

R1/12

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

FRV *Scotia*

Cruise 1202S

## REPORT

7-28 August

### Personnel

K A Coull  
 S P R Greenstreet  
 M R Robertson  
 I M Gibb  
 M Mathewson  
 J McWilliam  
 H Fraser  
 J Drewery  
 H A McLay (7-19 August)  
 J Mair (7-19 August)  
 D C Emslie (20-28 August)  
 M Gault (20-28 August)

### Objectives

1. To undertake a demersal trawling survey of the North Sea.
2. To obtain temperature and salinity data from surface and seabed at each trawling location.
3. To carry out benthic sampling along the track of as many trawl stations as time permits.

**Out-turn days per project:** 20 days MF01B, 1 day MF07N

### Narrative

*Scotia* sailed from Aberdeen on the morning of 7 August and commenced trawling at the station east of Aberdeen. Two further stations were completed off the north east coast of Scotland before work was diverted towards developing a working procedure for the deployment and recovery of the benthic beam trawl and the Usnel box corer. Two benthic stations were completed satisfactorily during the first night. The vessel then worked in a northerly direction, completing stations in the Moray Firth, Orkney and west Shetland regions before moving to the stations east of Shetland on the morning of 11 August. Five stations were completed before problems with the motor propulsion units on the morning of 12 August resulted in *Scotia* breaking off from the survey programme. The vessel headed for Norway, docking in Stavanger at midnight on the 12 August. With the engine repairs being completed, *Scotia* sailed at 1600 hours on 14 August and resumed fishing operations later the same evening. Stations in the Bressay Shoal, Fladden, Coral Bank and Aberdeen Ground were completed before *Scotia* called into Aberdeen on the evening of 19 August to facilitate a change to the scientific personnel.

*Scotia* was diverted from the survey work in order to replace a mooring buoy at a location east of Stonehaven. This work was completed satisfactorily and the vessel resumed survey work at mid-day on 20 August. *Scotia* then worked in a generally south easterly direction until the evening of 21 August when poor weather conditions prevented the deployment of the benthic sampling

equipment. The vessel steamed northwards overnight and an improvement in the weather conditions allowed limited benthic sampling to be carried out prior to the start of trawling in the morning of 22 August. Work continued in an easterly direction, with the remaining stations in the Norwegian Sector being completed during the afternoon of 23 August. Stations in the Danish, German and Dutch sectors were completed over the following three days. *Scotia* then carried out work on the stations off the north east of England with the final station being completed on the evening of 27 August. *Scotia* docked in Aberdeen at 0830 hours on 28 August.

## Results

The survey area was well covered, with a total of 85 stations being sampled. Two stations, 37F0 and 37F2 were not sampled due to time lost during the survey period.

The provisional number of 0-group haddock and 0-group whiting caught per 30 minutes (standard haul duration) in each statistical rectangle are shown in Figures 1 and 2 respectively. Catches of 0-group haddock and 0-group whiting were relatively low in comparison with recent years. The 1999 year class (3-year olds) dominated the catches for haddock and the numbers encountered are the highest since the series of surveys commenced.

All length frequency data, haul summary information and age data for cod, haddock, whiting, saithe, Norway pout, sprat, herring and mackerel were punched at sea and stored on micro computer. All additional biological data collected for cod, haddock, whiting, saithe and Norway pout were punched at sea and stored in a suitable format for use in the Laboratory.

The Scanmar system was used throughout the cruise to monitor headline height, wing spread, door spread and distance covered during each haul. A report on methods of recording Scanmar data was completed and passed to relevant people in the Laboratory for further discussion.

Benthic sampling was successfully carried out at thirty locations (Fig. 3) from throughout the survey area. At each station, two 0.25 m<sup>2</sup> box core samples were collected and a five minute beam trawl completed. Sediments collected by the box core were sieved through a series of five mesh sizes to divide the infauna into five size classes. All material retained was then preserved and returned to the Laboratory for further analysis. Most of the animals caught in the beam trawl were identified to species, weighed and measured at sea while any others were preserved and returned to the Laboratory for identification.

