

R1/6

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FRV *Clupea*

Cruise 3/90 Part 1

3pt1CR90

REPORT

12-18 March 1990

Personnel

J C Gamble	PSO (in charge)
D D Seaton	SSO (12-14 March)
R B Mitchell	SSO (14-15 March)
S J Hay	HSO (14-18 March)
C W Shand	HSO
W S Macdonald	SO
I Napier	PhD student
N Ramsay	PhD student (12-14 March)

Objectives

1. To make a collection of gonads and fertilise eggs from herring caught on Ballantrae Bank.
2. To set up a trisponder system and to deploy a current meter and time-lapse camera on Ballantrae Bank.
3. To carry out trawling for pre-spawning Clyde herring.
4. To make pre-spawning diving, grab and TV surveys of the Ballantrae Bank spawning ground and to deploy apparatus on the sea bed.

Narrative

Scientific staff joined the vessel in Ardrossan during the afternoon of 12 March. *Clupea* departed for Ballantrae Bank the following day and commenced trawling for herring along previously successful trajectories on the western edge of the Bank. No substantial echosounder "marks" were seen and the first two trawls yielded no herring. Grab samples were made in the centre of previous spawn masses but no spawn was detected. We were advised by a fishing boat that a large mark of herring had been noted off Bennane Head to the north of the Bank. Sufficient ripe herring (one basket) were captured in a trawl fished in midwater to meet the demands for fertilised eggs. Fertilisation took place on board ship in the evening. Gonads and live plaice were also given to Professor J H S Blaxter, SMBA Fellow, Dunstaffnage Marine Laboratory.

Messrs Seaton and Ramsay left the ship with the fertilised eggs the following morning to be replaced by Messrs Hay and Mitchell. Work continued on Ballantrae Bank with the deployment of the current meter. Worsening weather (force 7-8, SSE-S) prevented any diving so time was spent grab sampling in the vicinity of previous spawn patches. No spawn was found.

The remainder of the time was spent on Ballantrae Bank whenever the weather permitted. No diving was possible on the Bank due to bad weather although two work-up dives were made in Campbeltown Loch. Grab samples were taken on the Bank as well as in the area of the "mark" on 13 March, the ROV was deployed on one occasion, trawls were made for stock analysis and hydrographic and productivity samples were taken.

### Results

1. Gonads were collected and eggs fertilised on 13 March 1990.
2. The trisponder system was made operational and the current meter deployed (55°07.36'N 05°02.44'W) at 1430 hrs on 14 March. Weather conditions prevented deployment of the time-lapse camera.
3. Herring were only caught on two occasions, about two baskets on 13 March and 20 individuals on 17 March. Herring were ripe and running on the first occasion and appeared to be fairly newly spent on 17 March.
4. Over 60 grab samples were taken but no spawn was found. Samples were taken for sediment analysis and macrofauna was removed. The ROV survey confirmed the absence of spawn but weather conditions, which badly hampered the entire cruise, prevented any open water diving.

J C Gamble  
28 August 1990

Seen in draft: W Smith

### CLYDE PROJECT - STATION POSITIONS

