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Charter Fishing Vessel *Favonius* (PD17)

Cruise 1610H

REPORT

9–18 November 2010

Personnel

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Out turn days per project: – 10740 - 10 days

Objectives

1. To assess the performance of a Nephrops trawl incorporating a design which gives a low headline height (~1.2m) in reducing by-catches of cod, haddock and whiting but still retaining catches of Nephrops. Catches from this test trawl will be compared to those retained by a traditional design of higher headline (~2.2m) Nephrops trawl.

Narrative

Staff and equipment joined FV *Favonius* (PD17) in Peterhead on 8 November. The trawl nets (test and control) were supplied to Favonius directly from Faithlie Trawls Ltd, Fraserburgh. The low headline test trawl was rigged onto the port net drum and the higher headline control trawl on the starboard net drum. Similar 80mm (nominal) codends constructed from 4mm single compact twine were attached to both trawls. Both extensions were rigged with 110mm (nominal) x 3m long square mesh panels constructed from 3mm knotted high tenacity twine and positioned at 12-15m from the codline. Both trawls were fished with tickler chains.

The vessel sailed on the morning of 9 November to fishing grounds in the Moray Firth where a number of hauls were made to assess the performance of the trawls and the twin rig system using Scanmar instrumentation and a net mounted self-recording camera. Due to a SE gale these evaluation hauls were continued until the evening of 10 November and thereafter the vessel sailed to commercial fishing grounds approximately 45 nmiles east of Peterhead (called F & F) and commenced catch comparison hauls. During the evening of 11 November the vessel sailed to new grounds (110 Miles Holes), approximately 90 nmiles NE of Fraserburgh and continued catch comparison hauls. The vessel remained on these fishing grounds until the evening of 15 November and then returning to F & F for 16 November. Due to a SE gale the vessel moved to grounds in the Moray Firth to carryout underwater observations for the remainder of the cruise. The cruise ended at Peterhead on 18 November with staff and equipment returning to Aberdeen.

Results

Gear Performance

Both test and control nets performed well without much fine tuning. The only alteration to the test net was the removal of 4 x 200mm floats (2 per side) from the wing-end. To test for

bottom contact a drop chain was added to both nets before haul 8 and were attached at groundgear centre. It was noted that the chain attached to the control net appeared to polish up after 2 hauls, but the chain attached to the test net after 4 hauls. One point noted was that the lower wing surface area of the control trawl appeared to speed up the mudding in of this net compared to the test net. However, the catch of *Nephrops* retained by both nets appeared to be fairly even after haul 13.

The Scanmar data indicated that the headline heights of the test and control nets were 0.8m and 1.9m respectively. The wing-end spread was wider for the test net at around 26m compared to 24m for the control net. The vessels Notus door and clump sensors indicated that the test net was easier to spread and gave a door to clump distance of approximately 71m compared to approximately 64m for the control side.

Catch Comparison

A total of 15 catch comparison hauls were made during the trials. Haddock, whiting, and cod were encountered. *Nephrops* were found in limited numbers with the highest numbers encountered during the dawn hauls. On the F & F grounds haddock and whiting tended to be made up of fish in the size range <30cm. However, on the offshore grounds at the 110 Mile Holes the populations of haddock and whiting included larger fish in the range 30cm to 40cm. The largest cod concentrations were also encountered on the offshore grounds. A fuller statistical analysis will be carried out in the Laboratory.

Submitted:
R J Kynoch
5 January 2011

Approved:
I Gibb
17 January 2011.