

Indexed *HR*

PD

R1/6

Not to be cited without prior reference to the Laboratory

FRV "CLUPEA"

CRUISE 7/88

7CR88

REPORT

25 July-12 August 1988

Personnel

G Howard	SSO
C Shand	SO
K MacKenzie (Jnr)	ASO
S MacLachlan	Casual ASO

Objectives

1. To determine Nephrops trawl catch rates, sex and size composition, growth and maturity on grounds in the Clyde, Sound of Jura and the Minches.
2. To study Nephrops distribution in relation to sediment characteristics.
3. To obtain television and photographic records of Nephrops.
4. To obtain sediment samples for particle size, organic carbon and faunal analysis.

Narrative

The scientific staff joined and equipment was loaded at Greenock on 25 July, but SW gales delayed departure until 26 July. On 26 July, "Clupea" began a programme of trawl and grab sampling, and photographic surveys at stations in the Clyde. On 31 July, a similar programme was started in the Sound of Jura, and on 1 August "Clupea" proceeded to Oban for the half landing on 2 August. On leaving Oban, "Clupea" proceeded to the Colonsay-Tiree area, and then into the South Minch. Working clockwise around Skye, "Clupea" returned to the South Minch to sample stations on Maxwell Bank, before continuing the survey of North Minch stations. "Clupea" left the North Minch on 10 August, heading for Buckie where she arrived at 2100 hours on 11 August. Scientific staff left the ship on 12 August.

Results

Trawling: Six, one-hour, and eight half-hour hauls were made using the small mesh trawl BT118A. Severe problems were encountered with the net scooping up large quantities of very soft mud. After changing to a larger mesh net, the 30 fm prawn trawl, BT149B, a further two half-hour and 13 one-hour hauls were made.

Nephrops catch rates were variable, and ranged from 0-36.6 kg/hr (BT118A) and from 0.2-36 kg/hr (BT149B).

Nephrops catches are detailed by area in Table 1.

Fish catches were generally poor. In the Clyde, quantities of sprat were taken, and in the Minches whiting and horse mackerel were the most prevalent species. Quantities of Crangon allmoni were caught off Arran.

Samples of the Nephrops catch were analysed for ovary maturity and pre-moult frequency.

Grab sampling: Sediment samples were taken using a Day grab from two stations along the track of each trawl haul. Samples of sediment were sent for particle size and organic carbon content analysis, and samples were retained for faunal analysis.

Photographic survey: A sledge carrying still and video cameras was towed over selected stations, and photographic material obtained for later analysis.

General: Water samples for radio-caesium analysis were collected at Cape Wrath, Pentland Firth and Buckie.

