

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

CRUISE REPORT

FRV "Goldseeker"

21 July - 21 August 1969

Narrative

"Goldseeker" left Buckie on 21 July and proceeded through the Caledonian Canal to Corpach. While on passage through Loch Ness hydrographic sampling was undertaken. The cruise ended at Corpach on 20 August.

Trawling was carried out at various stations in Loch Linnhe, the Inner Sound, Sound of Sleet, Tiree Passage and Firth of Lorne.

Escallop dredging was undertaken in sheltered waters around Eigg, Kerrera and in the Sounds of Sleet and Lull, when weather conditions made trawling impossible. A standard 4 ft dredge with a 12-toothed bar was used, and hauls were of 15 minutes duration.

ResultsTrawling: Nephrops

Good hauls of Norway lobsters were made in several places within each of three main areas, the results being tabulated below.

Inner Sound - July

Carapace length mm	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Totals	Mean Carapace length
♂		1	15	58	95	124	153	127	128	82	56	9	2	850	49.5
♀		2	11	84	75	24	4							200	35.5
Unmated ♀				3										3	33.2

August

♂		3	9	19	27	61	88	103	78	54	23	5		470	50.9
♀		4	8	24	18	10	1							65	34.2
Unmated ♀				1										1	

Tiree Passage - August

♂	1	56	255	299	203	87	42	6						949	33.3
♀	2	65	330	250	42	2								691	29.4
Unmated ♀	3	15	12	3										33	29.7

Loch Linnhe - July

Carapace length mm	15-9	20-4	25-9	30-4	35-9	40-4	45-9	50-4	55-9	60-4	65-9	70-4	75-9	Totals	Mean Carapace length
♂		2	26	76	80	81	51	34	14	2				366	40.4
♀		3	28	111	238	58	5							443	36.3
Berried ♀			1	2	4									7	34.6

August

♂		1	28	66	76	78	38	39	13	1				340	41.2
♀		1	15	143	418	89	4							670	36.7
Berried ♀			1	15	39	7								62	36.7

Pandalus

Pandalids were absent from most hauls, and when taken were few in number. The total catch for all areas was 200 shrimps. Loch Linnhe and Inner Sound were the only places in which more than single shrimps were taken in any one haul.

Loch Linnhe			Inner Sound		
	Total	Mean Carapace Length mm		Total	Mean Carapace Length mm
♂	46	17.5	♂	47	18.1
♀	47	17.8	♀	60	17.9

Squid

In Three Passage (stat. sq. XX11a) a total of 243 Loligo of size range 4-20 cm were taken.

White Fish

Of the fish caught, Whiting, Haddock, Hake and Witch were the most common. Fair sized fish were taken in Inner Sound, the best catches being:-

Haddock 341; size range 22-37 cm
 Hake 118; size range 15-60 cm
 Witch 276; size range 14-38 cm

The best catches of Whiting were made in Three Passage where 231, size range 20-34 cm and 141, size range 6-14 cm were taken. In the same area 350 Sprat, size range 7-12 cm were caught. Small Whiting were also plentiful in Loch Linnhe (340. 7-20 cm).

Dredging

Escallops were taken in each of the areas fished, but catches were generally poor. The best hauls were made in the Sound of Mull, (Scallastle Bay and off Fishnish Point) (11 and 12 Pecten / $\frac{1}{2}$ hr respectively).

The escallops were all old, 66.7% being over nine years, the mean length was 121.7 mm

Hydrography

In Loch Ness the water column at a point opposite Urquhart Castle was examined for temperature, salinity, oxygen, biological oxygen demand, free phosphate, nitrate, nitrite, silicate and pH.

The temperature at the surface, 14.5°C, differed markedly from that at 60m (6.1°C) and the bottom 220m (5.45°C). Oxygen saturation fell off from 102.7% at the surface to 93.1% at 60 m, and dropped abruptly to 72.6% in the bottom 10 m. Phosphate and nitrite values were low, while nitrate and silicate were high by sea water standards. No trace of salt water was found.

Nutrient utilisation is very poor in the loch, possibly because the very low value of phosphate is limiting.

Seals

A colony of ca 80 seals was observed on Eilean nan Gamhna, Kerrera.

F G HOWARD
30 October, 1969