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In Confidence - Not to be quoted without prior reference to the Laboratory

Charter Vessel 'Aries' BCK 126

Report
21 May to 1 June 1984

Objectives

By experiment to attempt to separate shrimp from fish by catch using a separating panel fitted to a 1400 Ivor Christensen shrimp trawl.

Narrative

The 'Aries' sailed on Monday to Cullen Bay while it was proposed diving observations would be made on the gear before setting off for the fishing grounds. Unfortunately the sea state and onshore wind made it impossible to dive so the vessel proceeded to the fishing grounds 130 miles NE Buckie.

No time was lost due to weather and fishing continued uninterrupted during the daylight hours 0400 to 2200 each day. On Friday 25 May the 'Aries' returned to Buckie and landed its catch, and then proceeded to Cullen Bay where diving observations were made on the trawl. The separating panel fishing line was found to be set 2 metres behind the footrope and was not giving the correct opening. The net was taken ashore and the panel was reset to the correct position with the separating fishing line immediately above the footrope.

'Aries' sailed to Cullen Bay on Monday morning 28 May where again diving observations were made and the net measured. The alteration was satisfactory and the vessel sailed to the Fladen grounds where fishing continued uninterrupted during the week. The catch was landed on Friday 1 June and the scientific staff and equipment returned to Aberdeen.

Results

The results presented here are pooled results of all hauls during the daylight periods. They will be further analysed in relation to the ambient light conditions. These more detailed analyses are now in progress.

The aim was to collect shrimp in the lower codend and fish separately in the upper codend. From this summary of the Shrimp/Fish separation it is apparent that the 1.5 metre tied down setting of the panel immediately above the footrope gave the best results.

	Top Codend		Bottom Codend		Combined (kg)	
	Shrimp	Fish	Shrimp	Fish	Shrimp	Fish
Panel Height						
1.5m free running	390kg	219kg	833kg	793kg	1223	1012
2m behind the footrope	32%	22%	68%	78%		
1.25m immediately above the footrope	751kg	2410kg	474kg	540kg	1225	2950
	61%	82%	39%	18%		
1.4m immediately above the footrope	729kg	2551kg	977kg	1193kg	1706	3744
	42%	68%	58%	32%		

1.5 immediately above the footrope	180kg 28%	700kg 57%	462kg 72%	531kg 43%	642	1231
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From these first observations and results further improvements can be made in reducing the shrimp catch from the top codend using this type of separating panel with slight modification.

Particularly noticable was the time saved by the crew in sorting the shrimp from the fish. The damage to both small and large fish was greatly reduced and the quality of the marketable fish improved. The bulk of the big catch was mainly pout with some haddock and whiting.

John Main
3 July 1984