

R1/6

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FRV *Clupea*

Cruise 1797C

REPORT

7-17 October 1997

Personnel

P J Copland	HSO	7-17 October 1997
P Fernandes	RFAU	7-17 October 1997
T B Christensen	Visitor (Reson, Denmark)	7-17 October 1997
F Gerlotto	Visitor (ORSTOM)	11-17 October 1997
N Spyridakias	Visitor (IMBC Crete)	11-17 October 1997

Objectives

1. To deploy the RESON SEABAT scanning sonar system on a pole alongside *Clupea* looking at 45° to vertical and perpendicular to the line of the vessel.
2. To obtain acoustic data on fish schools using the RESON system to compare with data collected synchronously in the vertical aspect using the EK 500 echosounder and a portable BIOSONICS dual beam echosounder.
3. To obtain biological samples from observed fish schools by trawling.

Out-turn days per project: 11 days EDE.**Narrative**

Clupea sailed from Ardrossan at 1800 hours on 7 October to Lamlash Bay to calibrate the EK500 echosounder system. Upon successful completion of the calibration *Clupea* began a series of survey transects to the East of Arran and into lower Loch Fyne using the hull mounted transducer to search for fish schools. A suitable area for the collection of acoustic data was located in Inchmarnock waters.

The RESON SEABAT and SIMRAD transducers were then deployed on a pole alongside *Clupea*. Data from the SIMRAD system were collected with the BI500 system and stored on DAT tape. Data from the RESON system were collected using a modified data acquisition programme which records consecutive transmissions directly onto computer. Work continued in Inchmarnock waters until 11 October when *Clupea* proceeded to Rothesay to collect the remaining members of the scientific crew. Unfortunately the BIOSONICS dual beam transducer to be used in the small boat work was delayed in transit and it was necessary to return to Rothesay on the evening 12 October to collect it. Work then commenced using the portable echosounder deployed from the rubber boat. This arrangement allowed quantification of traces seen on the RESON system at horizontal ranges from 20 to 100 metres.

A large amount of data on coincident fish schools were collected (over 20 gigabytes) and stored on WORM CD. Three trawl hauls were carried out to identify species and size composition of the observed fish schools: these were mostly sprat and a few small herring in the early part of the cruise in Inchmarnock; and mostly small herring in the later part of the cruise in waters off the north east coast of Arran. Work continued until the evening of 16/10 when *Clupea* returned to Ardrossan at 2000 hours to prepare for unloading on following day.

P Copland
27 October 1997

Seen in draft: A Simpson, OIC *Clupea*