The thermosalinigraph was run continuously until 19 August. A fault developed with the system resulting in no further data being collected from 20 August. A CTD was deployed at each trawling station to obtain temperature and salinity profiles.

K A Coull  
27 September 2002  
Seen in draft: Peter Barratt, OIC *Scotia*

### Scotia Groundfish Survey - August 2002

Number of 0+ haddock per 30 minutes

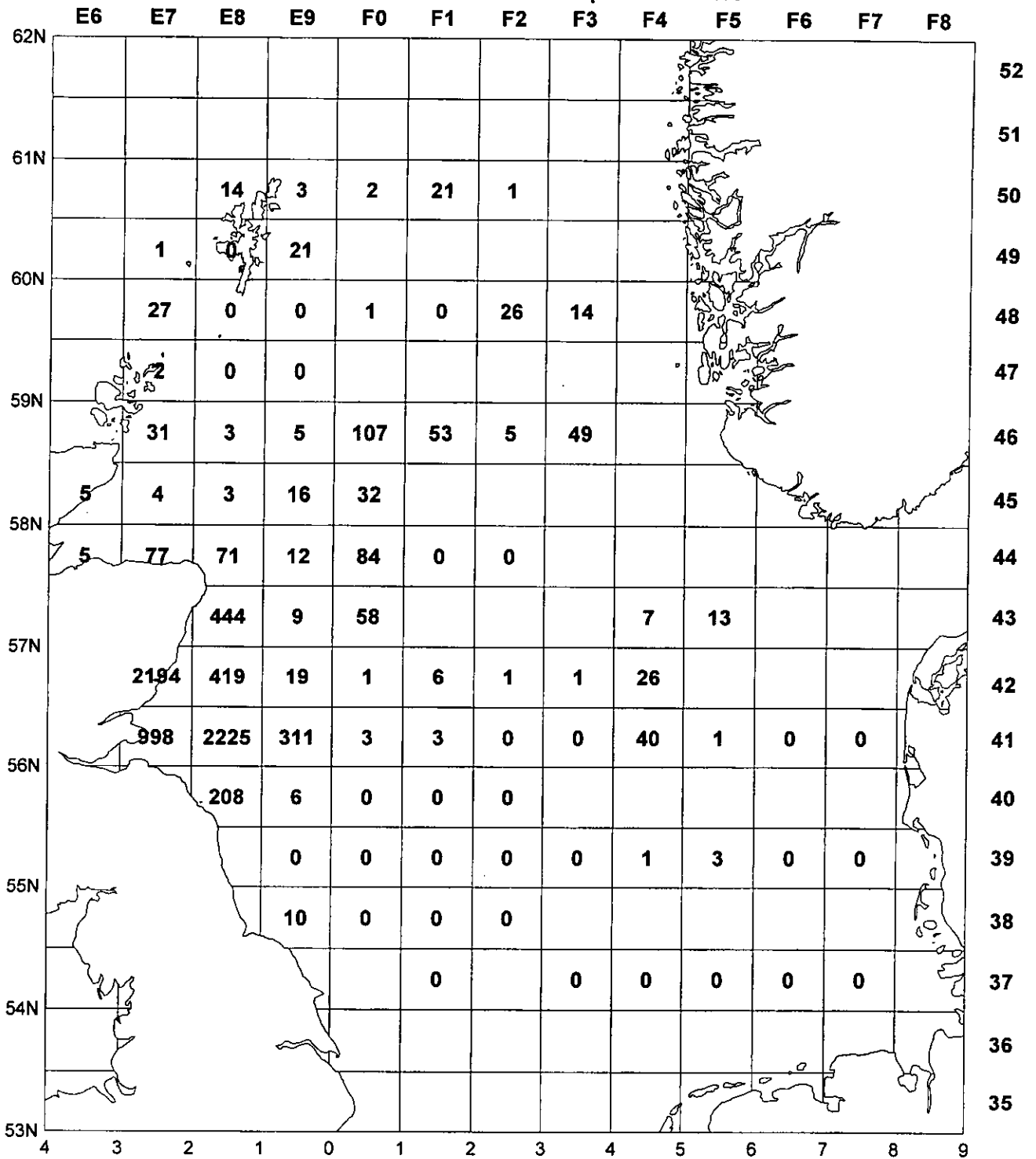


Figure 1

### Scotia Groundfish Survey - August 2002

Number of 0+ whiting per 30 minutes

