

R1/6

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

FRV *Clupea*

Cruise 0696C

## REPORT

1-19 April 1996

### Personnel

|               |          |                        |
|---------------|----------|------------------------|
| M R Robertson | HSO      | 1-19 April (in charge) |
| C W Shand     | HSO      | 1-19 April             |
| F Armstrong   | SO       | 1-13 April             |
| E Pinn        | Res Asst | 1-19 April             |
| I Garioch     | Res Asst | 13-19 April            |
| F Armstrong   | SO       | 1-13 April             |

**Gear:** TV sledge and drop-frame, day grab, thermosalinograph, RoxAnn

### Objectives

1. To undertake an intensive TV, still photography and grab survey in selected areas of the Minches
2. To record surface temperature and salinity levels from the survey areas
3. To collect further RoxAnn data from the Minches.

**Out-turn Days:** 19 days BKE1

### Narrative

*Clupea* sailed from Ardrossan at 0700 hours on the morning of Tuesday 2 April and made for Loch Ryan. On arrival off the loch, a hydrographic mooring was located and its position noted before the vessel sailed for the Minch, dropping anchor at 2000 hours in the Sound of Mull.

The following morning, at 0615 hours, *Clupea* headed for the first station in the Sea of the Hebrides to commence a TV survey. Work continued all day until 2000 hours when the vessel moved to Canna and dropped anchor for the night.

The next day, S/SW gales prevented any TV work being attempted, however grab samples were collected from two stations before the weather deteriorated further and forced *Clupea* to move north through the Little Minch and finally drop anchor in Staffin Bay (Skye) at 1700 hours.

On the morning of Friday 5 April, *Clupea* returned to the Little Minch to attempt still photography. However, weather conditions prevented any work employing a drop frame and further grab samples were collected from the area. Later that day, improving weather

allowed the completion of still photography runs. *Clupea* then made for Loch Snizort (Skye), dropping anchor at 2230 hours. Work continued for the following six days on the TV, still photography (drop frame) and grab surveys until the morning of Friday 12 April when gale force S/SW winds again forced the vessel north. On reaching shelter in Raasay Sound, *Clupea* completed an acoustic survey of the area before heading for Kyle of Lochalsh for the half-landing.

On the morning of Sunday 14 April, *Clupea* attempted to return to the stations in the South Minch but gale force SE winds prevented work in the area and the vessel made for shelter in Loch Hourn, dropping anchor at 1100 hours. The following day, weather again prevented any work being conducted and *Clupea* made for shelter in Loch Dunvegan (Skye).

On the morning of Tuesday 16 April, the vessel returned to the vicinity of the Little Minch and completed two grab stations before moving to the area of the Shiant Islands and completing four RoxAnn transects. Deteriorating weather then forced *Clupea* to seek shelter, dropping anchor in Loch Erisort (Lewis) at 1900 hours.

Finally, on 17 April *Clupea* made for the positions in the North Minch completing five grab stations and two sledge tows before sailing for the Pentland Firth and Fraserburgh, arriving there at 1500 hours on Friday 18 April.

## Results

1. A total of 22 sledge tows; 15 mud sites and seven sand/gravel (see Fig. 1), 29 drop-frame; 12 mud sites, six rock and 11 sand/gravel (see Fig. 2) and 20 grab stations; 12 mud sites and eight sand/gravel (see Fig. 3) were sampled. The photographs, video tapes and sediment samples generated will be analysed later in the laboratory.
2. Continuous surface salinity and temperature data were collected from throughout the survey areas. These data will also be analysed later in the Laboratory.
3. RoxAnn E1, E2 and depth information was collected from Raasay Sound and around the Shiant Islands. These data will be used to create 3D images showing sediment distributions overlaid on surface plots of the local bathymetry.

