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Charter Fishing Vessel *Challenge II* (UL 33)

Charter Cruise 0298H

REPORT

1-12 June 1998

Personnel

R J Kynoch	SO (in charge)
N Graham	SO
P J Barkel	PTO
S McKay	ASO
T Foster	Student

Objectives

- 1 To determine the effect of the position of an 80 mm or 100 mm square mesh window on the selectivity of a 100 mm diamond mesh cod-end attached to a commercial whitefish trawl.
- 2 To measure the selectivity of the same cod-end without a window.
- 3 To collect, as time allows, video film of the gear and fish reaction to it using the remote controlled underwater TV vehicle (RCTV).

Out-turn outs per project: 12 days MFO6Q

Narrative

Staff and equipment joined the vessel at Peterhead harbour on 1 June. The twin trawl gear and RCTV equipment were rigged and the vessel then sailed for the fishing grounds, 45 miles east of Peterhead, in the early hours of 2 June. For the first two hauls both nets were fished with 40 mm cod-ends and 80 mm straight extensions to check on port or starboard bias. Due to bad weather underwater observations were unable to be made at this time to check the symmetry of the twin trawl rig. Selectivity trials were thereafter carried out with the experimental cod-ends attached to the starboard trawl and a small mesh cod-end attached to the port trawl. During the cruise the selectivity of three different window configurations in a 100 mm cod-end were measured: 80 mm and 100 mm windows in the cod-end and an 80 mm window at the front of the extension. The selectivity of a 100 mm cod-end without a window was also measured for a comparison.

During the cruise sufficient quantities of haddock were found on the grounds for every haul and whiting in most. Eighteen of the 26 hauls were considered valid. The cruise ended at Peterhead on 12 June and staff and equipment returned to Aberdeen.

Results

Similar numbers of haddock and large (>23 cm) whiting were caught in the two nets when small mesh cod-ends were used on both nets (hauls 1 and 2). There were more small whiting however, caught in the starboard net during these hauls.

The mean selection parameters for each cod-end configuration are given in Table 1. Preliminary analysis shows that inserting a square mesh window directly into the cod-end will increase the probability of escape for smaller fish. A fuller statistical analysis will be carried out in the Laboratory.

R J Kynoch
9 September 1998

Table 1

Description	Number of valid hauls	Haddock		Whiting	
		L50	SR	L50	SR
100 mm cod-end	5	22.8	3.31	26.8	3.90
80 mm window inserted into the front of the straight extension.	5	22.8	3.6	25.5	2.87
80 mm window inserted into 100 mm cod-end.	5	25.6	3.97	27.9	4.00
100 mm window inserted into 100 mm cod-end.	3	37.1	13.5	34.7	8.4