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In Confidence: Not to be quoted without reference to the
Laboratory

CRUISE REPORT

FRV GOLDSEEKER

2 - 26 February 1976

2 - 26 March 1976

OBJECTIVES

1. To study the state of scallop and queen stocks in the Clyde area and on the West Coast.
2. To study the influence of tooth angle and haul duration on the efficiency of dredges.

NARRATIVE

Part I

'Goldseeker' was delayed by ice in the Caledonian Canal but completed her passage to Ardrishaig by 7 February and scientific staff joined next day. Bad weather delayed loading of the gear at Tarbert, but work started in North Kilbrennan Sound where divers observed the behaviour of the gear on 10 and 11 February. Work was done in two experimental areas - Clunaig and south of Otter Spit - when weather conditions allowed, and other areas were surveyed on other days. Work on both objectives continued until 24 February. On 25 February passage was made to Ardrishaig as weather conditions prevented crossing to Troon for long weekend.

Part II

The scientific staff found 'Goldseeker' at Ardrishaig on 2 March. The dredge experiments were completed on the 4 March when the Clyde survey was started. This took until 12 March when 'Goldseeker' proceeded to Ardrishaig for passage through the Crinan Canal.

Scallop grounds were sampled on the east Jura coast and Gigha Island. On 10 March the vessel proceeded to Oban where stores and water were obtained.

Stations in the Sound of Mull were worked and 'Goldseeker' proceeded through the Caledonian Canal. The cruise ended in Buckie on the 24 March.

RESULTS

1. Scallop and queen stock survey

A total of 116 hauls were made using 4 ft dredges, mostly towed with two on one bar. Both sampling and commercial mesh and tooth spacing were used (16 and 12 teeth, $2\frac{1}{4}$ and $3\frac{1}{4}$ inch mesh). The age composition of scallops caught is shown in Table 1. Young scallops were dominant on most West Clyde grounds, and also at Easdale and Gigha. Old scallops predominated on the Ayrshire coast, North Arran and Sound of Mull. The best catches were obtained off the Otter Spit and in Jura Sound.

Queens were caught in large numbers off the loch of Arran and in the Sound of Mull. They were mainly fairly large.

2. Scallop dredge experiments

Fair concentrations of scallops were found at Clunaig and experiments were carried out there. A better area was later found off the Otter Spit, and a second experiment was done. In all 60 double hauls were made. Results show that ten minute hauls do not catch twice as many scallops as five minute hauls and that catches vary with angle of attack of the teeth. Best catches were obtained with the head of the dredge raised slightly. Results are undergoing statistical analysis.

J Drinkwater
J A Sinclair
9 June 1976

Seen in draft: J A Calder, W B Reid

T A B L E I

Percentage age composition of scallops

Number of rings:	1	2	3	4	5	6	7	8	9	> 9
Lady I. - Lendalfoot	-	7	10	7	14	7	3	7	3	42
Otter Spit	-	-	21	21	16	16	2	7	5	12
Inverneill	-	-	25	10	6	3	1	4	4	47
Inchmarnock-Ardlamont	5	16	27	19	6	4	3	1	-	19
N. Arran	-	7	10	7	14	7	3	7	3	42
Claonaig-Skipness	-	8	14	35	24	3	1	1	-	14
Gigha	8	18	27	14	15	4	5	4	2	3
Sound of Jura	-	5	14	15	5	3	9	15	12	22
Easdale	-	3	19	22	5	13	30	5	-	3
Sound of Mull	-	4	7	7	9	2	6	4	11	50