

R1/12

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FRV *Scotia*

Cruise 0207S

REPORT

20 January – 10 February 2007

Personnel

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Objectives

1. To take part in the International Bottom Trawl Survey in the North Sea.
2. To collect biological data and samples in preparation for a maturity workshop (WKSMCHWS – Nov 2007).

Out-turn days per project: 22 days – RV0702

Narrative

Scotia sailed from Aberdeen at 1100 on 20 January and commenced trawling on the station east of Aberdeen with the GOV trawl fitted with groundgear "B". With trawling activities restricted to daylight hours there was only time to complete one trawl station. Methot net sampling for herring larvae was then carried out during the hours of darkness, covering three statistical rectangles off the east coast of Scotland. Two hauls were carried out in each rectangle with the square frame and the round frame being used alternatively. Two further stations were completed with groundgear "B" before changing to groundgear "A" on the afternoon of 21 January. Work continued on the south western part of the survey area until the following afternoon when, with favourable weather conditions forecast, the decision was taken to work eastwards overnight, taking the vessel into the Norwegian sector. Work continued in the Norwegian sector until the afternoon of 25 January when *Scotia* returned to UK waters to commence work on the central part of the survey area. Work in this region continued until the evening of 27 January when Methot net sampling had to be cancelled at 9.00pm due to poor weather conditions. The vessel proceeded towards the Moray Firth area and was able to recommence trawling at 1200 the following day. With an improvement in the weather forecast, the vessel worked northwards through the night and completed three stations off the southwest of Shetland the following day. *Scotia* docked in Lerwick at 0800 on 30 January for the mid cruise break and sailed again the following morning. The vessel resumed trawling on the

northern part of the survey area, completing stations west and north of Shetland on the evening of 1 February. Poor weather conditions on 2 February restricted trawling to two stations before *Scotia* worked towards the more sheltered waters off the east coast of Orkney. The vessel carried out work on three stations in this region the following day then proceeded in a south easterly course of work in order to complete the exposed stations off the northeast coast of Scotland while the weather conditions were favourable. With these stations completed on the afternoon of 7 February, *Scotia* then completed work in the inner Moray Firth area then proceeded to the west of Orkney where two further stations were sampled. Work on the survey area was completed on the afternoon of 9 February and the vessel then proceeded to Aberdeen, docking on the morning of 10 February.

Unloading of the heavy trawl gear took place on the 10 February with the portable laboratory containers being unloaded on 11 February. Scientific gear and samples were unloaded on the morning of 12 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 preliminary indices for all vessels participating in this international survey with a total of 322 hauls having been completed to date. 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 2006	Preminary 2007	Mean (average 1980–2006)
Cod	7.1	3.4	9
Haddock	1212	96	659
Whiting	223	100	546
Norway pout	3340	1455	2846
Herring	911	1059	1966
Sprat	422	2816	1328
Mackerel	215	127	111

The survey indices for 1980 – 2007 for the above species are provided in Figure 1. At this stage it appears that the numbers of one-year old cod, haddock, whiting , Norway pout and herring are below the long term survey average with sprat and mackerel being above the average.

Method Net Sampling

A total of 125 Method Net hauls were carried out in order to obtain an estimate of the numbers of pre-metamorphosing herring larvae. Two samples, one with the traditional square Method frame and one with the newly acquired circular frame were carried out in each statistical rectangle of the survey area. Additional sampling was carried out in an attempt to obtain a comparison between the two frame types.

Biological Sampling

Additional biological data were collected from species listed in the 2006 report of the IBTS in support of EU Data Collection Regulation (EC) No 1639/2001 and No 1581/2004.

Additional biological data and samples were collected for the forthcoming Workshop on maturity of cod, haddock, whiting and saithe.

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.

