

R1/6

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FRV *CLUPEA*

Cruise 1395C

**REPORT**

10-23 August 1995

**Personnel**

M R Robertson	HSO	10-23 August (in charge)
E Armstrong	SO	10-23 August
E Pinn	Res Asst	10-23 August
C W Shand	HSO	14-18 August
A D Hawkins	CSO	18-20 August

**Gear:** RoxAnn, Day grab, Agassiz trawl and TV

**Objectives**

1. To undertake an intensive benthic and RoxAnn survey in an area enclosed by lines drawn between 56°45'N 06°30'W, 56°45'N 07°00'W, 57°15'N 07°00'W, 57°15'N 06°30'W, and 56°45'W 06°30'W.
2. To carry out benthic sampling for the Quality Status Review (QSR).
3. To carry out a RoxAnn survey of Loch Duich.
4. To collect live copepods for filming.

**Out Turn Days:** 14 days BKE1

**Narrative**

After loading equipment at Ardrossan harbour on the afternoon of 10 August, *Clupea* sailed for the work site to the south west of Skye at 1730, arriving there at 0900 on 11 August. An intensive RoxAnn survey was carried out, work being completed by 2400 on 13 August. *Clupea* then sailed for Kyle of Lochalsh for a 24 hour half-landing and berthed there at 0445 on 14 August. The vessel sailed from Kyle at 0745 on 15 August and made for the work site off Skye; TV tows, Agassiz hauls and grab samples were taken from within the designated area until 2015 when the vessel headed for shelter and dropped anchor off Eigg at 2130. The next morning, *Clupea* returned to the work area

and continued with the biological survey until 1600 when the vessel returned to Kyle. On 18 August, *Clupea* sailed for Loch Duich where a RoxAnn sonar survey was conducted, the vessel then sailed for the anchorage off Eigg and remained there overnight. The following day, *Clupea* returned to the main work area and completed the sampling programme before returning to Kyle, arriving there at 2130. The next day, *Clupea* commenced grab sampling for the QSR programme, work continuing until 2130. On 21 August, *Clupea* continued with the QSR work and completed all sampling by 1800. She then made for Scrabster. Finally, on the morning of 22 August, *Clupea* sailed from Scrabster at 0800 for Fraserburgh. A series of plankton tows were collected from off Wick before the vessel arrived at Fraserburgh and tied up at 2000.

## Results

1. Six five-mile by five-mile boxes (total area 150 square miles) were surveyed using RoxAnn (see Fig. 1). These data, on the location of differing sediment types within each box:
  - a) formed the basis for an intensive TV, Agassiz trawl and grab sampling programme designed to identify and enumerate the benthic communities present. A total of 70 Day grab samples, 15 Agassiz hauls and 11 TV tows were carried out in the area. PSP and heavy metal sediment samples were also taken. The video tapes, samples and other material will be examined subsequently in the Laboratory.
  - b) were used to create images of sediment roughness and hardness overlaid on 3D plots of the local bathymetry.
2. Eight of the nine QSR stations (QSR9 - QSR2) were sampled for benthic infauna, PSP cysts and heavy metals (see Fig. 1) with a total of 48 Day grab samples being collected. All material was returned to the Laboratory for subsequent analysis.
3. A RoxAnn survey of an area within Loch Duich was successfully completed. The data collected will be used in further sonar investigations within the loch.
4. Three vertical plankton tows were collected (see Fig. 1). All the animals were returned to Aberdeen for examination.

M R Robertson  
26 September 1995

Seen in draft: G Geddes (for A Simpson)

