

In confidence -- Not to be quoted without reference to the Laboratory

Cruise Report

FRV "Mare"

15 August -- 3 September 1977

Objectives

- (1) To conduct 1st stage sea trials with a trawl mounted low light television system.
- (2) To use the above system to obtain Video tape recordings of fish reaction to the trawl.

Narrative

Handling and familiarisation trials with the equipment occupied the first week of the cruise. These were conducted in Spey Bay -- on well known grounds of 10-12 fms.

The remainder of the cruise was spent in the deeper offshore waters of the Moray Firth in depths from 20-55 fms.

Grounds fished were the Bellans, Clythe Ness, Smith's Bank and Aberdour Bay, but fish, particularly roundfish, were rather sparse over the whole area.

Trawling had to be suspended on three days of the cruise due to gale force southerly winds.

Results

The TV camera was mounted and tried in both the transverse and fore and aft positions at the rear edge of the square.

By operating the tilting mirror incorporated in the system the following sections of the gear could be looked at:-

The bobbin section of the footrope from quarter to quarter; the sidepanel and top square in line with the quarters; the belly and baitings and the ground in front of the footrope.

Although there were few fish on the grounds those observed included Plaice, Sole, Dabs, Cod, Whiting, Saithe and Skate. Identification of species of similar outline proved difficult at the time of observation. This was particularly true of roundfish which on occasions were seen to swim directly into the net, apparently, without first being herded by it.

Most of the skate were over-run by the footrope and of those observed approx 25% only, were caught.

Light level at 20 fms in clear water remained sufficiently high for work to be continued till approx half an hour before sun set.

A significant observation from an engineering point of view was a noticeable increase in headline height, and corresponding decrease in spread as the gear moved into deeper water at a warp length/depth ratio above the 3/1 level, usually accepted as being standard practice.

A considerable number of Video tapes were collected during the cruise and these will be analysed in the Laboratory.

A Corrigall
22 September 1977

Seen in draft - W T Mair