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FRV *Clupea*

Cruise 0102C

REPORT

8-19 January 2002

Ports

Start Point: Fraserburgh

End Point: Fraserburgh

Half Landing: To be decided

Personnel

A Weetman In charge
C Shand
B Ward

Gear

50 mm prawn trawl BT 149B (plus Scanmar)

Day grab

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

Objectives

- To obtain estimates of distribution and abundance of *Nephrops* in selected sea lochs on the West coast using underwater cameras. TV work will also attempt to tie in with sea lochs investigated during cruises 0201C and 1501C.
- To collect sediment samples at each station.
- To use trawl caught samples of *Nephrops* to examine biological features at different sites throughout the survey areas.
- The TV survey will also be used to collect data on other potential commercial species.

Out-turn Days per Project: 12 days MF01T

Narrative

Clupea sailed from Fraserburgh at 1130 hours on Tuesday 8 January, and owing to the weather, headed straight for the Inner sound, missing out Loch Eribol. TV work was first attempted west of Loch Ewe at 1100 hours on Wednesday 9 January, but poor sea conditions cut short further work in that area. Subsequently, *Clupea* steamed southwest towards Staffin Island, where one station was completed, again in poor conditions. In the light of the weather forecast it was decided to head for Kyle that night, where the TV equipment was transferred to the drop frame to enable work in the southern lochs to continue over the next few days. At each site a ten-minute video recording of the sea bed was made, and a mud sample was taken at the end of

the run. In addition, still photos and mud samples were taken on behalf of Jim Kinnear for Roxann calibrations at a number of locations within the lochs. All the Loch Hourm and half of the Loch Nevis stations were completed by the end of Friday 11 January - with the vessel spending the night at anchor in Loch Nevis. The following day saw completion of Loch Nevis, Loch Duich and Loch Alsh - with the vessel returning to Kyle each night and with Loch Kishorn being fully sampled on Saturday 12 January. Loch Torridon was targeted next, but with numerous creels being present in the outer loch sampling effort had to be concentrated in the inner loch (where *Clupea* anchored the same night). The weather remained poor on Monday 14 January with no work being possible and accordingly *Clupea* steamed to Gairloch, to provide easy access to the Inner Sound stations. On Tuesday 15 January (as work in the Inner Sound appeared to be possible) the TV equipment was transferred back to the sledge and one station was completed. The vessel then headed for the south of Raasay Sound hoping to gain some shelter, and one station was successfully completed. As the vessel proceeded north however, the water clarity worsened (due to trawler activity) and TV work was terminated. With the wind picking up, the only alternative was to trawl in the 'mixed fishing' zone above Loch Torridon. En-route there *Clupea* spent the night in Gairloch - only managing to trawl and carry out one TV station the following day before anchoring in Staffin Bay for the night. TV work was continued the following morning, but in the afternoon, conditions deteriorated and with a poor forecast it was decided to head for Fraserburgh - with the vessel docking there at 1330 hours on Friday 18 January at the end of the cruise. The equipment was then dismantled, as conditions had been too poor to carry out this work en route. The vessel was unloaded the following Monday.

