

R1/12

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FRV *Scotia*

Cruise 0209S

REPORT

26 January – 17 February 2009

Personnel

K A Coull
M Mathewson
K Summerbell
R Watret
R Catarino
L Ritchie
B Lawrence (Part I)
L Leith (Part II)
L McPherson (Part I. Visitor – Aberdeen University)
A Baudron (Part II. Visitor– Aberdeen University)
C Cronin (Visitor – Cork Ecology)
A Batty (Visitor – Cork Ecology)

Objectives

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

Out-turn days per project: 23 days – RV0901/10597

Narrative

Scotia sailed from Aberdeen at 1000 on 26 January and commenced trawling on the station east of Aberdeen with the GOV trawl fitted with Groundgear “B”. The Methot Net was then deployed but due to false readings being displayed from the Scanmar system, the net struck the sea bed, resulting in damage. With the weather forecast indicating light winds for the next 3 or 4 days the decision was taken to steam east overnight to the outer stations, completing 5 Methot stations through the night. After completing the first haul on the morning of 27 February, the vessel then moved into the Norwegian Sector, completing the Trawl and Methot stations in this area before leaving the sector on the morning of 30 January. With weather conditions turning poor as the day progressed, *Scotia* completed 2 further trawl stations then proceeded to the Moray Firth overnight in order to work in the more sheltered inshore waters. With 3 Trawl and 6 Methot stations completed (in strong winds), the vessel then moved through the Pentland Firth to the west of the Orkney. *Scotia* then worked in a northerly direction, covering the stations west of the Orkney and Shetland Isles. With the weather forecast indicating reasonable conditions for a further three days it was agreed that the vessel should delay the mid cruise-break and proceed in a southerly direction, covering the more exposed stations on the north eastern part of the survey. A further 9 Trawl stations and 24 Methot stations were completed before the vessel docked in Aberdeen on the morning of 7 February.

Scotia resumed work on 8 February at the station east of Peterhead. The vessel then completed the 8 Trawl stations and 18 Methot stations in the general area northeast of Peterhead and east of Orkney Isles before moving south on the night of 11 February to cover the stations on the southern part of the survey area. *Scotia* then worked continuously on Trawl and Methot stations in the Montrose Bank, Aberdeen Bank and Devil's Holes area before finishing the standard survey area on the morning of 15 February. *Scotia* then steamed south west to carry out Methot sampling at 5 stations in an area off the northeast of England in order to fill gaps in the international coverage. With this work completed during the morning of 16 February, *Scotia* headed for Aberdeen where she docked, before unloading on the morning of 17 February.

Results

Trawling

The GOV was used throughout the cruise with groundgear "A" (152mm rubber disks) being used in the southern part of the survey area and groundgear "B" (305mm 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 bottom contact sensor was attached to the groundgear for each tow and the data downloaded for further analysis in the laboratory

A total of 52 valid hauls was achieved with all allocated stations being sampled as well as two further stations west of the Orkney Islands (44E6 & 44E7).

Table 1 shows the (final) preliminary indices for all vessels participating in this international survey with a total of 388 hauls having been completed. 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)

	Final 2008	Preminary 2009	Mean (average 1980–2008)
Cod	2.7	1.2	8
Haddock	60	67	618
Whiting	270	232	515
Norway pout	2344	5969	2801
Herring	1793	2451	1982
Sprat	1432	5598	1011
Mackerel	66	1	110

The survey indices for 1980 – 2009 for the above species are provided in Figure 1. At this stage it appears that herring is stronger than the last 5 year-classes, sprat is high (but this is heavily influenced by a single haul), Norway pout is stronger than recent years, but cod, haddock and mackerel are very low. Whiting maintains the recent level but is low in relation to the longer term average.

Methot Net Sampling

A total of 109 Methot Net hauls were carried out in order to obtain an estimate of the numbers of pre-metamorphosing herring larvae. The circular frame was used to complete 2 hauls in each statistical rectangle of the survey area and the deployment and recovery speeds were adapted in accordance with advice from the Herring Assessment WG.

Biological Sampling

Additional biological data were collected from various species in support of EU Data Collection Regulation (EC) No 2008/949.

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. CTD was deployed at each station (with Reverser bottle attached) in order to obtain temperature data as well as water samples for analysis for salinity, nitrate, silicate and phosphate.