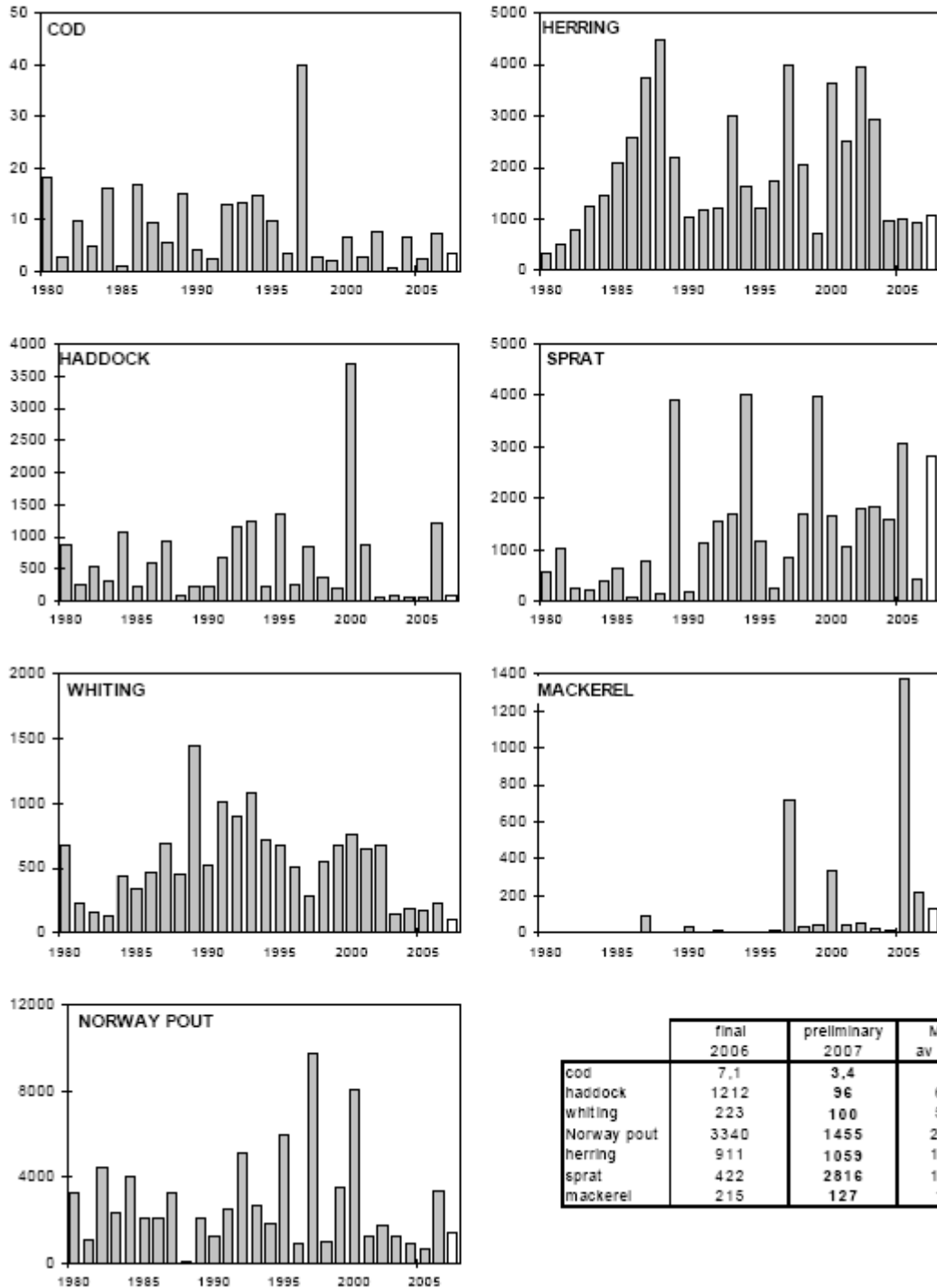
K A Coull
26 February 2007

Seen in Draft: Captain Norman Paddle, OIC, *Scotia*

Figure 1

International Bottom Trawl Survey: 1-group indices as average N/ hour fishing
 1980-2006 Final indices, 2007 preliminary values based on: 322 hauls

19-2-2007



IBTS - Quarter 1 Survey 20 Jan - 11 Feb 2007

