

R1/6

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FRV *CLUPEA*

Cruise 1896C

**REPORT**

18-30 November 1996

**Ports**

Start - Corpach

End - Kyle of Lochalsh

**Personnel**

E M Macdonald	HSO (in charge)
C D Hall	SSO
S J Hay	HSO
G Slessor	HSO

**Objectives**

To conduct a large scale hydrographic, chemistry, biology and sediment survey of the Minches area, from 56°20'N-58°30'N between the mainland and the Outer Hebrides.

This cruise formed Part I of a two part survey of the whole Minch area. The following cruise, 1996C, formed Part II of the survey.

**Out-turn days per project: 13 days BGI1**

**Narrative**

Scientific personnel joined *Clupea* in Corpach at 1130 hours on 18 November 1996 and the vessel sailed at 1230 hours, to commence the survey in the Tiree passage. Gear was tested off Ardmore Point and the vessel anchored overnight in Calgary Bay. The survey began at 0730 hours on 19 November 1996 and at each station, ROSIE and CTD casts were carried out. Nutrient samples were taken at each station and chlorophyll and salinity samples were collected for calibration purposes. Sediments were sampled whenever possible using the Day Grab. Zooplankton and macroplankton were sampled using Ocean Sampler and Dual Methot net respectively. In addition, a continuous thermosalinograph record was maintained during the cruise. A total of 53 stations (47 from the main survey area and six extra sea loch stations) were sampled during the cruise period, as shown in Figures 1 and 2.

The survey proceeded well despite mixed weather conditions until 24 November 1996 when gale force SE winds prevented operations and the vessel sheltered in Loch Brittle. Work resumed the following day and proceeded without serious interruption until 28 November 1996 when the vessel was forced to abandon plans to complete a transect across the Minch

and shelter in Loch Snizort. The weather on the following day did not allow any transects to be completed, and the vessel was forced to restrict sampling to sheltered areas and sea lochs. Additional stations were sampled in Gareloch and Lochs Torridon and Sheildaig (Fig. 2).

The vessel docked in Kyle of Lochalsh at 2000 hours on 29 November 1996 and scientific personnel left the vessel at 0900 hours the following morning.

## Results

The water column was almost exclusively well mixed at each station, with little evidence of thermal or haline stratification. Temperature was mainly in the range 10-11.5°C and chlorophyll values were very low, generally <1 µg/l. Zooplankton biomass was also low, with the macrozooplankton containing small numbers of *Pasiphea* spp. and *Meganctiphanes* spp. and occasionally 0-group demersal fish. Ctenophores, mainly *Pleurobrachia* spp. were evident in many samples. Preliminary examination of grab samples showed that resting cysts of the PSP-producing dinoflagellate *Alexandrium tamarense* were present in the sediment in some locations. When available, the full results of analyses from this cruise will be combined with those from 1996C which completes the survey area of North, Little and South Minches.

E Macdonald  
5 February 1997

See in draft: A Simpson

Fig. 1a. Hydrographic and plankton stations sampled during cruise Clupea 18/96

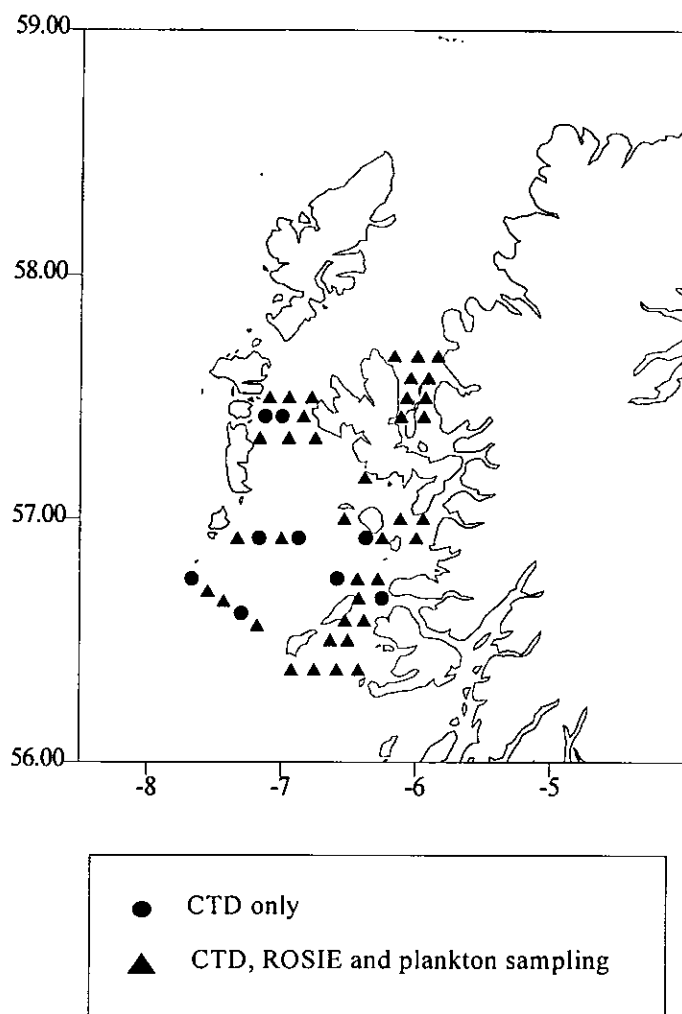


Fig. 1b. Stations sampled by Day Grab during main survey, Clupea cruise 18/96.

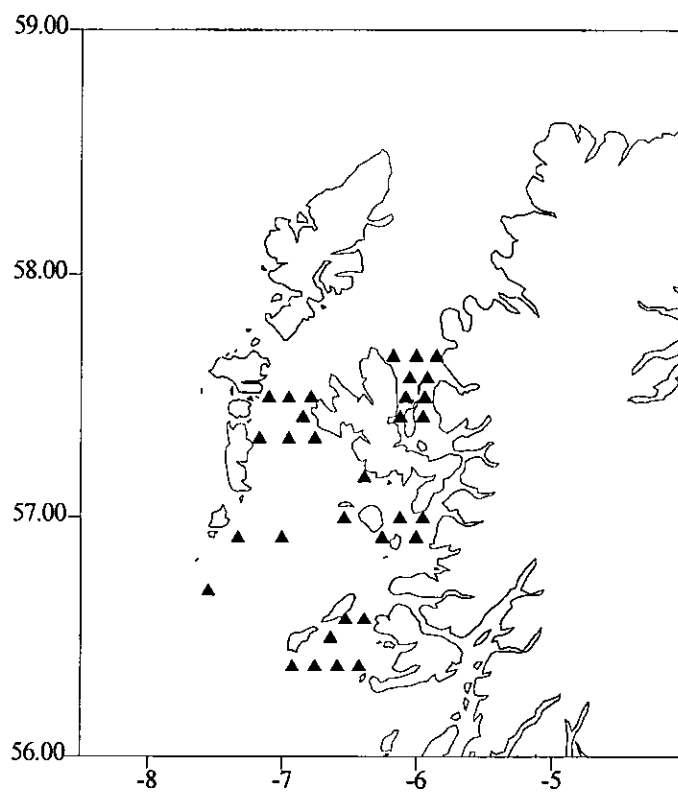


Fig.2 Extra stations in Gareloch and Loch Torridon

