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IN CONFIDENCE: Not to be quoted without reference
to the Laboratory.

CRUISE REPORT

FRV MARA

29 MAY-1 JULY 1972

OBJECTIVES

1. To determine the stock composition and abundance of Norway lobsters on the fishing grounds in the Firth of Clyde, South Minch, North Minch and Noup Deep.
2. To obtain data on spawning of Norway lobsters.
3. To establish the by-catch of white fish species in the Norway lobster fishery.
4. To devote two days, 30 and 31 May, to Clyde environmental sampling.
5. To obtain information on the distribution of pandalids.

NARRATIVE

Mara sailed from Ardrossan at noon on 31 May and finished the Clyde environmental sampling on 2 June. Scientific staff for the Nephrops survey joined Mara on the evening of 4 June and commenced the survey next day. The donkey engine clutch lining had to be replaced in Oban which lost one and a half working days. Bad weather in the North Minch area precluded working the Noup Deep ground; this part of the survey was switched to the Moray Firth. The survey finished at Buckie on 29 June.

RESULTS

Norway lobsters

A total of 17,182 Norway lobsters were measured and classified as to sex and condition. Ovary development was noted in samples from each area surveyed. The stock composition of Norway lobsters, by areas, is shown in Table 1. The percentage of total females within each ovary development stage is shown by area in Table 2.

Whitefish

The most common commercial species of white fish caught in each area is shown in Table 3. A red-band fish (Cepola rubescens) was taken in the area ZZ10c. Codends were measured and recorded as requested by the gear section.

Dredging in Sollum Voe disclosed a large population of horse mussel (Modiolus) along the middle of the Voe in 15-20 fathoms.

During the cruise the echosounder was run more or less continuously. Good fish traces, probably of herring, were found on several occasions between Sumburgh Head and Helli Ness. The records were reported to the laboratory, and the traces kept.

A. D. McINTYRE
2nd November, 1962.

TABLE 1

The percentage size composition of male and female Norway lobsters in specified areas round Scotland, together with the number of individuals sampled, the mean carapace length in mm and the percentages of soft and berried.

Area	No. in sample	10/ 14	15/ 19	20/ 24	25/ 29	30/ 34	35/ 39	40/ 44	45/ 49	50/ 54	55/ 59	60/ 64	65/ 69	70/ 74	Mean C.L.	% Soft	% berried
Firth of Clyde	1193 ♂	-	-	0.5	10.1	31.2	24.3	16.8	10.7	3.9	1.7	0.6	0.2	-	37.2	4.6	0.2
	1247 ♀	-	0.1	0.5	14.3	48.7	32.5	3.4	0.3	0.1	0.1	-	-	-	33.3		
West of Scotland	2733 ♂	+	2.0	15.8	38.8	24.8	10.7	4.2	2.3	0.8	0.4	0.1	-	+	29.6	0.9	0.8
	6173 ♀	-	1.6	16.4	47.2	29.4	5.2	0.1	+	-	-	-	-	-	28.0		
North Minch	1295 ♂	-	0.1	2.7	21.7	35.4	22.2	10.8	3.5	1.1	1.1	1.2	0.3	-	34.3	1.1	0.03
	3197 ♀	-	-	0.9	21.9	46.0	28.3	2.7	0.1	-	-	-	-	-	32.5		
Moray Firth	799 ♂	-	0.1	3.8	20.7	40.3	20.7	10.4	3.3	0.7	-	-	-	-	33.3	1.1	0.2
	545 ♀	-	-	4.4	22.8	48.1	22.2	2.1	0.2	-	-	-	-	-	31.7		

Total No. ♂: 6,020

Total No. ♀: 11,162

TABLE 2

The percentage of the catch of female Norway lobsters sampled for each stage of ovary development 0 to V, and berried, by areas.

Area	Firth of Clyde	Scottish West Coast	North Minch	Moray Firth
No. in sample	644	1758	921	463
0	1.4	7.4	1.8	5.6
I	3.3	8.9	3.6	14.9
II	1.2	7.2	1.6	1.1
III	18.3	18.2	7.6	3.5
IV	48.9	35.3	40.0	33.7
V	26.7	22.3	45.3	41.2
Berried	0.2	0.6	0.1	-

TABLE 3

The numbers of commercial white fish species caught in each area by Mara during the Norway lobster survey

Area	No. of $\frac{1}{2}$ hr hauls	Lemon Sole	Plaice	Common dab	Megrin	Witch	Cod	Haddock	Hake	Saithe	Whiting
Firth of Clyde	13	65	4	131	2	19	41	15	620	203	333
Scottish West Coast	8	10	1	3	6	107	7	141	233	-	517
North Minch	8	71	-	11	11	130	4	50	381	-	923
Moray Firth	16	170	14	858	-	495	79	2490	11	-	1034