded to mooring 2, which was recovered by 1045 and serviced and relaid by 1145.

During the morning of 22 October *Clupea* was contacted by a fishing vessel and informed that mooring 6 had been inadvertently picked up and moved by them. Unknown damage had been done to the instrumentation. It was also pointed out that the date of recovery of the mooring as indicated by the notice to fishermen had been exceeded. Correction notices were immediately faxed to the east coast fishery officers, and the Forth, Fifeness and Aberdeen coastguards. A MIMS radio message was telephoned to Stonehaven Radio, and was broadcast each day until Friday 29 October.

Clupea returned to mooring 6, which was completely recovered 1330. Minor damage to the two current meters (broken impellers) was repaired and the mooring was successfully relaid by 1430. *Clupea* then proceeded to St Andrews Bay, where she dropped anchor at 1700. Work continued preparing ROSIE and the NBIS "Smart" CTD, and a test profile was successfully performed by 2000.

Clupea next sailed at 0600 the following morning. She proceeded to the start of the Fifeness (M) Hydrographic Section, which was completed by 1130 that morning. She then continued to the Eden line which was completed by 1620. The St Andrews Bay (J) section was completed by 2031 and the Tay Mouth Section (I) by 0130 Sunday 24 October. *Clupea* then proceeded north, completing the Todhead section (S) by 0730 and the Dee Section (F) by 1200. She then steamed north, arriving at Fraserburgh at 1800. Scientific equipment was packed up and data processed. Scientific staff left *Clupea* at 0900 the following morning.

Results

Objective 1 was completed by late afternoon on Friday 22 October, this took longer than anticipated because of unforeseen circumstances, weather, parts of the moorings missing, mainly pick up pallets necessitating in the recovery and redeployment of the entire mooring.

Objective 2 commenced at 0630 on the morning of Saturday 23 October and sections M, K, J, I, S and F were completed by 1200 on 24 October. *Clupea* then proceeded to Fraserburgh and docked on the evening of the 24th.

Temperature and salinity were measured using an NBIS CTD and nutrient and chlorophyll samples were collected by the Rosette sampler. Mooring instrument records and nutrients await analysis at the Laboratory.

W R Turrell

15 February 1994

Seen in draft: G Geddes

SCOTTISH NORTH SEA COASTAL ZONE PROJECT 1993

