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Not to be cited without prior reference to the Marine Laboratory, Aberdeen

FRV *Scotia*

Cruise 0202S

## **REPORT**

18 January - 6 February 2002

### **Personnel**

A P Robb	(In charge - 18-29 January )
K A Peach	(In charge - 29 January - 6 February)
F Armstrong	
M C Mathewson	
R Watret	
T Blasdale	
C P Millar	
J Mair	(18-29 January)
O Goudie	(29 January - 6 February)
M Gault	(29 January - 6 February)

**Fishing Gear:** GOV Trawl (BT137) with ground gear A and B  
Full size Methot Net

**Out-turn days per project:** MFO1t (20)

### **Objective**

To participate in the International Bottom Trawl Survey in the North Sea.

### **Narrative**

*Scotia* sailed from Aberdeen at 1200 hours on 18 January and commenced work a few hours later in rectangle 43E8. In general fishing was carried out each day between 0730 hours and 1600 hours whilst sampling with the methot net took place between 1700 hours and 0700 hours. The survey progressed southward and then eastward with only slight interruption from the weather until around lunchtime on 24 January when deteriorating conditions stopped operations and the ship dodged until the following morning when fishing recommenced. Work continued on northwards until the ship arrived in Lerwick at 0900 hours on 29 January for the half landing.

*Scotia* sailed at 0800 hours on 30 February and headed east to the first trawl station. Fishing continued for the next seven days with occasional interruptions due to poor weather. *Scotia* finished fishing at 1900 hours on 5 February and docked in Aberdeen at 2130 hours.

### **Results**

A total of 53 half-hour hauls were made using the GOV trawl (see Map 1). 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. Table 1 gives the provisional international indices for the principle species

caught during the survey. The index is based on the numbers of fish caught per hour below a pre-defined length selected as the 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.

A total of 117 methot net stations were fished during the cruise in order to obtain an estimate of the number of pre-metamorphosing herring (see map 2).

### Acoustic

During trawling operations 850 Mb of EM 950 Swathe Sounder data was gathered. Sound velocity profiles were successfully taken prior to 40 of the tows. A further 7.9 Gb of acoustic data from the EK500 and EA500 and 14 Mb of Roxann seabed discrimination data was collected continuously throughout the survey.

### Hydrography

Surface and bottom temperatures, salinity, nitrate, silicate, and phosphate samples were taken at each trawling position. The thermosalinograph was run continuously throughout the cruise.

**Table 1. Preliminary International Indices**

	final 2001	preliminary 2002	MEAN 1978-2000
Cod	2.8	<b>8.3</b>	10
Haddock	887	<b>47</b>	713
Whiting	647	<b>781</b>	597
N pout	1304	<b>2053</b>	3038
Herring	2496	<b>3844</b>	1890
Sprat	1049	<b>2534</b>	1235
Mackerel	43	<b>75</b>	56

Brief summary of indices:

Cod – largest since 1997 but still below the long term mean.  
Haddock – one of the poorest on record (certainly worst since 1978).  
Whiting – showing signs of recovery highest since 1992 and above long term average.  
N pout – second year in a row below the mean recruitment.  
Herring – third highest since 1978.  
Sprat – well above long term average fifth consecutive strong recruitment.  
Mackerel – long term average skewed by the 1996 and 1999 year classes. Fairly strong year class in comparison to other years (exc 1996, 1999).

K J Peach  
20 March 2002

Seen in Draft: Capt P Ramsay

**SCOTIA VESSEL**

Programmes - Mr J A Morrison for approval. Reports - Mr J A Morrison for approval.

Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes.

Two xerox copies of track chart for reports to be sent to Dr L Rickards.

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**PROGRAMMES ONLY**

**Lab staff (hard copy)**

Mr J T M Hunter  
Mr T Reid  
Mr A Cranna

**Lab staff (e-mail)**

Mr P J Copland  
Mr J Dunn  
Mr A Beaton  
Mr G Howard  
Mr S Halewood

**Non-lab staff**

~~Island Cmdr Faroes (Faroes only)~~  
~~Flag Officer, Denmark (Danish part of N Sea only)~~  
Coastguard  
Dr J Baxter

**PROGRAMMES AND REPORTS**

**Lab staff (hard copy)**

Ms S Hughes (+ additional copy of track chart  
of reports only)  
Library (2)  
CO/OIC of Vessel (*Scotia*) (to be faxed)  
File  
Mr J A Morrison  
Capt R Denholm

**Lab staff (e-mail)**

Mr R S T Ferro ) Fish Man team  
Mr C Hall ) progs only  
Dr A D Hawkins  
Dr R M Stagg  
Dr R M Cook  
Dr C Moffat  
Mr M R Heath  
Mr A Macdonald  
Mr R D Galbraith  
E Morrison  
Mr J A Morrison  
Capt R Denholm

**Non-lab staff**

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Dr I Joint  
Director - Havfor Inst, Norway  
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Mrs van Duyvenvoorde  
Dr J G Gordon  
Dr J Molloy  
R de Clerck  
Mr B Stewart  
Capt J Cannan (*Scotia* and *Clupea* only)  
A Stewart  
Dr P Grieg-Smith  
Mr H C Boyar  
Dr R J A Atkinson  
Mr H i Jákupsstovu  
Mr C Bullimore (To be faxed: 01923 846392)

**Laboratory Personnel on Vessel (e-mail)**

A Robb  
F Armstrong  
K Peach  
M Mathewson  
R Watret  
T Blasdale  
C Millar  
J Mair  
O Goudie  
M Gault

**Fishery Officers at**

Aberdeen  
Peterhead  
Lerwick