

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD  
 FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1981 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 14

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

B J Robinson  
 W L Huggins  
 T Y Lee  
 P M Hudson

DURATION:

Left Lowestoft 1245 h 17 November  
 Arrived Lowestoft 0800 h 24 November

All times are Greenwich Mean Time

LOCALITY:

Inner Silver Pit

AIMS:

1. To conduct trials of acoustic survey equipment.
2. To collect fish echoes at 30 and 38 kHz for comparative purposes.
3. To attempt to calibrate the acoustic survey transducers using standard targets.

NARRATIVE:

CORELLA sailed at 1245 h and steamed to the Inner Silver Pit. The failure of one engine on route caused a late arrival at the Silver Pit and so the acoustic survey towed body, TM1 was not deployed until 18 November whilst CORELLA was at anchor off Mablethorpe. During the next three days the acoustic survey equipment was thoroughly tested and calibrated. On 21 November an acoustic survey of the Inner Silver Pit was conducted using 30 and 38 kHz equipment and the recently acquired SIMRAD QD echo integrator. Further equipment modifications and recalibrations were performed on 22 November based upon the results of the previous days survey. On 23 November worsening weather prompted an early return to an anchorage in Corton Roads where measurements were made upon the survey transducer TL2.

RESULTS:

Aim 1

- a. The towed transducer, TM1, towed well thereby demonstrating that the improvements instigated after CLIONE 10/81 have been successful.
- b. A satisfactory dual frequency acoustic survey system has now been developed permitting comparisons of fish echo intensities at 30 and 38 kHz.

- c. The microprocessor based automatic calibrator for acoustic survey receivers performed well. It has enabled several previously reported calibration anomalies to be explained.
- d. A prototype sea bottom echo detector was tested and was satisfactory under the available test conditions.
- e. The QD echo integrator was successfully used for the first time on an acoustic survey. Whilst it now performs to the manufacturers specification, it is awkward to use and its suitability for MAFF acoustic surveys is still uncertain.
- f. Electrical measurements were performed to complement recent acoustic measurements made at Staines reservoir.

**Aim 2**

No suitable fish concentrations were observed in the available survey time.

**Aim 3**

Time and weather did not permit this technique to be evaluated.

**B J Robinson**  
**1 December 1981**

Seen in Draft: G Sinclair  
 R C Newrick

Initialed: DJG

Distribution

Basic List +

B J Robinson	R B Mitson
W L Huggins	M H Beach
T Y Lee	C R Hood
P M Hudson	L Cox