

R1/12

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

FRV *Scotia*

Cruise 0794S

## REPORT

11 - 24 May 1994

### Ports

Loading:           Aberdeen  
Unloading:         Aberdeen

### Personnel

A McIntosh	HSO (in Charge)
D C Moore	SO
J Rusin	HSO
C Robinson	Visitor
L Newton (Miss)	Visitor
J Rotchell (Miss)	Visitor
Qingxiao Yang	Visitor
Uba Tahir	Visitor

### Objectives

1. *Braer* oil spill effects on hydrocarbon loadings in sediments and fish.
2. East Shetland Basin hydrocarbon survey.

### Out-turn days per project

9 days/*Braer*; 5 days BIA 1

### Narrative

After all gear and equipment had been loaded and secured, *Scotia* departed from Aberdeen at 1130 hours on 11 May and made passage north to the first sampling site. Samples of common dab were obtained by trawl at the sites indicated on the attached cruise chart. Sediment samples were obtained by Day grab and Craib corer at the sites indicated on the attached charts. Attempts to collect samples of sandeels by beam trawl and dredge were made at various locations including Fair Isle and from around the southern end of the Shetland Islands.

Macrobenthos samples were collected at sites previously occupied southeast of Fair Isle and west of the southern end of Shetland.

On completion of the sampling programme on the western side of Shetland, *Scotia* made passage to the eastern side where again attempts were made to obtain sandeels by trawl and dredge. Samples of common dab were obtained by trawl at the sites indicated. The sediment sampling programme was completed and a further site occupied to obtain control macrobenthos samples. This element of the cruise was completed by 0300 hours on Thursday 19 May, when *Scotia* then proceeded to head for the East Shetland Basin area where sampling of sediment by Day grab commenced at 0400 hours on 19 May.

Sampling by Day grab was conducted at the sites indicated on the attached map. Trawling for benthic fish species was undertaken at the indicated sites. The sampling programme in the East Shetland Basin was completed by 0700 on 22 May and a transect of stations, including five bottom trawl sites, along longitude 1°30' E was completed by 0900 hours on 23 May. A further five sediment stations and two trawl samples were taken before heading for Aberdeen where *Scotia* was alongside by 0800 hours on 24 May and all scientific equipment and personnel were disembarked by 1000 hours.

## Results

Objective 1. This was successfully completed. As on previous occasions, at some of the sites where sediment sampling was indicated, the ground proved too difficult to obtain satisfactory samples. Collection of sandeels was not possible at all sites attempted due to a combination of weather and suitable fishing gear.

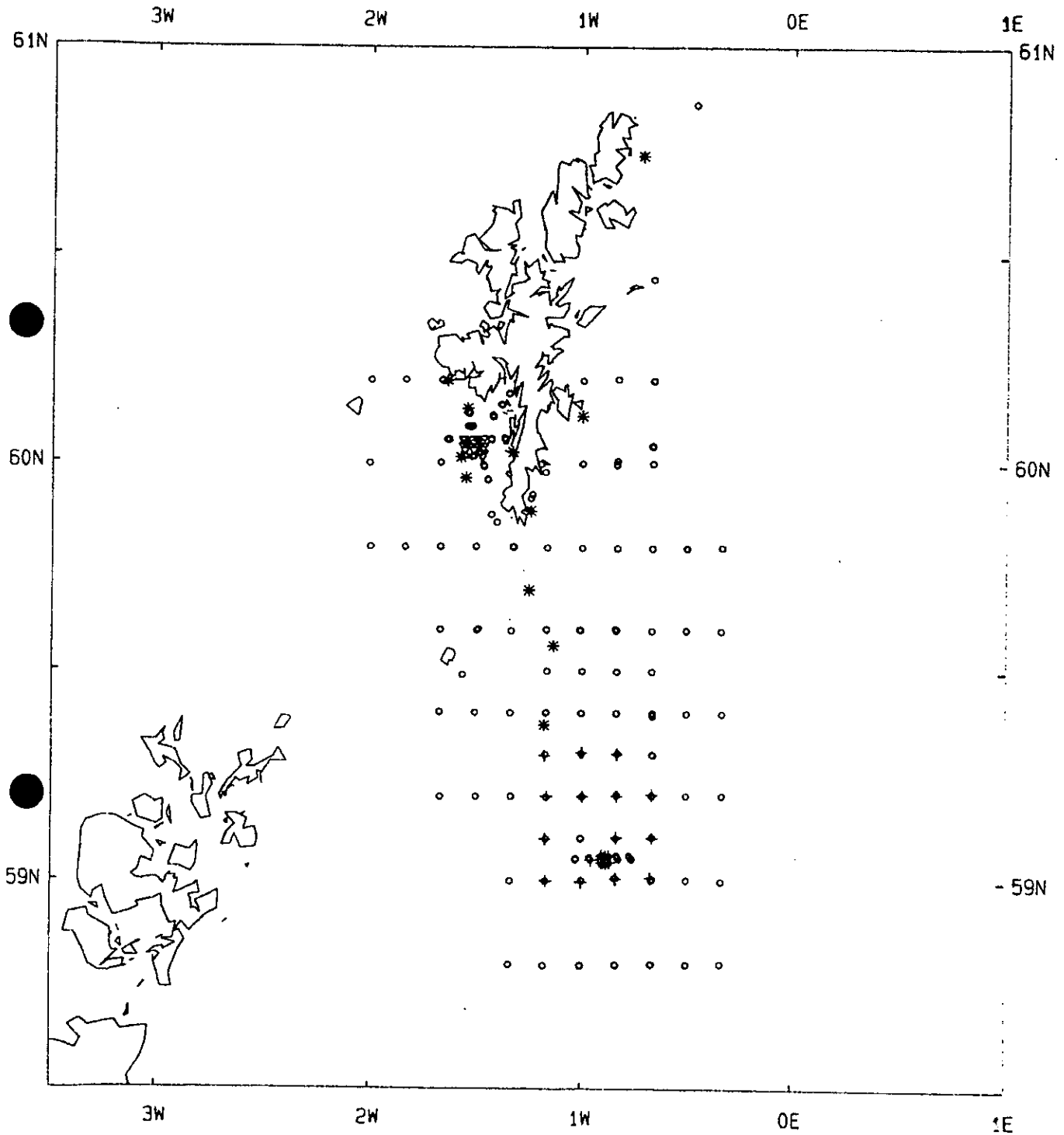
Objective 2. The sediment sampling programme was fully achieved and the return of suitable fish samples was as expected and similar to previous occasions.

