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FRV "Goldseeker"

Cruise 13/86

Report

16 September - 6 October 1986

Personnel

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Objectives

1. To investigate the spatfall of scallops and queens in the Clyde Sea area and the Sound of Jura.
2. To study the composition of scallop and queen stocks in the same areas.
3. To measure water temperature and salinity at each spat collection station.

Narrative

Scientific staff and crew joined Goldseeker on the evening of 16 September, leaving Corpach on 17 September to make passage for west of the peninsula of Kintyre. Spat collectors were retrieved from around Islay and the Sound of Jura areas until poor weather hastened a passage through the Crinan Canal on 20 September. Spat collectors were retrieved and dredging undertaken in the Clyde Sea Area until 27 September when the vessel returned through the Crinan Canal to continue work west of Kintyre. The remaining collectors were retrieved, and dredge hauls made west of Kintyre and in the Sound of Mull. The half landings were spent at Tarbert on 23 September and at Oban on 30 September; "Goldseeker" was left at Corpach on 6 October.

Results

1. Scallop and queen spat was collected from 67 strings, each of four spat collectors, retrieved from 15 positions, seven west of Kintyre and eight in the Clyde sea area. Numbers of scallop spat from west of Kintyre varied from 0 to 13 per collector string and queen spat from 0 to 193. Sizes of both species ranged from 1 to 16 mm. In the Clyde sea area, numbers of spat varied from 0 to 116 and 1 to 3064 per collector string and sizes ranged from 1 to 9 mm and 1 to 27 mm for scallops and queens respectively. Spat of both species were generally more numerous from stations inside the Clyde.
2. A total of 54 dredge hauls (37 of 30 minutes duration, 13 of 15 minutes duration and four of one hour) were made using an array of three 85 cm dredges (1 x 9 toothed dredge each in starboard and port positions with an 11 toothed sampling dredge between).

Catches were best at the east coast of Jura, the Sound of Mull and in the Kilbrannan sound where 151, 77 and 59 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, especially outside the Clyde. There is also an abundance of scallops of the older age groups in all the areas fished which would indicate good prospective commercial catches. The overall mean length of scallops caught in the Clyde was 112 mm, while in west of Kintyre it was 107 mm and 108 mm in the Sound of Mull.

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

The mean length of 350 queens caught in 29 hauls in the Clyde was 73.9 mm. No queens were caught elsewhere.

3. Surface and subsurface temperature and salinity readings were taken at most stations and the results are shown in Table 2.

D I Fraser

9 October 1986

Seen in draft: A Mair

TABLE 1 COMPOSITION OF SCALLOP CATCHES

West of Kintyre

Rings of growth	1	2	3	4	5	6	7	8	9	10	
Number	1	16	78	48	54	36	22	19	18	48	Total No 340
% no at each age	0.3	4.7	23	14.1	15.8	10.6	6.5	5.5	5.1	14.1	
Mean length (mm)	69	79	89	102	106	116	119	123	122	127	Overall mean length 107 mm

Sound of Mull area

Rings of growth	1	2	3	4	5	6	7	8	9	10	
Number	2	55	100	65	41	49	47	34	47	91	Total No 531
% no at each age	0.4	10.4	18.8	12.2	7.7	9.2	8.8	6.4	8.8	17.1	
Mean length (mm)	60	84	95	105	109	112	115	119	120	124	Overall mean length 108 mm

West Clyde area

Rings of growth	1	2	3	4	5	6	7	8	9	10	
Number	0	18	38	33	44	28	26	23	23	113	Total No 346
% no at each age	0	5.2	11	9.5	12.7	8.1	7.5	6.7	6.6	32.6	
Mean length (mm)	-	83	95	103	108	113	115	116	119	121	Overall mean length 112 mm

TABLE 2

West of Kintyre

Position	Seabed Midcollector Surface			Comp. in /US/10 ⁴			depth (m) at collector strings
	String	Temp	°C				
5 3 9 12	12	11.5	12.5	6.0	6.2	6.3	10 m R N Chamais
40	12	12	12	6.4	6.5	6.5	11 m L Indaal
18	11.5	12.5	12.5	6.3	6.4	6.4	16 m L Stornoway

Clyde

20	12.3	11.5	11.0	5.9	6.2	6.3	18 m Kilfinnan Bay
21	10.5	10.5	11.0	6.4	6.4	6.4	28 m Auchalick Bay
26	11.0	11.0	11.2	6.4	6.4	6.4	20 m Adlamont Bay
28	11.5	11.0	11.0	6.3	6.4	6.4	14 m S Claonaig
32	11.7	12.0	11.7	6.1	6.2	6.3	14 m Catacol Bay
31	11.25	11.5	11.7	6.3	6.3	6.3	20 m C O Arran
41	11.0	11.0	11.0	6.2	6.3	6.2	23 m L Striven