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

Chartered Vessel "Aries" BCK 126

REPORT

16 September - 4 October 1985

Personnel

J Main	SSO	16 Sept - 4 Oct
G Sangster	HSO	16 Sept - 4 Oct
C Hall	HSO	16-21 Sept
F Cruickshank	PTOIV	16-21 Sept

Objectives

1 To observe the behaviour of fish and Nephrops to a new 640 fish/prawn trawl fitted with a separating panel. The top will be a fish net with a codend of 80 mm mesh and the lower section will be a prawn net with a codend of 70 mm mesh.

2 The trawl will be filmed from the towed underwater vehicle TUVII.

3 The fish and Nephrops catches from daylight, dusk and night hauls will be compared.

Narrative

The "Aries" arrived at Gairloch on Monday morning 16 September and was loaded with the trawl and scientific equipment including the divers towed underwater vehicle (TUVII).

The vessel worked daily from Gairloch during the first week on the Melvaig tow when the gear was studied in detail. The underwater vehicle and diving gear was off loaded on the 20th and part of the team returned to Aberdeen.

During the second week fishing was conducted in the North Minch with the vessel arriving in Buckie for the weekend.

The third week was worked off Macduff on the Nephrop fishing ground in company with a number of Buckie vessels. The trip ended at Buckie on Friday 4 October and the scientific staff returned to Aberdeen. The trawl was left onboard and fished for one week by the owners.

Results

The trawl on examination was a good shape with the separator fishing line and panel running at 1.4 m without the strops being tied down. The headline height while towing at 2.5 knots was 3.4 m, the wingend height 1.5 m and the wingend spread was 9.1 m.

Very few fish were seen entering the trawl on the Melvaig tow but the footrope and busom of the gear was tight on the bottom. The catches recovered from the codend in deep water were encouraging with the majority of Nephrops, flatfish cod and skate entering the lower codend with haddock (9 to 48 cms) and whiting (8 to 40 cms) passing into the top one.

During the second and third weeks the separating panel fishing line was set at 75 cms above the ground line and small mesh covers were fitted over the codends. Both Nephrops and fish were sampled and measured from every haul. Fishing was reported and experienced to be poor during the time in the Minch and it was not found practical to compare fishing during daylight, dusk and dark.

The fishing in the Moray Firth was better and the vessel worked alongside the commercial fleet where our catches were found to be similar in quantity.

The findings are now being analysed at the Laboratory. Still and video pictures were also obtained of the trawl during this cruise.

On the previous cruise in August/September 2 underwater sea cages of haddock were left containing fish in order to continue the study of survival after damage during escape from the codends. Unfortunately, the cage with the damaged fish which was positioned just off the Melvaig tow on hard ground was reported to have been towed away by scallop dredgers. The cage, anchors, dhan and floats were all lost. The cage filled with the control fish caught by handline was still there and all the haddock were found to be in excellent condition. These were released on 19 September some 35 days after capture. After release the haddock remained around the cage and the divers for approximately 5 minutes before moving off into deeper water.

J Main

29 November 1985