All samples taken were treated according to standard protocols. Sediment analysis for total hydrocarbon concentrations, fish biochemistry and histology and benthic faunal analyses will be carried out at MLA and elsewhere as soon as is practicable and the results made available where appropriate.

A McIntosh  
25 April 1995

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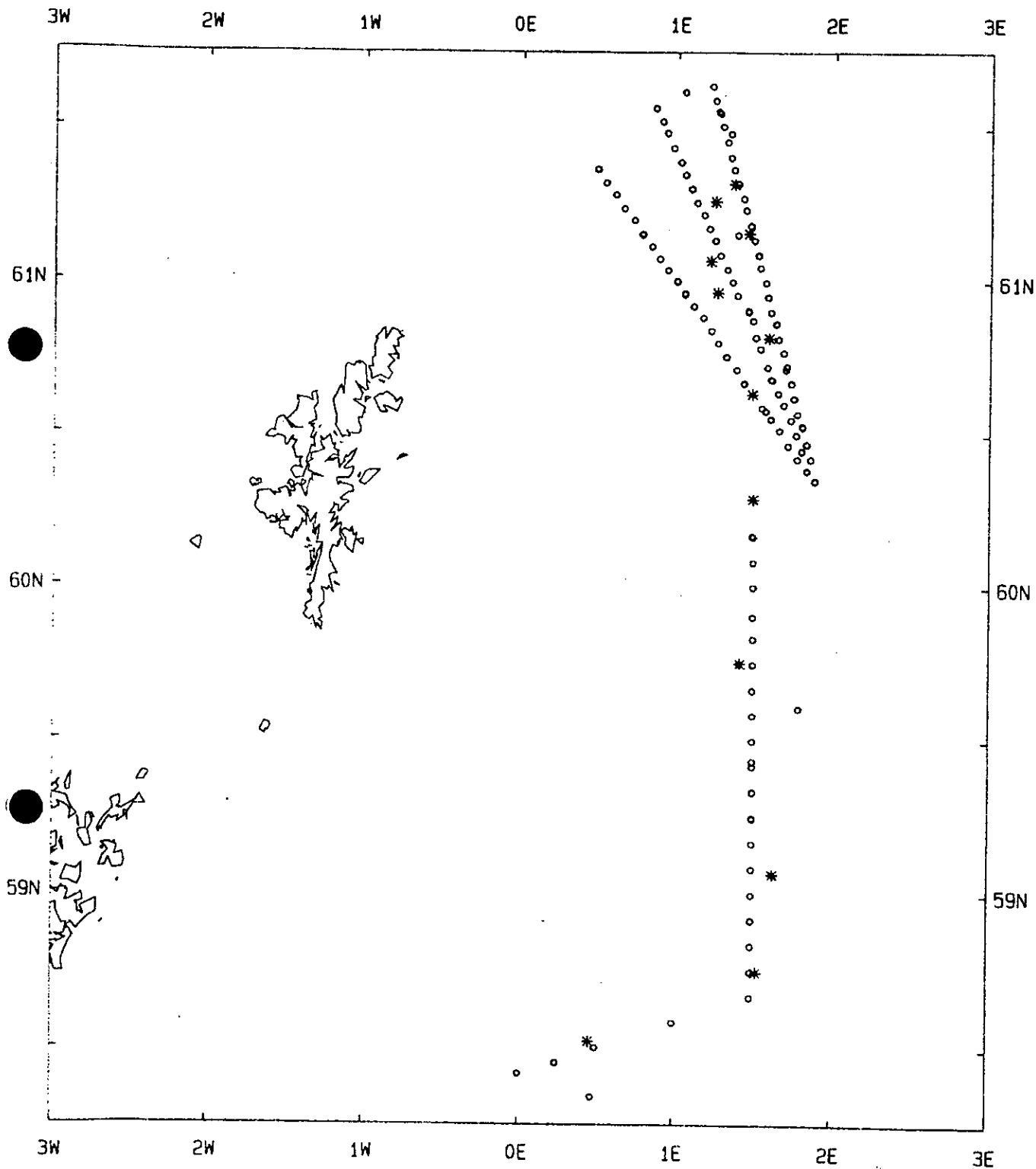
Sampling locations during the period 11 - 18 May 1994  
in relation to the BRAER oil spill



- o - sampling by Day Grab
- + - sampling by Craib Corer
- \* - sampling by bottom trawl

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Sampling locations during the period 19 - 23 May 1994  
in relation to spacial and temporal trend monitoring  
in the East Shetland Basin



- o - sampling by Day Grab
- + - sampling by Craib Corer
- \* - sampling by bottom trawl