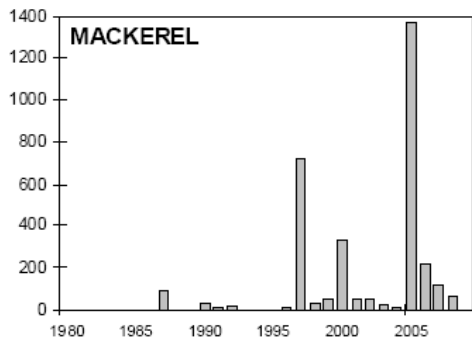
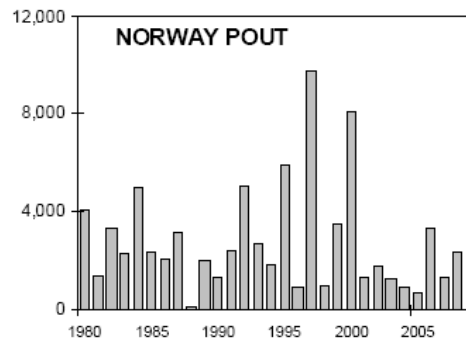
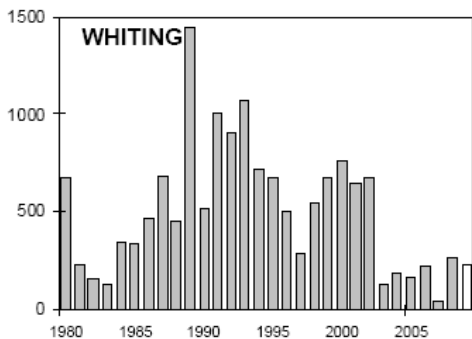
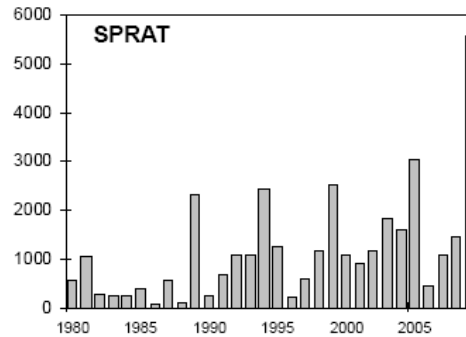
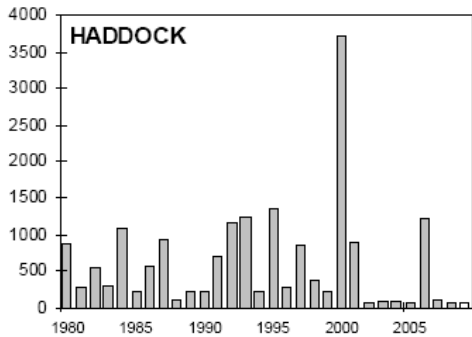
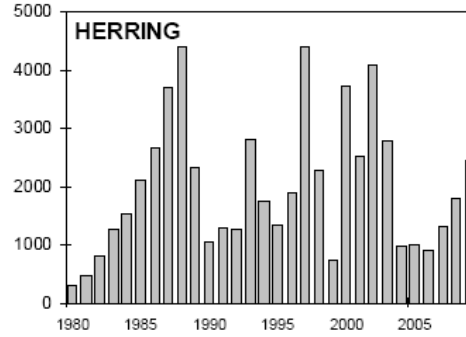
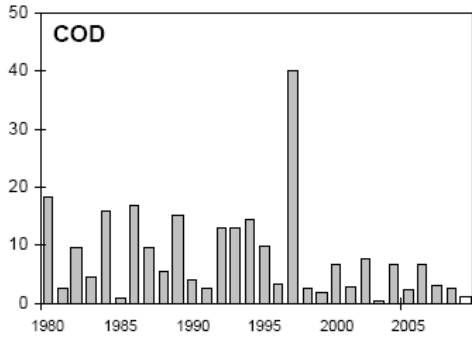
K A Coull
17 February 2009

Seen in Draft: Captain Andy Somerton, OIC, *Scotia*

Figure 1

International Bottom Trawl Survey: 1-group indices as average N/hour fishing
 1980-2008 Final indices, 2009 preliminary values based on: 388 hauls

02/03/2009



	final 2008	preliminary 2009	MEAN av 80-08
cod	2.7	1.2	8
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IBTS - Quarter 1 Survey 2009

