

R1/3

Not to be cited without prior reference to the Laboratory

Charter Fishing Vessel *Crimmond*, BCK118

Report

8-19 May 1989

Personnel

J Main	SSO
G Sangster	HSO
I Leaver	ASO part time

Objective

To investigate the possibility of separating cod from flatfish in a new design of separating trawl.

Narrative

The *Crimmond* was prepared for sea on Monday 8 May and the modified Jackson Rockhopper Trawl fitted to the net drum. Diving observations were conducted on the trawl in Cullen Bay during the first day to establish that the separating panels were as required. Fishing was conducted on the south side of the Moray Firth until Friday afternoon when the vessel tied up for the weekend.

Diving was again required on Monday 15th to examine the adjustments made to the separator during the first week to further improve the separation of the species.

During the second week, fishing was again conducted on the south side of the Moray Firth. On Friday afternoon the vessel returned to Buckie when the trawl and scientific equipment was off loaded and returned to Aberdeen.

Results

Separation of haddock and whiting from the main catch was achieved by fitting the leading edge of the separating panel directly above the rockhoppers. The panel was attached along the selvedge of the trawl splitting the net into 2 compartments terminating in 2 separate codends.

The lower level or compartment of the trawl was fitted with a secondary separating panel. The leading edge started a few metres ahead of the codend and could be adjusted in height by strops fitted between the belly of the net and the fishing line of the separator. The longitudinal edge of the lower or secondary separator was also attached to the selvedge, splitting the lower codend into 2 compartments in the hope of separating cod into the top and flatfish and other groundfish into the bottom.

Separation of haddock and whiting into the top codend was excellent using 120 cm strops between the hoppers and the fishing line of the primary separating panel.

	Top codend		Bottom codend			
	%	Number	Top level %	Number	Lower level %	Number
Haddock	87	2455	9	251	4	103
Whiting	79	1182	16	238	4	72

Separation could have possibly been further improved by shortening the strops to a minimum of 75 cms.

In the lower compartment 3 levels of the secondary separation panel was attempted using 30 cm, 15 cm and 8 cm strops. The strops in this case did not accurately define the space between the 2 levels due to the netting not being held in a rigid shape. The shortest strops gave spaces at certain positions of approximately 30 cms between the separating panel and the belly of the net.

For all hauls 294 cod (46%) entered the top level and 394 cod (54%) entered the lower level of the bottom codend. However, separation was better for larger cod greater than 29 cm. The best separation was achieved with 8 cm strops giving 16 cod (90%) into the top level and 2 cod (10%) into the lower level.

Separation of flatfish and other groundfish inside the bottom codend diminished as the level came down with 8 cm strops giving the poorest separation ie

	Top level		Lower level	
	%	(Numbers)	%	(Numbers)
Lemon sole	28	(100)	72	(260)
Plaice	40	(31)	60	(46)
Angler	45	(5)	55	(6)
Others (dab, skate, catfish, turbot, dogfish)	40	(34)	60	(49)

The best separation was achieved with the 30 cm strops

	Top level		Lower level	
	%	(Numbers)	%	(Numbers)
Lemon sole	18	(31)	82	(146)
Plaice	16	(7)	84	(37)
Angler	0	(0)	100	(2)
Others (dab, skate, catfish, dogfish)	25	(19)	75	(58)

Further analysis of the results is being conducted and modifications to the separating panel will be implemented to control the space between the belly and lower or secondary panel.

J Main

16 June 1989