

R1/6

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

FRV *Clupea*

Cruise 1995C

## REPORT

27 November - 1 December 1995

### Personnel

E Armstrong	SO (in charge)
C Stewart	Industrial Technician
I Garioch	Contract Worker
A Heaver	Questor Tangent - 27 November
W Collins	Questor Tangnet - 27 November

### Objectives

1. To ascertain the stability and towing behaviour of the modified towed body used in acoustic fish stock surveys.
2. To evaluate the plotter/acoustic analysis software installed by Questor Tangent.

**Out turn days per project:** 5 days EDE1

### Narrative

After installation of equipment brought on board by the Questor Tangent technicians *Clupea* sailed from Fraserburgh at 1300 hours on Monday 27 November and steamed a grid over various ground types in the South Trench. On completion of this work *Clupea* returned to Fraserburgh to offload the Questor Tangent personnel and equipment. *Clupea* then sailed at 0600 hours on Tuesday 28 November to conduct trials on the modified towed body. Data was gathered on the performance of the towed body throughout the following days, nights being spent in Invergordon to allow alterations to be made as required.

*Clupea* returned to Fraserburgh on the evening of Thursday 30 November. All staff left the vessel at 1000 hours on 1 December and returned to Aberdeen.

### Results

Data was gathered by the Questor Tangent System and taken ashore for the further analysis by Questor Tangent. Data was also gathered on the performance of the towed body at various speeds, tow points and weight distributions.

E Armstrong  
31 May 1996