

L. W. G.

R1/10

FRV 'Goldseeker'

In Confidence: not to be quoted without prior reference to Laboratory

Cruise 3/81 2 Feb - 2 April 1981

Report

3GR81

Objectives

1. To study the age and length composition of scallop and queen stocks in the Clyde area and west of Kintyre.
2. To select areas suitable for later gear studies.
3. To compare the standard commercial dredge with one of larger mesh, ring size and tooth spacing.

Narrative

'Goldseeker' left Buckie at 01.45 on 3 February 1981 and made a passage via the Caledonian and Crinan Canals to Troon, arriving at 20.30 on 6 February. Scientific staff joined ship at 8 February and scientific investigations started on 9 February.

The compositions of scallop stocks in the Clyde, the Sound of Jura and the Sound of Mull were studied by means of dredges. Comparisons were made between standard dredges and dredges with increased tooth-spacing, rings and meshes. With two week-end breaks for the crew, work continued until 30 March. The scientific staff left the ship at Corpach at 08.00 on 31 March and 'Goldseeker' made a passage via the Caledonian Canal to Buckie, arriving on 2 April.

Results

1. Scallop and queen stock survey

A total of 113 hauls were made in the Firth of Clyde, West of Kintyre and The Sound of Mull using two scallop dredges to the bar (one sampling dredge with 16 teeth, 2 1/4" mesh, the other a standard dredge with 12 teeth, 3 1/2" mesh). Scallops were caught on most grounds with the best catches at Lamlash and Ardlamont, and in The Sound of Mull. The age and length composition of scallops caught are shown in Table 1. Younger scallops were most common in the West Clyde area although new recruits to the fishery were found in all areas fished.

Queens were abundant only in the West Clyde area, where 629 queens were caught in one fifteen minute haul. None were caught West of Kintyre.

2 & 3. Ten toothed (10T), 3/4" mesh scallop dredge was tested against the standard twelve toothed (12T), 3/4" mesh dredge

Ardlamont Bay, Lamlash and part of The Sound of Mull were chosen for more detailed study and from a total of 32 hauls, 663 scallops were caught.

Hauls of 15 minutes duration were made using two dredges mounted on one towing bar, through and against flood and ebb tides and with the dradges in both port and starboard positions.

The results are given in Table 2 and indicate that in all three areas the ten toothed dredge caught more large scallops and fewer two and three year group scallops than the 12 toothed dredge but its total catch was lower.

J Drinkwater
D Fraser
26 June 1981

Seen in draft W B Reid

TABLE I
AGE LENGTH COMPOSITION AND NUMBER OF SCALLOPS CAUGHT USING 12T and 16T DREDGES

No. of RINGS	WEST CLYDE				EAST CLYDE				W. OF KINTYRE			
	16 NO.	16 ML.	12 NO.	12 ML.	16 NO.	16 ML.	12 NO.	12 ML.	16 NO.	16 ML.	12 NO.	12 ML.
1	4	55	-	-	3	71	1	62	-		-	
2	36	83	20	88	3	89	4	85	6	76	1	68
3	61	96	40	97	13	101	14	100	12	88	5	96
4	49	105	46	105	16	110	17	113	7	97	13	105
5	30	112	44	112	14	117	11	114	10	109	10	109
6	13	113	23	118	7	121	10	122	15	113	19	112
7	24	116	42	117	9	123	15	129	18	120	7	123
8	33	120	43	119	12	127	5	136	10	120	18	124
9	15	122	21	118	2	130	6	127	8	124	8	127
>	38	125	55	123	15	130	26	130	18	123	33	125
	TOTAL NO CAUGHT 637 from 74 hauls				203 from 23 hauls				218 from 15 hauls			
Overall Mean L.	111 mm				119 mm				117 mm			

ML = Mean Length

NO = Number

TABLE 2

LAMLASH (8 hauls)				
rings	10T	dredge	12T	dredge
	NO	ML	NO	ML
2				
3	6	104	9	100
4	14	109	16	108
5	2	114	6	110
6	7	122	7	114
7	7	121	7	124
8	9	122	16	127
9	12	130	5	127
>	7	130	3	142
	TOT NO 64	MEAN 119mm	TOT NO 69	MEAN 116mm

ARDLAMONT (16 hauls)				
rings	10T		12T	
	NO	ML	NO	ML
2	1	86	10	91
3	7	101	37	96
4	21	110	56	108
5	10	118	20	114
6	10	125	14	121
7	8	128	19	126
8	8	135	18	130
9	4	129	8	130
>	24	136	19	134
	TOT NO 93	MEAN 124mm	TOT NO 201	MEAN 114mm

Sd OF MULL (8 hauls)				
rings	10T	dredge	12T	dredge
	NO	ML	NO	ML
2			1	78
3			4	91.5
4			13	98
5	2	108	22	106
6	6	113	20	113
7	26	116	30	114
8	11	119	26	117
	4	121.5	9	117
>	22	121	40	120
	TOT NO 71	MEAN 118mm	TOT NO 165	MEAN 113mm