

R1/6

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FRV *CLUPEA*

Cruise 0393C

REPORT

10 February - 3 March 1993

Personnel

C S Wardle	SPSO (OIC)	
C W Glass	SSO	
W R Mojsiewicz	HSO	
C W Shand	HSO	22 February - 3 March
P Barkel	PTO	10-22 February
N J Pfeiffer	Visitor (DoM, Fisheries Research Centre, Dublin)	22 February - 3 March

Fishing Gear

Bottom trawls BT130C and D (blue and white "North Sea" glow trawl to be used first) with 7' Vee boards (V33/34) and heavy rockhopper ground gear.

Objectives

1. To assess significance of light levels in determining night and day selectivity mechanisms effecting fish in cod-ends.
2. To observe the behaviour of fish in cod-ends at night using the TUV fitted with the Simrad scanning sonar and flash camera.
3. To assess small fish escape routes at night using small mesh pocket covers.

Out-turn Days per Project: ICL1

Narrative

FRV *Clupea* sailed on 10 February and the TV cable was towed and marked. Further tows were made in the Copinsay area where visibility was poor for observation work and in the Moray Firth where conditions were found to be more suitable. The net was finally rigged correctly on 12 February and useful day and night hauls were achieved on the following three days, but the vehicle towing wire was broken when the net came fast on the 15th. A sequence of bad weather and failure of the *Clupea* clutch drive led to the loss of the next six days. Subsequently, northerly winds only allowed two tows close in at Cruden Bay and a final four tows in the Firth of Forth. The observations achieved, in addition to those in a related series of cruises, are beginning to show the fish behavioural patterns in cod-ends that are typical of light and dark conditions, with and without the black tube fitted (objective 1). The Simrad scanning sonar was successfully used to position the camera precisely alongside the cod-end where flash photographs could be made at 30 second intervals during long periods with no light (objective 2). Too few hauls were made with pockets to infer distribution patterns of escape routes in dark hauls (objective 3).

C S Wardle
1 June 1994