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Charter Fishing Vessel *Alison Kay* LK57

Charter Cruise 3301H

REPORT

20 February - 6 March 2002

Ports

Loading: Aberdeen

Unloading: Aberdeen

Personnel

R J Kynoch (In charge)

I Penny

M Mathewson

M Burns

Objectives

1. To determine the effect of towing speed on the selectivity of a 110 mm diamond mesh cod-end fished with a 90 mm square mesh panel and without a lifting bag.
2. To undertake the same as objective 1 but use a 120 mm diamond mesh cod-end with no square mesh panel or lifting bag.

Narrative

Staff, fishing gear and instrumentation joined *Alison Kay* at Aberdeen on 20 February 2002. The fishing gear and instrumentation were rigged aboard the vessel in Aberdeen harbour. The 90 mm square mesh panel was rigged in the top sheet of the net with its rearmost row of meshes 8.95 m from the codline. During the evening of 20 February the vessel sailed north towards Shetland. However due to a severe northerly gale (force 8-9) the vessel steamed to Lerwick for shelter during the afternoon of 21 February. With a decreasing forecast during the evening of 23 February the vessel sailed to fishing grounds 20 miles east of the Shetland. Cod-end selectivity trials were thereafter carried out using the 110 mm cod-end with a 90 mm square mesh panel fitted at the 9-12 m position (Objective 1).

During the second week of the cruise 3 days were lost due to poor weather with the vessel dodging and then sheltering in Lerwick, therefore there was insufficient time to carry out Objective 2. The cruise ended at Aberdeen on 6 March with staff, fishing gear and instrumentation returning to the Laboratory.

Results

To minimise the risk of a net bias, on each haul the vessel towed a straight course either with or against the tide, thus ensuring that the gear fished symmetrically.

During every haul self-recording net speed logs were attached to the headlines of both trawls and measured the speed of the trawls through the water. The average haul duration was 2.5 hours and the speed of the trawl through the water ranged between 2.3-3.8 kts.

There were sufficient quantities of haddock and juvenile whiting on the grounds for every haul but there were insufficient whiting above 100% retention length (>40 cm). Small numbers of cod were caught throughout the trials but not in sufficient quantities for selectivity analysis.

Sixteen selectivity hauls were made of which one was invalid due to a hole in the small mesh cod-end. Preliminary analysis of the data obtained for haddock and whiting indicates that there is no significant difference in selectivity due to trawl speed through the water. The mean selection parameters for haddock and whiting for each haul are given in Table 1.

A fuller statistical analysis will be carried out in the laboratory.

R Kynoch
10 July 2002

Table 1. Haddock and whiting mean net speed and selection parameters for each haul.

Haul No	Net Speed (kts)	Haddock		Whiting	
		L50	SR	L50	SR
1	3.1	31.3	4.2	35.3	4.0
2	2.5	32.3	6.1	31.9	3.0
3	3.7	39.9	8.1	39.7	6.1
4	3.7	35.8	4.5	35.7	3.0
5	2.3	33.5	4.3	36.4	3.6
6	3.4	34.5	5.1	37.0	4.0
7	3.8	35.9	5.0		
9	2.5	34.8	4.3		
10	3.4	35.9	3.9		
11	2.5	34.3	3.7		
12	3.3	34.4	3.7	36.8	3.7
13	3.4	33.5	3.3		
14	2.3	36.0	4.2	36.8	4.6
15	3.8	33.4	3.2	34.8	2.6
16	3.1	32.7	6.5		