Results

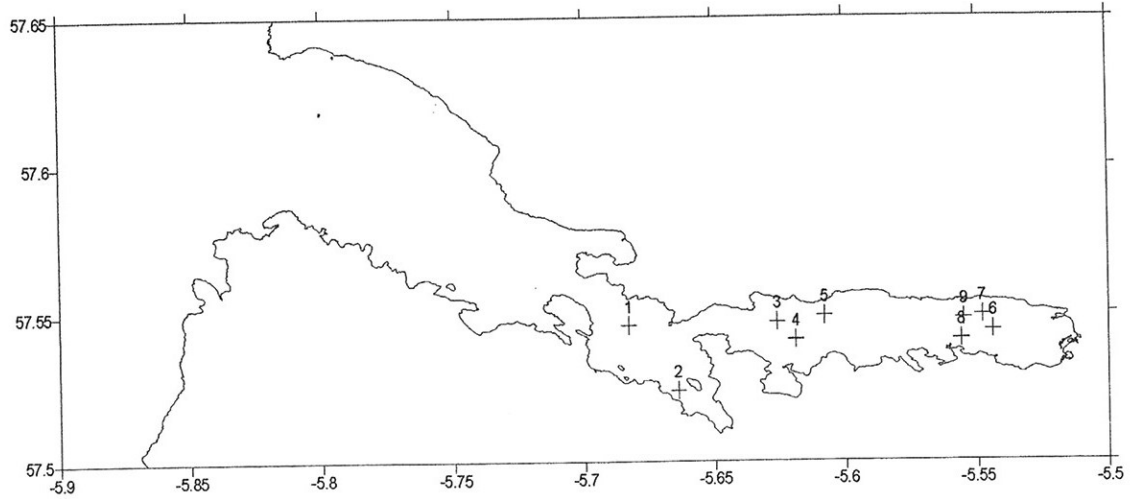
Preliminary estimates of mean *Nephrops* burrow density for each station are shown in Table 1. The TV stations, calibration and trawl sites are shown on the figure.

Final analysis of the videotapes will be carried out within the Laboratory.