G Howard

14 October 1988

Seen in draft: W Smith

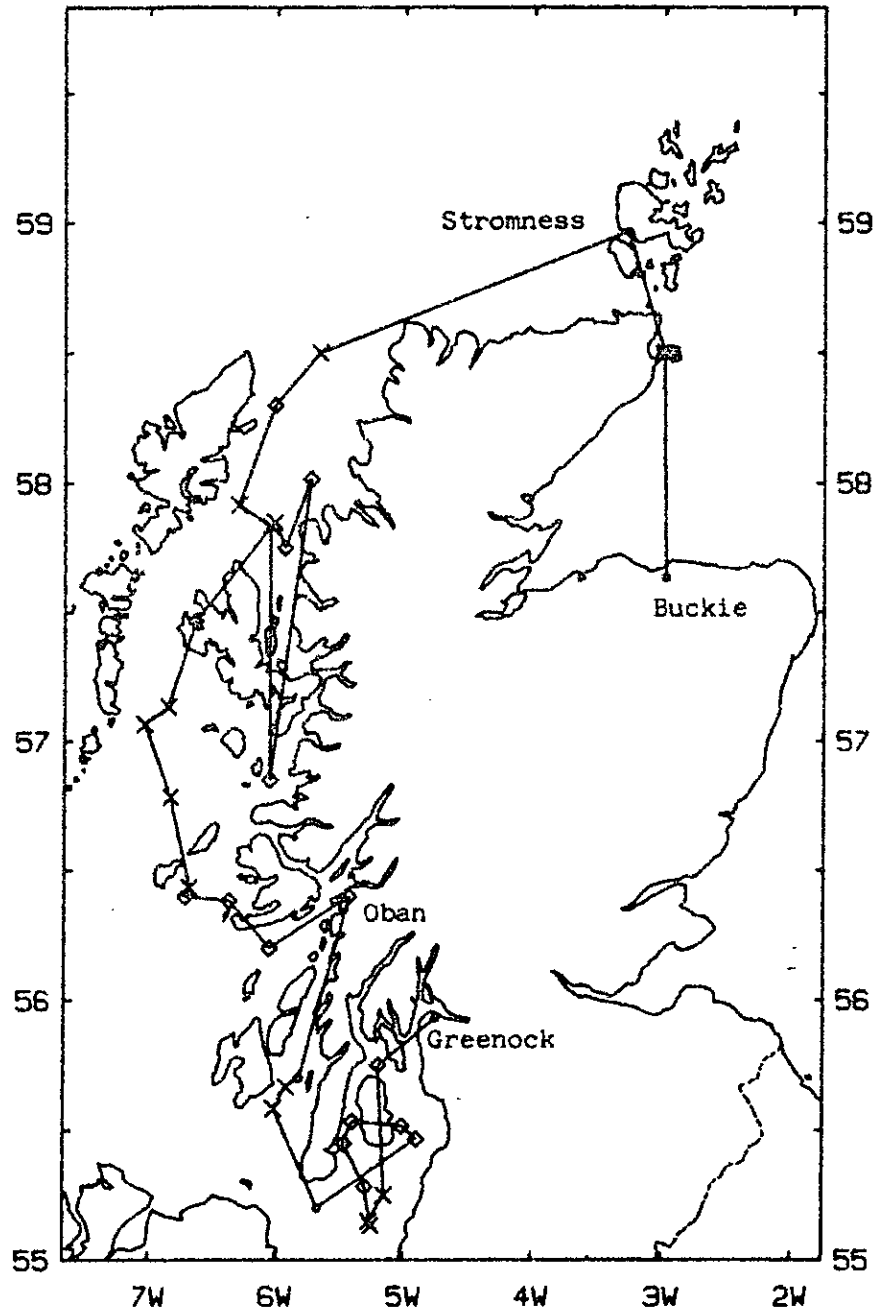
Table 1

Carapace length and sex composition of Nephrops catches by area

CL mm	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	MCL	Total
<u>22 mm prawn trawl</u>												
<u>Clyde</u>												
Male	0	16	168	336	101	62	25	5	1	1	27.9	715
Female	1	19	285	439	163	86	33	5	1	0	27.6	1032
<u>Sound of Jura</u>												
Male	0	18	97	180	106	23	2	1	1	0	27.4	428
Female	5	64	157	237	82	15	0	0	0	0	25.3	560
<u>30 fm prawn trawl</u>												
<u>Colonsay and Tiree</u>												
Male	0	9	187	347	338	128	11	3	0	0	29.2	1023
Female	2	20	311	497	193	11	0	0	0	0	26.2	1034
<u>South Minch</u>												
Male	0	47	336	863	690	199	29	6	2	2	28.8	2174
Female	2	45	316	935	363	71	6	0	0	0	27.3	1738
<u>North Minch</u>												
Male	0	3	26	196	292	166	51	13	2	0	32.3	749
Female	0	4	42	165	281	141	26	2	1	1	31.6	663

CLUPEA 7/88

7W 6W 5W 4W 3W 2W



- ◇ Trawl, grab and camera station
- × Trawl and grab station
- Camera station

OS/MA/88