

R1/12

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

FRV *Scotia*

Cruise 0306S

## **REPORT**

26 January – 16 February 2006

### **Personnel**

K A Coull  
A P Robb  
M Mathewson  
F Burns  
R Watret  
J Mair  
A Tait  
I Martinez (Visitor)

### **Objectives**

1. To take part in the International Bottom Trawl Survey in the North Sea.
2. To collect samples of ovaries from mature cod.
3. To collect samples to support a project to describe genetic description of different species of cephalopods.
4. Collection of haddock and whiting from defined areas for further analysis in the Laboratory.

**Out-turn days Per Project:** 22 days – RV0602

### **Narrative**

*Scotia* sailed from Aberdeen at 0930 on 26 January and started work on the station east of Aberdeen, with the GOV trawl being deployed, rigged with groundgear “B”. With trawling restricted to daylight hours it was only possible to complete one further station before embarking on Methot Net sampling for herring larvae. With this work being done during the hours of darkness, the vessel completed 8 hauls before arriving at the next trawling location for daylight. The GOV trawl was deployed with groundgear “A” for the first station of the day but the loss of small fish from the inner cod-end resulted in the haul having to be repeated. This was resolved by adopting a different method of tying the cod-end and both crew watches were briefed in this procedure. With favourable weather conditions forecast for several days, *Scotia* proceeded in an easterly direction in order to complete the outer stations of the survey area. Work continued uninterrupted on the eastern and southern part of the survey area until the evening of 3 February, when *Scotia* worked west throughout the night to arrive at stations south west of Shetland for daylight on 4 February. Six stations were completed to the west and north of Shetland before *Scotia* called in to Lerwick for the mid cruise break on 6 February. The vessel sailed again the following morning, resuming work on the stations east of Shetland. Severe weather prevented deployment of the Methot

Net in the early hours of 8 February and *Scotia* moved in towards the east coast of Shetland in order to seek shelter. With the winds forecast to decrease, the vessel resumed work the following morning at the station east of Sumburgh Head. The vessel completed the stations in the central part of the survey area then moved in towards the inshore stations of Orkney and Moray Firth on 13 February. The survey area was completed on the afternoon of 14 February. Additional work was carried out off the north east coast of Scotland in order to obtain biological data in relation to the EU Data Collection Regulations. *Scotia* docked in Aberdeen on the evening of 15 February and unloading commenced at 0800 on the morning of 16 February.

## Results

### Trawling

The GOV was used throughout the cruise with groundgear "A" (152 mm rubber disks) being used in the southern part of the survey area and groundgear "B" (305 mm bobbins) being used in the northern part. The Scanmar system was used throughout the cruise to monitor headline height, wing spread, door spread and distance covered during each tow.

A total of 50 valid hauls was achieved with all allocated stations being sampled.

Table 1 shows the preliminary indices for all vessels participating in this international survey. The indices are based on the numbers of fish caught per hour below a pre-defined length selected as a probable delimiter of 1+ fish.

Table1. Preliminary indices for Quarter 1 International Bottom Trawl Survey (All countries)

	<b>Final 2005</b>	<b>Preminary 2006</b>	<b>Mean (average 1980–2005)</b>
<b>Cod</b>	2.3	<b>6.9</b>	9
<b>Haddock</b>	70	<b>1059</b>	637
<b>Whiting</b>	172	<b>230</b>	559
<b>Norway pout</b>	698	<b>3604</b>	2827
<b>Herring</b>	1020	<b>1335</b>	2007
<b>Sprat</b>	3017	<b>824</b>	1364
<b>Mackerel</b>	1370	<b>263</b>	107

While catches of juvenile haddock were the highest since the 2000 survey (1999 year class) and are above the series average for this internationally coordinated survey, catches of juvenile whiting remained relatively low for the fourth successive year. Catches of juvenile Norway pout and mackerel were well above average and, in the case of Norway pout, were the highest since the 2000 survey. Reported catches of juvenile cod, herring and sprat were below the series average.

### Methot net sampling

A total of 100 Methot Net hauls were carried out in order to obtain an estimate of the numbers of pre-metamorphosing herring larvae. The Methot Net was deployed over the starboard side of the vessel with the electronic flow-meter (EF 325) being used throughout.

### Biological sampling

Additional biological data were collected from species listed in the EU Data Collection Regulation (EC) No 1639/2001 and No 1581/2004.

Samples of ovaries from mature cod were collected for the Department of Marine Ecology, University of Aarhus, Denmark.

Samples of cephalopods were collected to support a project to describe genetic description of different species of cephalopods.

Samples of haddock and whiting were frozen and taken back to the Laboratory for analysis.

### **Age determination**

Otoliths from cod, haddock, whiting, saithe and Norway pout were aged at sea.

### **Hydrographic sampling**

The ship's thermosalinograph was run continuously throughout the cruise. A CTD was deployed at each station in order to obtain temperature and salinity profiles as well as water samples from surface and bottom.

K A Coull  
15 March 2004

Seen in Draft: Captain Peter Ramsay, OIC, *Scotia*

IBTS - Quarter 1 Survey 26 Jan - 16 Feb 2006