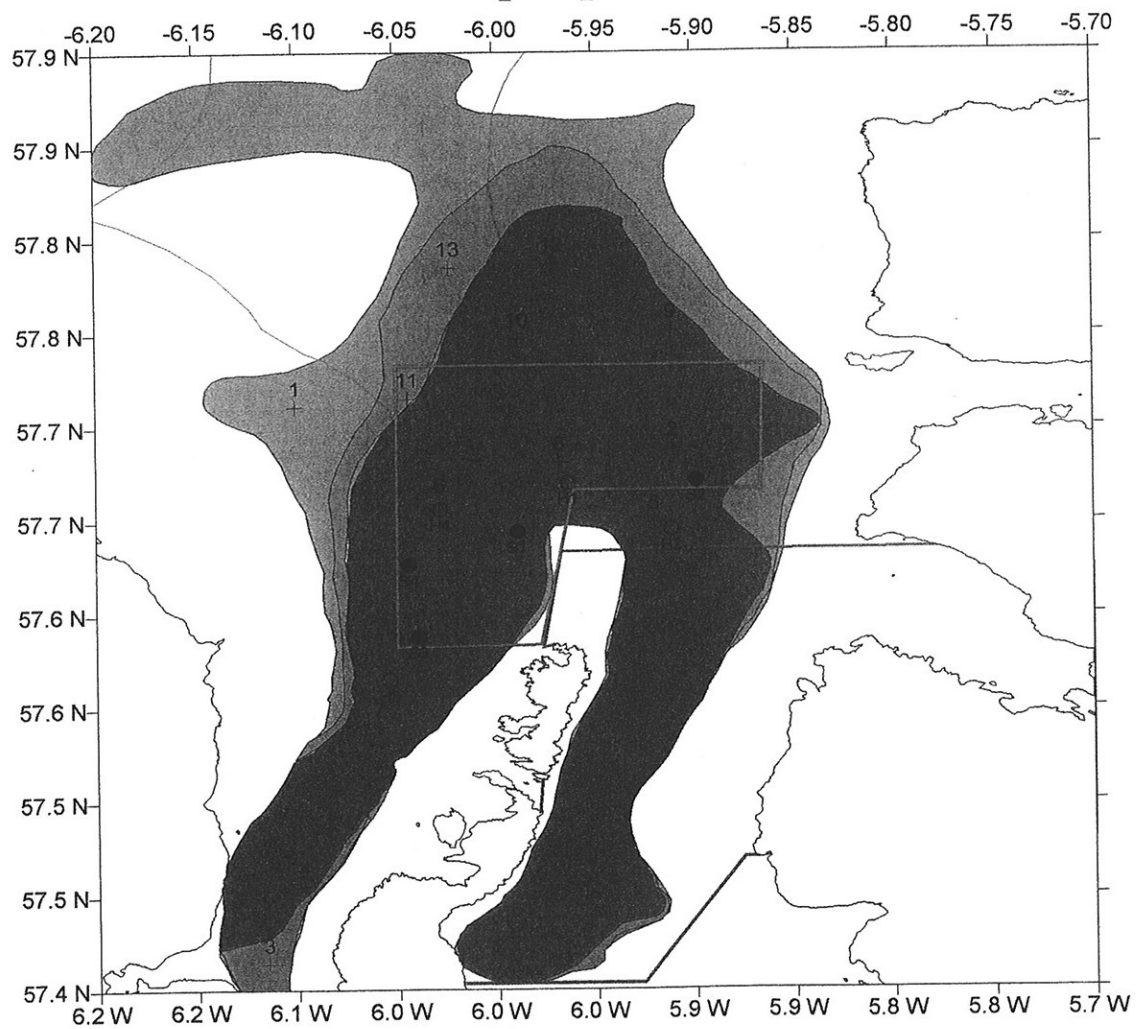
Adrian Weetman
11 February 2002

Seen in draft: A Nichol, OIC *Clupea*

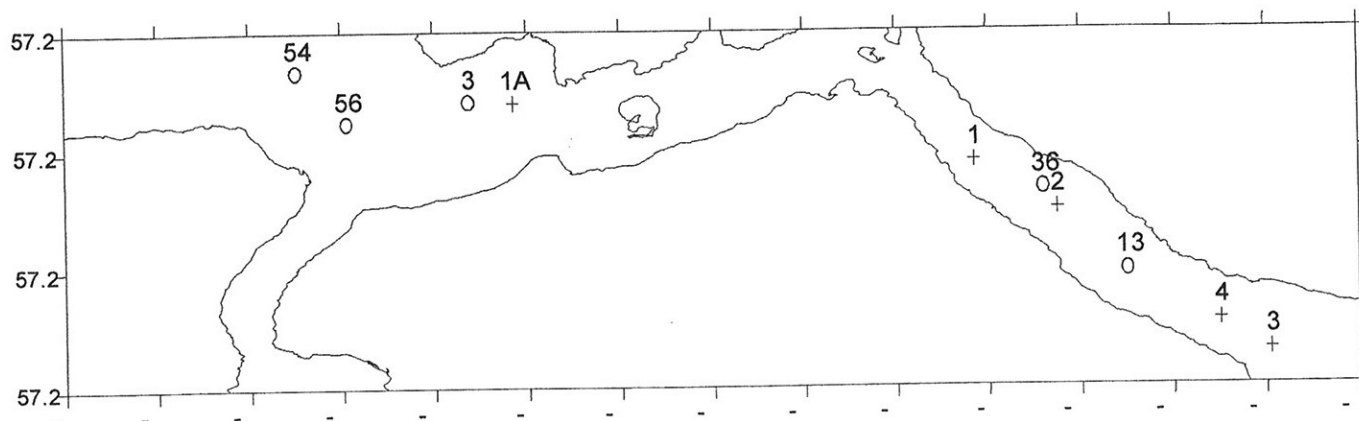
Loch Torridon



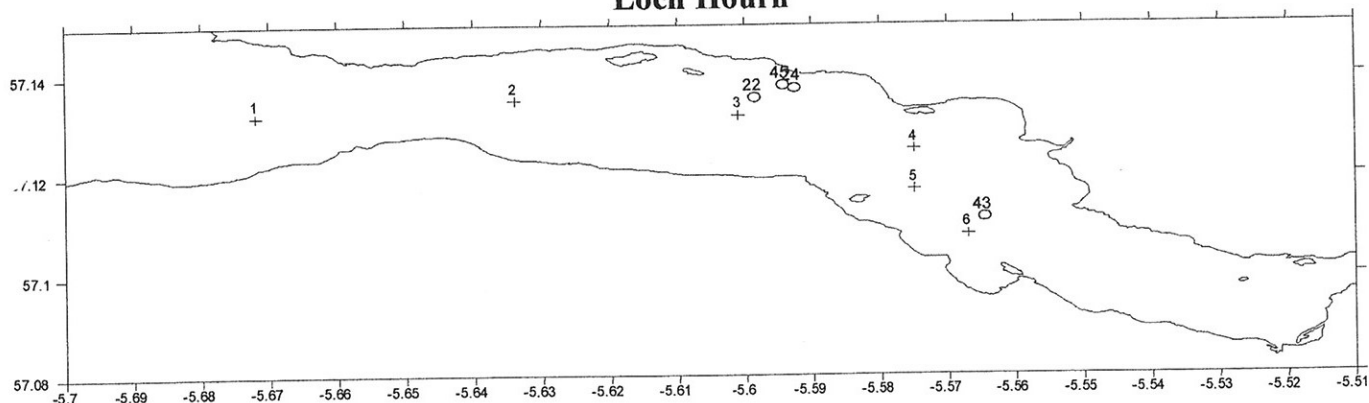
Inner Sound *Nephrops* TV sampling 2002



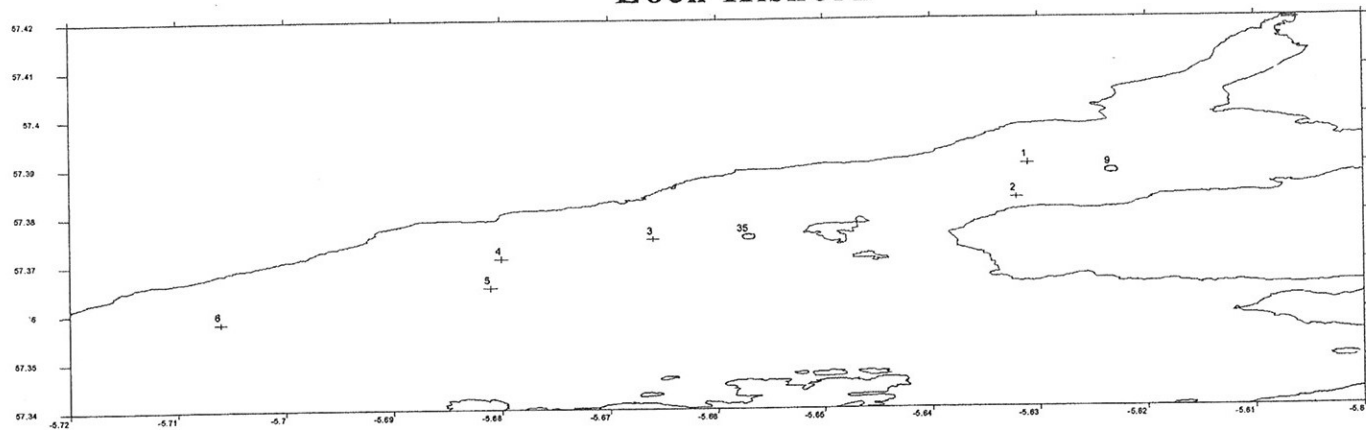
Loch Duich & Loch Alsh



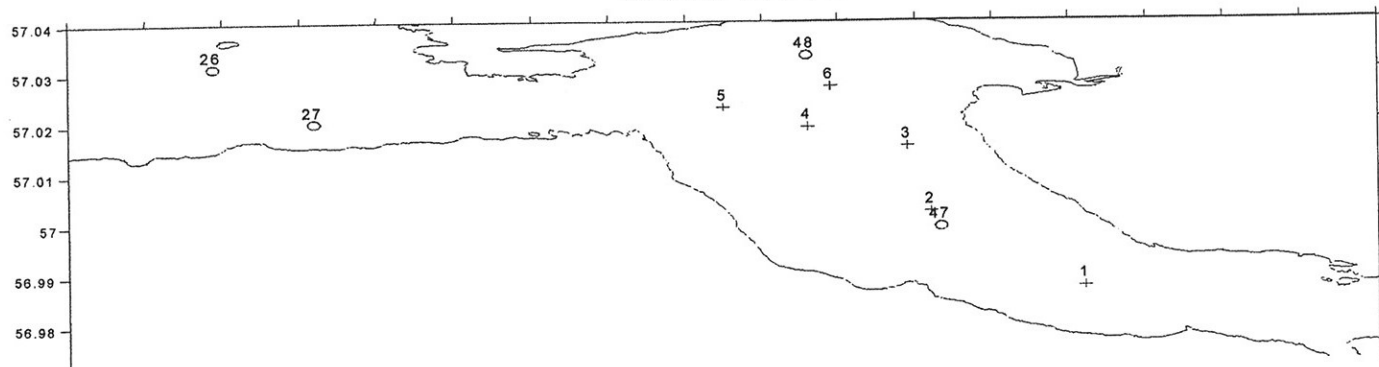
Loch Hourn



Loch Kishorn



Loch Nevis



Clupea January 2002

	Station	Long.	Lat.	Preliminary Density
LOCH HOURN	2002H001	-5.672	57.132	0.02
	2002H002	-5.634	57.135	0.12
	2002H003	-5.601	57.132	0.25
	2002H004	-5.575	57.125	0.17
	2002H005	-5.575	57.117	0.13
	2002H006	-5.567	57.108	0.12
LOCH NEVIS	2002N001	56.987	-5.688	0.12
	2002N002	57.002	-5.688	0.08
	2002N003	57.015	-5.691	0.07
	2002N004	57.019	-5.704	0.37
	2002N005	57.023	-5.715	0.00
	2002N006	57.027	-5.701	0.19
