

CRUISE REPORT

F.R.S. "SCOTIA"

6th - 31st July, 1962.

Objectives

The primary objectives of the cruise were -

- (1) to tag Norway lobsters on the principal fishing grounds around Scotland,
- (2) to determine the extent of the Norway lobster grounds and obtain information on stock composition,
- (3) to survey whiting stocks on the Norway lobster grounds off the Scottish west coast.

In addition to the above objectives, a limited programme of hydrography and plankton was detailed.

Method

Norway lobsters and white fish were sampled by a nephrops trawl of about 70 mm mesh in the wings and bag. The net was rigged with a minimum number of floats on the headrope, and towing speed reduced to the minimum. The cod and mesh averaged 64.6 mm. A coullene topside cover was attached to the codend, which was fitted with blinders.

Norway Lobsters

Investigations were undertaken in the Firth of Clyde, off the west of Scotland (the Sound of Jura, and to the west of Mull), the North Minch, the Moray Firth and the Firth of Forth. The stock composition of male Norway lobsters in these areas is shown in Table 1.

One thousand male Norway lobsters were tagged and released in each of the above areas, with the exception of the Firth of Forth, where about 800 were released.

The principal predators on Norway lobsters were cod, Scyllium canicula, and Raja clavata; in addition, Pristiurus, conger, witch, haddock, hake, whiting and halibut were found to have been feeding on Norway lobsters. Infestation of Norway lobsters Stichocotyle nephropsis was common in the Minch but probably less so than in 1961.

White fish

Records of the catch per 10 hours' trawl of the more commonly occurring white fish in each area were made. The contents of cod stomachs were recorded and flesh examined for parasites. Whiting were otolithed and other species dealt with according to standing instructions.

Hydrography

Temperature and salinity samples were taken from standard depths in all areas.

Plankton

Plankton on both east and west coasts of Scotland was generally poor, consisting almost entirely of coelenterate forms, i.e., Aurelia, Cyanea and Pleurobrachia. A large concentration of Calanus was encountered at the entrance to the South Minch and this was associated with numbers of Sagitta elegans. Further south off the coast of Northern Ireland and approaches to the Clyde, Limacina retroversa occurred in all samples.

Table 1

The percentage size composition in 5 mm carapace length groups of male Norway lobsters in certain areas round Scotland, together with the number of individuals sampled and the mean carapace length in mm.

	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
Firth of Clyde	4947	0	5.5	9.4	18.1	27.3	22.5	12.6	7.1	2.0	0.4	0	0	0	33.9
West of Scotland	3729	0.1	2.6	21.1	24.8	20.5	14.6	8.7	3.9	2.8	0.8	0.1	0	0	31.2
North Minch	3693	0	+	1.4	7.7	24.3	25.8	15.8	9.4	6.5	5.5	2.9	0.8	0.1	40.0
Moray Firth	2984	0	0.7	7.8	33.3	28.9	14.0	8.8	4.7	1.4	0.3	0	0	0	32.1
Firth of Forth	1348	0	0.1	3.3	12.4	17.1	26.8	18.4	11.4	6.0	3.1	1.2	0.2	0	38.3