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CRUISE REPORT

FRV GOLDSEEKER

19 AUGUST-4 SEPTEMBER 1975

OBJECTIVES

- 1) To study the catch composition of lobsters and crabs on grounds off Argyllshire west of Kintyre.
- 2) To compare the efficiencies of standard Scottish creels and Cornish inkwell pots.
- 3) To compare the efficiency of artificial and natural baits in catching lobsters and crabs.

NARRATIVE

The Scientific Staff joined "Goldseeker" on 18 August at Troon. The creels were loaded and she sailed for Tarbert on 19 August. Two days were spent creeling off Bute, and on 23 August, "Goldseeker" proceeded to Ardrishaig and through the Crinan Canal.

Creel hauls were made on both sides of the Sound of Jura and in Loch Craignish.

Mr Howard left the ship on 30 August, and Mr Dunthorn joined the following day. Creel hauls were made west of Kintyre. The Goldseeker returned through the Crinan Canal on Thursday 4 September and berthed at Troon late that evening.

The scientific staff left the boat at Ardrishaig

METHODS

Six fleets of eight creels (4 Scottish east coast type and 4 Cornish inkwell type) were shot and hauled daily. In each fleet one creel of each type was baited with 300g fresh fish, one of each type with a synthetic attractant, one of each type with a cement blank, and the final pair was left empty.

The synthetic attractant was prepared by the Institute of Marine Biochemistry, and consisted of a mixture of L-amino acids, quaternary amines, nucleotides and lactic acid, based on the composition of an extract of squid.

Eight grammes of this mixture were incorporated into 100g of a cement type binding agent for each synthetic bait block, the blocks were contained in a Nethon purse and tied into the creels. 100g blocks of the cement binder without added attractant and completely empty creels were used as controls.

The creels were baited daily according to a pre-arranged plan.

RESULTS

A total of 384 creel hauls yielded a total of 91 crabs (40 male and 51 female) and 5 lobsters.

The catch composition and the catches of the different creel and bait types is shown in the following table.

East coast creel

Cornish Ink well

	♂	♀	Total	% of total catch	♂	♀	Total	% of total catch
Fresh fish								
Crab	20	24	44	48.4	7	16	23	25.3
Lobster	1	0	1		2	1	3	
Synthetic attractant								
Crab	5	7	12	13.2	4	3	7	7.7
Lobster	-	-	-		-	-	-	
Blank cement binder								
Crab	2	0	2	2.1	0	1	1	1.1
Lobster	-	-	-		1	0	1	
Empty creel								
Crab	1	0	1	1.1	1	0	1	1.1
Lobster	-	-	-		-	-	-	

The composition of the crab catches is given below.

East coast creel

	No. of hauls	Total Catch				Total	Catch per 100 creels
		Undersized ♀	Undersized ♂	Marketable ♀	Marketable ♂		
Fresh fish	48	5	9	19	11	44	91.7
Synthetic attractant	48	1	2	6	3	12	25.0
Blank cement	48	0	1	0	1	2	4.2
Empty creel	48	0	1	0	0	1	2.1

Cornish ink well

Fresh fish	48	0	4	16	3	23	47.9
Synthetic attractant	48	0	1	3	3	7	14.6
Blank cement	48	0	0	1	0	1	2.1
Empty creel	48	0	1	0	0	1	2.1

The mean carapace widths of the undersized and marketable crabs was:

	Undersized	Marketable
East coast creel		
Fresh fish	91.0mm	139.4mm
Synthetic attractant	66.5mm	146.7mm
Cornish ink well		
Fresh fish	85.3mm	152.3mm
Synthetic attractant	99.5mm	158.8mm

The lobster catch consisted of four males and one female with carapace lengths ♂ 95, 103, 117, 130mm and ♀ 137mm.

F G Howard  
A Dunthorn

Seen in draft - Mr W Reid.