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FRV *Clupea*

Cruise 2003C

## REPORT

5-17 December 2003

### Ports

**Loading:** Fraserburgh, 1 December 2003

**Sailing:** Fraserburgh, 5 December 2003

**Unloading:** Fraserburgh, 17 December 2003

### Personnel

A Weetman In Charge

C Shand

R Campbell

J Adey (University of Glasgow) Dates to be confirmed

### Gear

50 mm prawn trawl 149B (plus Scanmar)

Day Grab

Towed TV sledge, drop frame, umbilical towing cable and cameras (plus back up)

### Objectives

1. To obtain estimates of distribution and abundance of *Nephrops* in the Loch Torridon and Sound of Rassay area, as part of the Torridon project.
2. To continue this survey technique throughout several West Coast lochs.
3. To collect sediment samples at each station.
4. To use trawl caught samples of *Nephrops* to examine biological features at different sites throughout the survey area.
5. To gather visual data of the seabed in Loch Sunnart, for use in the Inshore Fisheries ROAME MFO465.

**Out-turn days per project:** 13 - MFO1TC

### Narrative

*Clupea* sailed from Fraserburgh at 1200 hours on 5 December 2003, heading into a Northerly wind which increased the steaming time to the west coast. By 1030 hours on 6 December however when *Clupea* arrived at Gairloch to collect J Adey, the weather had faired. This allowed five sites to be surveyed with the TV sledge to the North of Raasay before *Clupea* headed to Longa to anchor for the night. The weather on the following day was again calm, allowing for 10 of the more exposed northerly stations of the Inner Sound to be surveyed, before the vessel anchored in Staffin Bay. Nine stations were completed on

8 December, covering Raasay Sound and the last sites to the north of Raasay (incorporating the trawl only and mixed fishing areas as set out by the Torridon MSC project). *Clupea* then anchored in nearby Gairloch. As all the open water sites in the Inner Sound had been completed, the TV equipment was transferred from the towed sledge to the drop frame system, in preparation for work in the lochs, where creels were abundant and the size of the lochs would not suit towing the sledge. J Adey left the vessel the same night at Gairloch. A strong Southerly wind on the morning of 9 December made for difficult working conditions in Outer Loch Torridon, with only three stations completed. However, by moving up to Shieldaig Island, the situation improved, and a further eight stations were successfully surveyed in the Upper Loch, where the vessel anchored at night. The forecast suggested the weather was to due to break over the next couple of days, so the vessel headed for Loch Sunart, completing previously unobtainable stations at the mouth of Loch Torridon. Two sites were visited in the creel only area North of the DEFRA range. After an extensive search in the creel only area to the South of the range, only one safe site could be located due to the density of creels. Having completed nine TV stations for the day, *Clupea* tied up in Kyle for the night. Arriving in Loch Sunart at 1100 hours on 11 December in calm conditions, to support the Inshore Fisheries ROAME, 18 sites were recorded and photographed, illustrating the variable benthic conditions found in the loch. Two sites had extended recordings as they were used for *Nephrops* burrow density analysis, where as the remaining stations only required momentary contact with the seabed to allow a photograph to be taken. Anchoring in Loch Sunart allowed for an early start on 12 December, finishing the last seven ROAME sites before the wind proved too strong for work to continue. With gales arriving from the Northwest, it was decided that *Clupea* would be unable to carry out TV duties on the West Coast for a further three days, and so the vessel headed for the Moray Firth, visiting Arisaig Bay to confirm its *Nephrops* suitability for future investigation. Due to the weather and time constraints, no trawling was carried out on the West Coast. At 1230 hours on 13 December the vessel was off Helmsdale, in a southwesterly force 6 wind was unable to work and went to anchor off Golspie. The wind died down over night, but the swell remained throughout 14 December, during which nine TV sites were visited in crab grounds and scallop grounds previously surveyed by the Inshore Fisheries Group. The swell proved too difficult to work in on 15 December at the more northerly scallop grounds, but by heading south all the time, nine scallop areas were successfully surveyed, before anchoring off Cromarty. On 16 December a traditional creeling area was visited off Lossiemouth, (which was also one location where large amounts of squid eggs had recently been trawled up by fishermen), but the sea state only allowed two sites to be effectively surveyed. These concluded the TV survey, the results of which indicated *Nephrops* burrow densities on the West Coast for areas visited; visualised the seabed area within the ROAME project's geographical limits; provided digital recordings of crab and scallop grounds; and video footage of areas in the Moray Firth for the EPS group at the Marine Laboratory. *Clupea* arrived in Fraserburgh late on the afternoon of 16 December, where the TV cable was taken off the winch, and all the Instrumentation equipment was cleaned and packed. Unloading was carried out on 17 December.