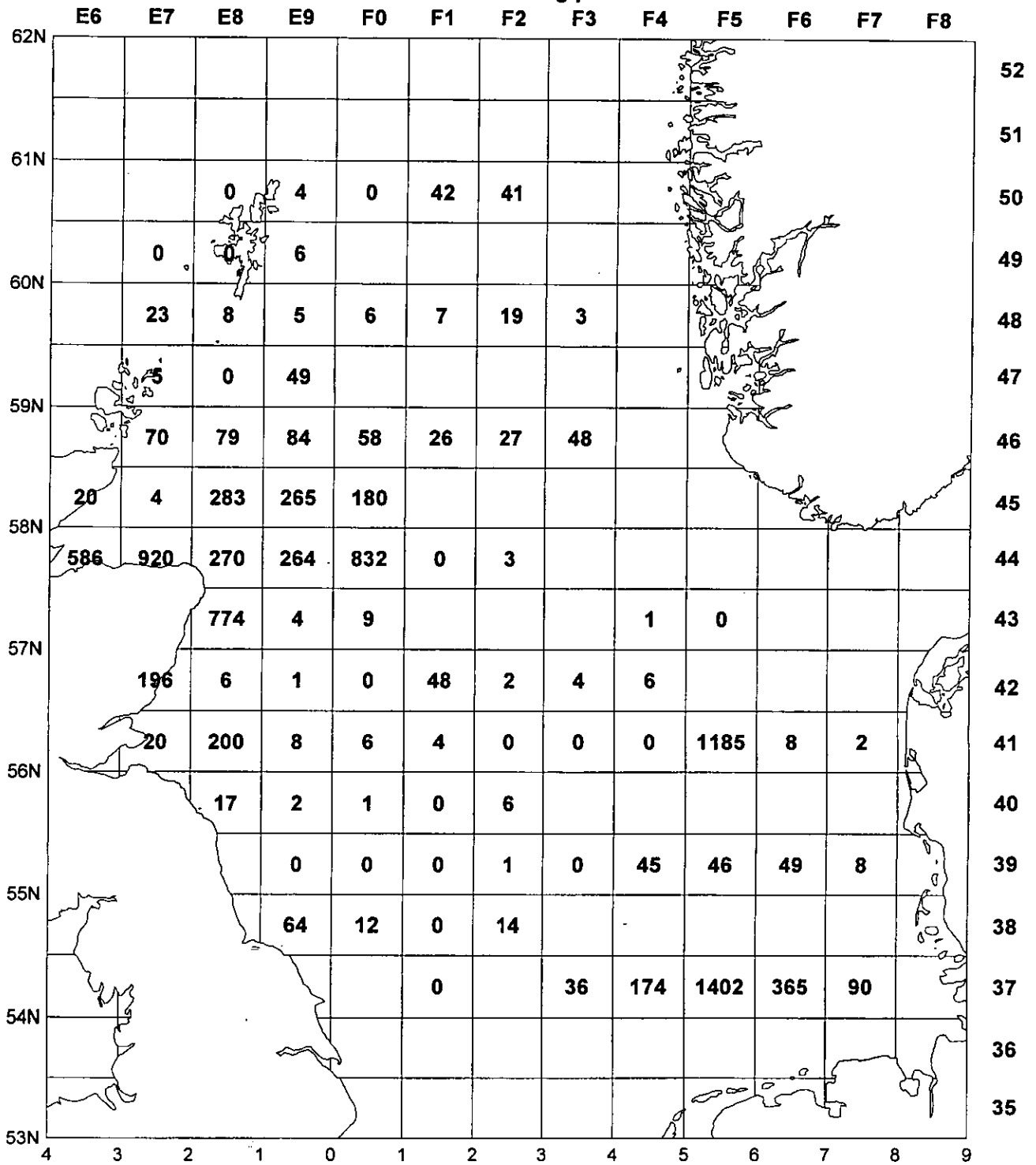


Figure 2

# Scotia Groundfish Survey - August 2002

## Benthic Sampling Stations

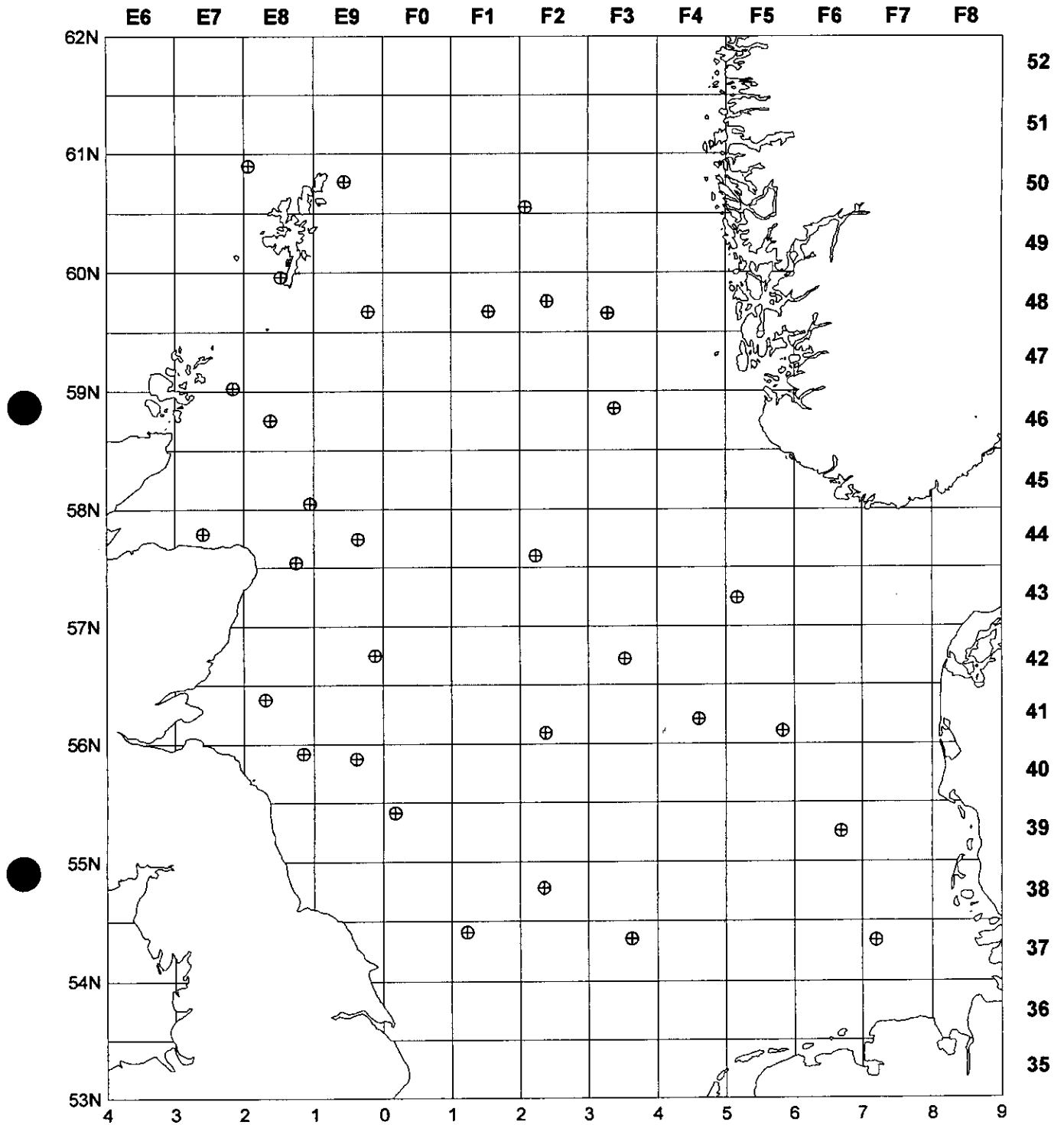


Figure 3

# Scotia Groundfish Survey - August 2002

