1GR78
FRV GOLDSEEKER
Cruise 1/78
REPORT

(i) 30 Jan - 23 Feb 1978
(ii) 28 Feb - 24 Mar 1978

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 and behaviour studies.
3. To compare the standard commercial dredge with one of larger mesh, ring size and tooth spacing.

Narrative

GOLDSEEKER left Troon after loading stones, water etc on Monday 6 February. The Dredging programme was carried out in the area from Turnberry/Bennane head area to Otter Spit in the north.

On 19 February the vessel developed mechanical trouble and required help from FRV CLUPEA, which towed GOLDSEEKER to Tarbert then on to Troon.

On completion of repairs an experiment was carried outin the Otter Spit area using dredges of various tooth spacings and mesh sizes. On the 13 March the vessel proceeded through Crinan Canal.

Operations were carried out in Jura Sound, Easdale Bay and Mull Sound using similar technique as before. The cruise ended at Buckie on 23 March.

Results

1. Stock Survey A total of 148 hauls were made using two 4ft dredges on a bar: one with 12 teeth and 83 mm rings and mesh, the other with 16 teeth and 57 mm rings and mesh. Most of the Clyde grounds were covered, together with others from the Sound of Jura to the Sound of Mull. Scallops were caught in all areas. Table 1 shows the age composition of scallops caught. Most Clyde grounds had a high proportion of young scallops, but outside the Clyde - particularly in the Sound of Mull - the proportion of old scallops was much higher.

2. Areas suitable for further study Three areas were found where scallops of a wide range of sizes were present in large numbers. These were: Lamlash, Claonaig and Otter Spit.

3. Gear comparison Two experiments were carried out just south of the Otter Spit, comparing standard 4ft dredges (12 teeth, 83 mm rings and mesh) with similar dredges with 10 teeth and 95 mm rings and mesh. In the first experiment 2 dredges, one of each kind, were towed together on a bar, both with and against the tide, and with the dredge positions changed so that both were towed in bothport and starboard positions. The second experiment was similar, but two dredges of the same kind were towed side by side. Each experiment totalled 32 double hauls. The results are shown in Table 2. The larger mesh dredge (with 10 teeth) caught more large scallops and fewer small ones.

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Seen in draft: W B Reid
O/C GOLDSEEKER

TABLE 1

Percentage age composition of scallops caught in different areas

Number of rings	1	2	3	4	5	6	7	8	9	>9
Ayrshire coast	1	18	11	12	16	16	8	5	5	8
Otter Spit	1	18	14	8	7	19	12	9	2	10
Inverneil	-	7	2	12	12	26	9	9	-	23
Inchmarnock and Ardlamont	-	7	12	15	22	12	6	4	2	20
Cloanaig	2	9	8	14	25	17	11	6	1	7
Kilbrennan Sound	2	9	5	21	23	12	9	6	2	11
N Arran	1	14	12	16	18	11	7	3	1	17
S Arran	-	11	9	14	15	27	11	2	1	10
Sound of Jura	-	3	10	10	7	11	10	10	7	32
Sound of Mull	-	3	7	11	2	9	2	7	4	55

TABLE 2

Age composition of scallops caught by different gears. (Numbers caught in 32 dredge hauls).

Number of rings	0	1	2	3	4	5	6	7	8	9	>9	Total
10 tooth + 12 tooth dredges on bar:-												
10 tooth dredge	-	9	8	10	27	36	43	40	40	20	28	261
12 tooth dredge	-	24	25	23	30	32	45	38	40	8	17	284
2 similar dredges on bar:-												
10 tooth dredge	2	3	3	10	23	35	49	50	32	12	54	273
12 tooth dredge	2	22	31	16	25	19	40	31	13	14	29	242