M R Robertson  
20 June 1996

Seen in draft: A Simpson, OIC

FIGURE 1

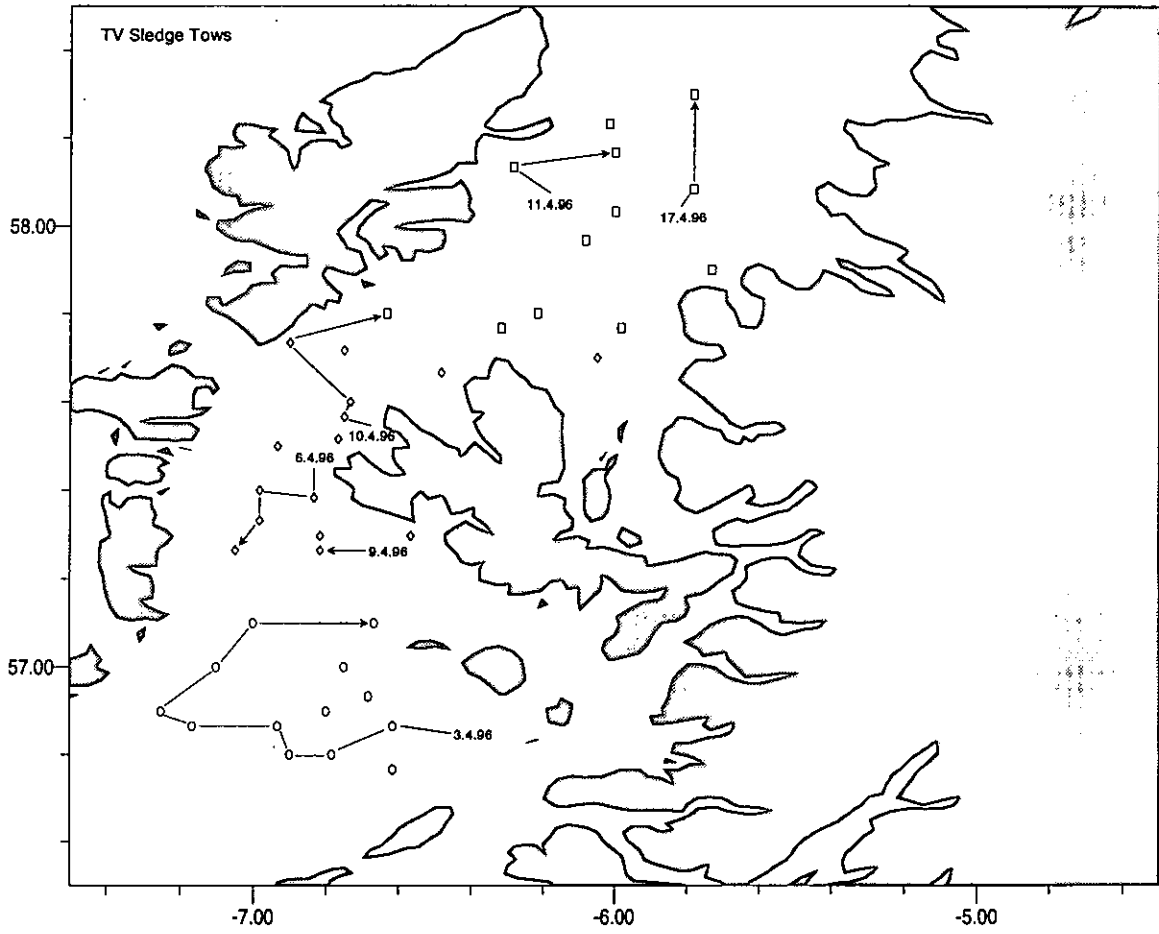


FIGURE 2

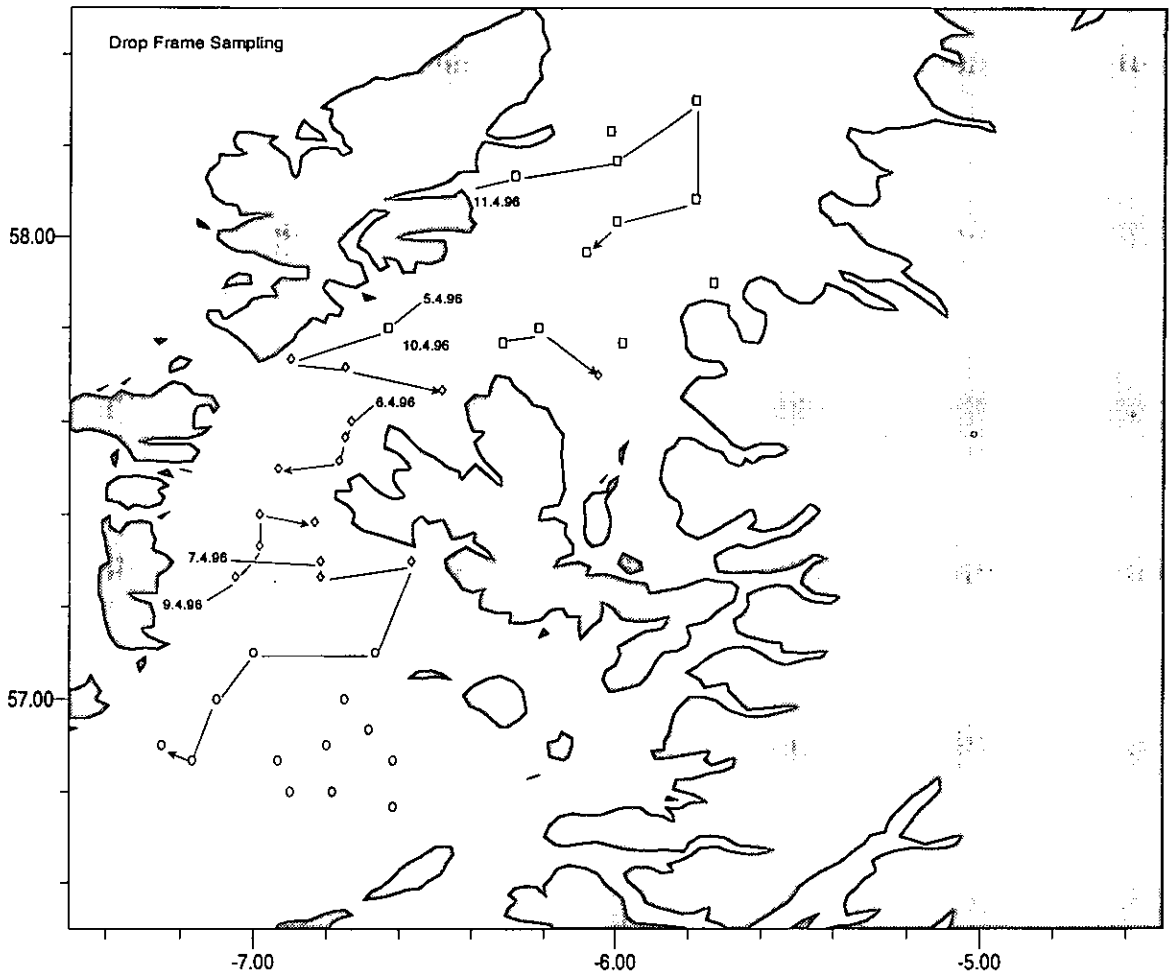


FIGURE 3

