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CHARTER VESSEL "KORVENNA"

Report

29 November to 5 December 1987

Personnel

J Main	SSO
G Sangster	HSO
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Objective

To observe the behaviour of fish in narrow, normal and wide seine net codends covered by a small meshed cover.

Narrative

The vessel was loaded and prepared for working on a daily basis from Wick on Monday 30 November. Only one haul was possible on that day working south of Wick off Lybster.

No time was lost due to weather and most fishing was conducted off Lybster in very clear water where good catches of small whiting were obtained in deep water.

Attempts were again made to observe roundfish in the early stages of the tow in shallow water both close to the land off Lybster and in Sinclair Bay. Unfortunately no roundfish were seen in either of these areas but valuable film of the nets was obtained.

The scientific equipment was returned to Aberdeen on Saturday 5 December.

Due to the kindness of a local boat owner in Wick, a Mr Bremner, we were allowed to use his net store and office with all facilities for storing equipment and codends and for the recharging of camera batteries and diving cylinders.

Results

Three codends attached to a 570 mesh seine net were observed with varying quantities of roundfish retained in both the codend and cover. The bulk catches ranged from between 20 and 200 boxes, mostly whiting.

Colour video tapes of these observations are now being analysed in detail.

Direct observations showed that there is masking of all three codends by the cover. Selectivity occurs until the codend has filled sufficiently for the small mesh to be pressed against the codend meshes. At this point selectivity declines until the codend is full and selectivity ceases. The drag of the cover pulls the netting tight on to the codend meshes and this pressure is increased with the bulk of small fish. This was most noticeable when we had between 100 and 200 boxes of small whiting in the cover.

Two, 2 metre zips were fitted to the cover; one in line with the codend and the other approximately five metres behind the codend. When the zips were opened it allowed filming of both fish behaviour between the cover and codend and inside the cover behind the codend. When the zip alongside the codend was opened, those fish which were tightly packed between the two sheets of netting immediately poured out until the codend could be seen. With this release of fish the codend was allowed to swell and take up its proper shape. From the position behind the codend and inside the cover it was seen that the cover was tight against the ball of fish in the codend and that no fish could pass back into the rear of the cover.

The cover was released from the codend whilst towing at two and a half knots and immediately small fish started to escape through the after part of the codend. No escapes were observed in this area before releasing the cover.

Good illustrations have been recorded on video tape and have been edited for viewing.

Whilst searching for roundfish in shallow water there was the opportunity to fit the net with a tickler chain, running approximately 0.5 metre in front of the beam. This worked extremely well, lifting the flatfish off the bottom.

A 450 mesh seine net fitted with a set of rockhoppers was observed on fine ground and showed that the gear came into contact with the seabed only after towing for a few minutes. When the vessel stopped the whole gear lifted off the seabed which would release the net if it came fast on hard ground. A pair trawl was also observed in shallow water towing at 3, 3.5 and 3.75 knots. Video tapes of all three nets are now being edited for addition to the library collection.

J Main

8 February 1988