## Results

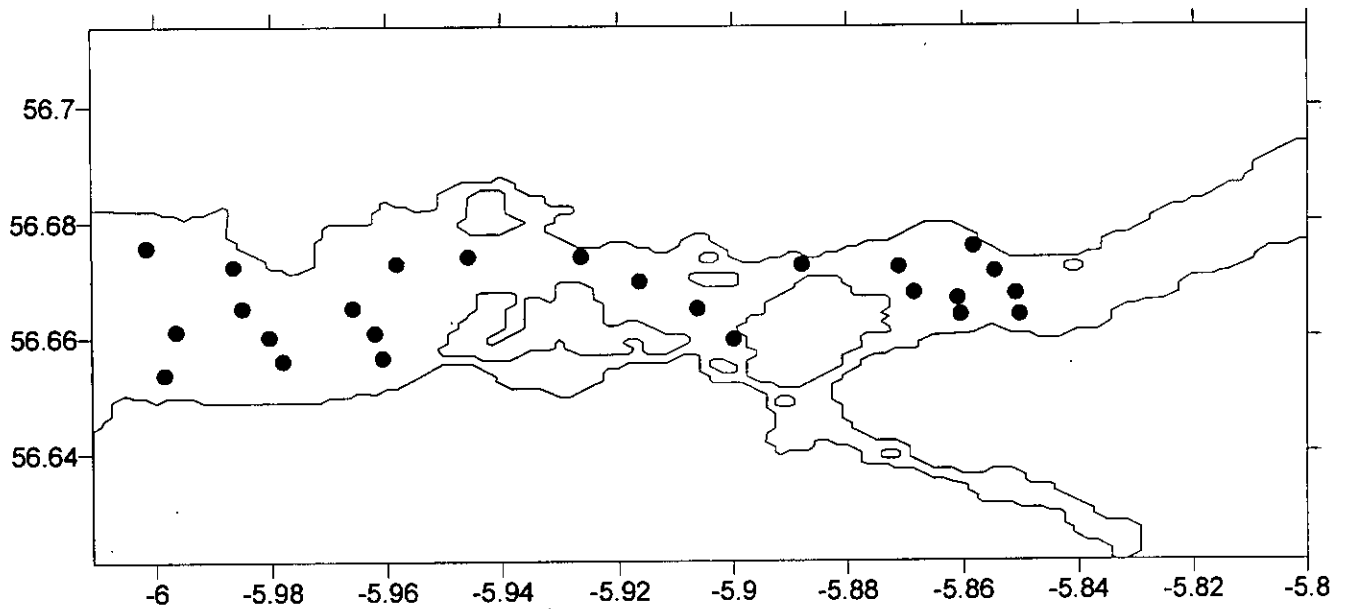
The distribution of TV stations are shown on the charts.

Sediment samples were collected at all suitable sites.

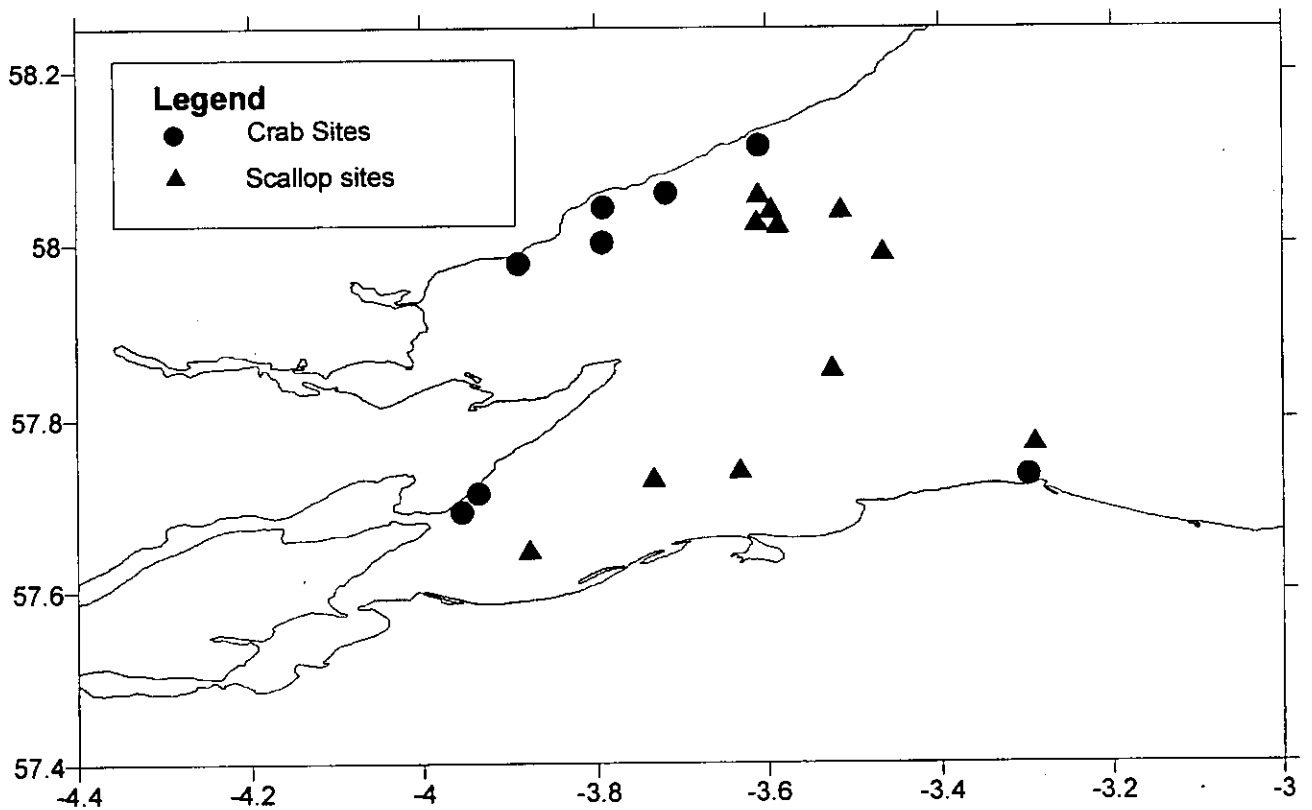
Video recordings of *Nephrops* burrow densities have been verified, with the results yet to be analysed.

AWeetman  
6 February 2004

## Loch Sunnart, ROAME Sites, Cruise 2003C



## Moray Firth, Crab and Scallop Sites, Cruise 2003C



## Inner Sound and Loch Torridon Sites, Cruise 2003C