LOCH DUICH	2002D001	57.258	-5.503	0.07
	2002D002	57.25	-5.485	0.03
	2002D003	57.226	-5.439	0.05
	2002D004	57.231	-5.45	0.11
LOCH ALSH	2002A001	57.268	-5.603	0.00
LOCH KISHORN	2002K001	57.39	-5.631	0.38
	2002K002	57.383	-5.632	0.41
	2002K003	57.375	-5.666	0.41
	2002H004	57.371	-5.68	0.21
	2002H005	57.365	-5.681	0.17
	2002H006	57.358	-5.706	0.10
LOCH TORRIDON	2002T001	57.546	-5.683	0.04
	2002T002	57.524	-5.664	0.36
	2002T003	57.547	-5.626	0.00
	2002T004	57.541	-5.619	0.20
	2002T005	57.549	-5.608	0.21
	2002T006	57.544	-5.544	0.40
	2002T007	57.549	-5.548	0.42
	2002T008	57.541	-5.556	0.26
	2002T009	57.548	-5.555	0.41
	2002R001	57.711	-6.1	0.70
INNER SOUND	2002R002	57.688	-5.91	0.41
	2002R003	57.414	-6.115	0.39
	2002R004	57.455	-6.097	0.00
	2002R005	57.649	-5.92	0.46
	2002R006	57.659	-6.028	0.52
	2002R007	57.54	-6.059	0.53
	2002R008	57.68	-5.97	0.63
