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FRV "Goldseeker"

11GR87

Cruise 11/87

Report

14 September - 3 October

Personnel

J Mason PSO (in charge))
D J Bova SO) 14-22 September

D I Fraser HSO (in charge))
S Hawthorn (Student)) 23 September - 3 October

Objectives

1. To investigate the settlement of scallops and queens in the Clyde Sea area, the Sound of Jura and the Sound of Mull.
2. To study the size and age composition of scallop and queen stocks in the same areas and to examine the gonads of both species to determine their maturity stage.
3. To record surface and subsurface water temperature and dissolved oxygen.

Narrative

Scientific staff and crew joined "Goldseeker" at Troon on the evening of 14 September and work began in the Clyde Sea area next day. "Goldseeker" spent 1 day in East Clyde and 6 days in West Clyde dredging for scallops and queens and retrieving strings of pectinid spat collectors, before spending the first half landing at West Loch Tarbutt on 21 September. The scientific staff changeover took place on 22 September during the boat's passage through the Chinan Canal. Spat collectors were then retrieved, dredging undertaken and temperature readings taken West of the Point of Kintyre, around Islay, Jura and in the Sound of Mull until 2 October. The second half landing was spent at Oban on 29 September and "Goldseeker" was left at Carpath on 2 October.

Results

1. Scallop and queen spat was collected from 71 strings (each of four spat collectors), retrieved from 26 positions, 14 West of Kintyre, 3 in the Sound of Mull and 9 in the Clyde Sea area. Numbers of scallop spat from West of Kintyre varied from 1 to 607 per collector string and queen spat from 3 to 5989. Shell sizes ranged from 3 to 21 mm and 1 to 22 mm for scallops and queens respectively. In the Clyde Sea area, numbers of scallop spat varied from 1 to 1055, size range 2 - 12 mm, and queen spat numbered from 57 to 2165, size range 2 - 16 mm. Scallops numbered 10 - 27, size range 4 - 17 mm and queens 287 - 5044 size range 1 - 15 mm from the Sound of Mull area. Queen spat was generally found to be more numerous than scallop spat. Highest numbers of queens were found in the Sound of Mull, West Clyde and the East Islay shore and scallop spat from stations off Islay and in West Clyde.

A total of 22 dredge hauls (nineteen of 30 minutes duration and three of one hour) were made using an array of three 85 cm dredges (1 x 11 toothed dredge each in starboard and port positions with a nine toothed sampling dredge between). Catches were best at the East Coast of Jura, Kilbrannan Sound and the Sound of Mull, where 153, 51 and 51 scallops were caught in 30 minute hauls. The age/length compositions of the scallop catches are shown in Table 1 and results show signs of good recruitment

in all areas fished, especially outside the Clyde Sea area. The overall mean length of scallops caught west of Kintyre was 96 mm, while in the Sound of Mull it was 100 mm and 105 mm in the Clyde Sea area.

Examination of scallop gonads in the Clyde suggested that spawning had recently ~~ceased~~ but in the Sound of Mull most scallops had half full or full gonads.

The mean length of 661 queens caught in 15 hauls in the Clyde was 76 mm no queens were caught elsewhere.

Surface and subsurface temperature and dissolved oxygen readings were taken at most stations, where weather permitted, and results are shown in Table 2.

D I Fraser

20 January 1988

Seen in draft: N E McInnes, CO

Table 1. Composition of scallop catches

West of Kintyre

Rings of Growth	1	2	3	4	5	6	7	8	9	10	
Number	0	22	63	67	20	13	12	9	4	11	Total No 221
% No. at Each Age	0	10	29	30	9	6	5	5	2	5	
Mean length (mm)	-	75	85	98	103	107	115	112	121	125	Overall Mean Length 98 m

Sound of Mull

Rings of Growth	1	2	3	4	5	6	7	8	9	10	
Number	3	73	29	21	13	10	9	9	3	7	Total No 177
% No. at Each Age	2	41	16	12	7	6	5	5	2	4	
Mean length (mm)	68	88	99	107	116	119	122	122	125	129	Overall Mean Length 100 m

West Clyde

Rings of Growth	1	2	3	4	5	6	7	8	9	10	
Number	0	39	115	45	96	25	25	23	16	52	Total No 436
% No at Each Age	0	9	26	10	22	6	6	5	4	12	
Mean length (mm)	-	83	90	101	110	114	120	123	121	126	Overall Mean length

