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Not to be cited without prior reference to the Laboratory.

FRV "Clupea"

**8CR87** 

Cruise 8/87

## Report

6-15 July 1987

# Personnel

PSO (in charge) 12-15 July R S Bailey HSO (in charge) 6-12 July P Hopkins SO F Armstrong Craftsman B Smith

J Fuller

K Hughes

Staff Inspector 9 July Staff Inspector 9 July

### **Objectives**

To carry out an echointegrator survey of the Firth of Clyde.

#### Narrative

"Clupea" left Buckie at 1115 on 6 July and set sail for the Clyde via the Pentland Firth. En route "Clupea" anchored at Tobermory Bay on 7 July and the acoustic equipment was calibrated. The Clyde was reached by 0700 on 8 July and echointegration began at 0800. At 1000 radio contact was made with the charter vessels "Erica" and "Acorn" which joined the survey. Echointegration continued during daylight hours until 14 July with "Erica" and "Acorn" fishing to identify echotraces observed by "Clupea". The cruise track is attached.

# Results

The greatest densities of fish were seen in the river Clyde and Loch Striven. Smaller concentrations were observed in Ayr Bay, Kilbrennan Sound and its southern approaches and the area south of Bute. Scattered marks of adult herring were also seen west of Inchmarnoch Island and the entrance to Loch Fyne. A more intensive grid was followed in this area to obtain better estimates of biomass.

R S Bailey P Hopkins

17 August 1987

Seen in draft: W Smith

