

R1/12

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FRV *Scotia*

Cruise 0200S

REPORT

24 January - 12 February 2000

Personnel

A W Newton	(In charge)	24 January - 4 February
A P Robb	(In charge)	4 February - 12 February
G Slesser		24 January - 4 February
F Armstrong		
M C Mathewson		
R Watret		
J McWilliam		
F Burns		
J Drewery		
I Penny		
M O'Dea	Visitor	24 January - 4 February
I MacPhee	Visitor	24 January - 4 February

Objective

To take part in the ICES International Bottom Trawl Survey in the North Sea.

Out-turn days per project: M01T:20**Narrative**

One hour prior to sailing, a fault developed in the computer controlling the main trawling winches. Sailing was delayed whilst local shore based engineers tried to identify the problem, but eventually it was decided that a representative from the manufacturers would have to be flown from Norway. *Scotia* sailed at 1800 hours on 24 January and spent the next 24 hours undertaking environmental work and scientific calibrations in the vicinity of Aberdeen. A Norwegian technician was transferred to *Scotia* by pilot boat in Aberdeen Bay on the evening of 25 January, and after repairs to the winch computer had been effected, *Scotia* began the survey. Over the course of the next nine days, the vessel gradually surveyed east and then northwards within the allotted survey area. However, all operations were hampered by severe weather conditions (westerly to northwest winds between force 7 and 11). During this period, a total of 72 hours were lost due to adverse weather conditions. Improving weather allowed *Scotia* to move further north and survey work was undertaken around Fair Isle before docking in Lerwick on 4 February. A change of personnel occurred at the half landing. The following day *Scotia* sailed at 0830 hours and proceeded to the trawling position at Balta. Work continued North around Muckle Flugga, and then southward down the west of Shetland. Poor weather conditions continued to hinder progress, and eventually in the early hours of 10 February, operations ceased for approximately 24 hours. Fishing recommenced the following day in less than ideal

conditions, and the last trawl was completed on the evening of 11 February. Methot net sampling and calibration continued until around 0400 hours. *Scotia* then proceeded to Aberdeen, docking at 0800 hours on 12 February.

Results

A total of 46 half hour hauls were made using the GOV trawl. During the first part of the survey, the ground gear consisted of the standard set of 152 mm rubber discs, but these discs were replaced with 305 mm bobbins for the stations in the northern part of the North sea. Short sweeps (60 m) were used for all tows. Each haul was monitored for headline height, wingend and door spread and the speed of the net through the water. Table 1 shows the preliminary indices for the principle species sampled during the survey. The index is based on the numbers of fish caught per hour below a pre-defined length selected as a probable delimiter of 1+ fish. These indices are liable to some revision after the ages of the various species have been confirmed by reading the otoliths.

Except for cod, all other species seem to have produced average or strong year classes. For cod, there was only one big catch of one-year-olds in the entrance of the English Channel. All other catches in the southern North Sea as well as in the German Bight were poor. This was especially striking as during the early 1980's high abundance of juvenile cod was a feature of this area.

Catches of one-year-old haddock were very big this year. By far, the biggest average catches over the last 25 years were made. Catches of whiting were usually good, but in the Southern Bight the amount of young whiting was not exceptional.

Catches of <20 cm herring were good; over the past years, there have only been three years with higher catches. This is in line with the observations of high numbers of herring larvae in February 1999. The catches of one-year old sprat were also good.

Most of the juvenile mackerel were caught in the northern North Sea. It is more likely that these mackerel belong to the western stock which are at the edge of their distribution area, than that they belong to the North Sea stock.

Eighty-two hauls were made with the Methot net in order to obtain an estimate of the number of pre-metamorphosing herring larvae. An analysis by Dr P Monk of DIFR, Copenhagen indicates that the catches of herring larvae in the MIK hauls, year class 1999, merely show an average size year class strength.

Top and bottom temperatures, salinities, phosphates, nitrates and silicates were taken at all trawling stations using a Seabird CTD.

A W Newton
12 July 2000

Seen in draft: R Walton

TABLE 1

Preliminary international indices from recent IBTS surveys						
Year	Herring	Cod	Haddock	Whiting	N Pout	Mackerel
2000	3,468	6.0	3,678	778	8,789	329.0
1999	707	2.0	195	704	3,244	43.0
1998	2,067	2.7	374	556	1,006	27.7
1997	4,069	40.0	860	288	9,752	718.8
1996	1,735	3.5	267	502	923	10.4
1995	1,886	9.7	1,375	679	5,941	2.3

Track Chart of 'Scotia'