	2002R009	57.75	-5.91	0.53
	2002R010	57.75	-5.99	0.61
	2002R011	57.72	-6.04	0.59
	2002R012	57.79	-5.97	0.46
	2002R013	57.79	-6.02	0.51

Roxann Calibration

	Frequency	Colour Code	Station	Lat.	Long.
LOCH HOURN	120	R	22	57.1355	-5.5986
	38	R	43	57.1113	-5.5645
	120	G	24	57.1373	-5.5926
	38	G	45	57.1379	-5.5943
LOCH NEVIS	38	LB	47	56.9990	-5.6867
	38	Y	48	57.0332	-5.7041
	120	Y	27	57.0201	-5.7681
	120	LB	26	57.0313	-5.7812
LOCH DUICH	120	P	13	57.2394	-5.4700
	38	P	36	57.2534	-5.4880
LOCH ALSH	120	Y	3	57.2682	-5.6125
	38	DB	56	57.2647	-5.6387
	38	Y	54	57.2734	-5.6497
LOCH KISHORN	120	Y	9	57.3883	-5.6233
	38	G	35	57.3753	-5.6571

Trawling Positions

TRAWL No.	LAT. SHOT	LONG. SHOT	LAT. HAILED	LONG. HAILED
1	57 38.65	05 59.36	57 40.19	05 57.81
2	57 40.26	05 53.91	57 38.71	05 54.67
3	57 35.29	06 02.36	57 33.91	06 03.23
4	57 37.59	06 02.64	57 39.37	06 01.68