

R1/12

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FRV *Scotia*

Cruise 0699S

REPORT

17-22 April 1999

Personnel

Alistair McIntosh	HSO	(B2)	(In charge)
Derek Moore	SSO	(B3)	
Lynda Webster	HSO	(B2)	
Pamela Simpson	SO	(B1)	
Colin Megginson	SO	(B1)	
Eric Dalgarno	ASO	(A3)	

Fishing Gear

Granton 48' Trawl (BT 101); 3 m Beam Trawl

Objectives

1. *Braer* oil spill effects on hydrocarbon loadings in sediments.
2. *Braer* oil spill effects on biochemical measurements and histopathology in fish.
3. *Braer* oil spill effects on *Nephrops* in the Burra Haaf with reference to a control site.

Out-turn Days per Project: six days AE08o

Narrative

The *Scotia* was loaded with all necessary sampling and scientific equipment and sailed from Aberdeen at 1230 hours on 17 April. Passage was made north to the first sampling area at Unst off the north east coast of Shetland where, on the morning of 18 April a bottom trawl was successfully completed which provided sufficient dab (*Limanda limanda*) for the samples required. Sediment samples were taken by grab at the start, middle and end points of the trawl. After making passage south, a grid of nine stations was sampled by Craib corer off the south east Shetland mainland as reference for those cores to be taken elsewhere.

Scotia then made passage to the west side of Shetland where sediment sampling by grab commenced at 0030 hours on 19 April and continued until dawn when fishing for *Nephrops* from the Burra Haaf was undertaken. Two half hour beam trawls failed to produce the numbers required. *Scotia* then continued with the rest of the sampling programme on the west side of Shetland. On completion of this, further attempts were made to sample *Nephrops* from the Burra Haaf with eventual success at around 2300 hours.

Overnight, sediment samples were taken south of Sumburgh and a successful bottom trawl completed in the same area on the morning of 20 April.

With impending worsening weather conditions it was decided to reduce the single sediment stations to those between the last site and the next trawling site, south east of Fair Isle. A successful bottom trawl was completed at the south east Fair Isle site followed by a line of stations sampled by grab. Sampling by core started at 2000 hours but had to be abandoned due to severe weather interfering with the DP station holding capability. A bottom trawl was completed in this area which provided sufficient fish samples for the analyses required. The severe weather precluded further sampling and *Scotia* dodged in this area overnight.

With no sign of the weather improving to allow the sampling programme to be completed *Scotia* made passage slowly south to the Little Halibut Bank site. By 0800 hours on 21 April, as there was no prospect of an imminent improvement in the weather to allow fishing, the remainder of the programme had to be abandoned. *Scotia* made passage for Aberdeen where docking was completed by 0700 hours on 22 April. All scientific equipment and the samples obtained were unloaded and returned to the MLA.

Results

Most elements of the main objectives of this cruise were completed. Due to weather conditions precluding successful sediment sampling, a number of single grab sites between Sumburgh and the south east Fair Isle core site had to be taken out of the programme. The core sampling at south east Fair Isle had to be abandoned after obtaining only two successful samples.

Six out of seven sites were successfully sampled for dab and sufficient *Nephrops* were obtained from Burra Haaf. No sample was obtained from the reference site.

All fish and sediment samples were collected and treated according to standard protocols and stored appropriately for subsequent analysis in the MLA.

A McIntosh
27 April 1999

Seen in draft: Captain Peter Ramsay, Master

Sediment and Fish sampling positions - Scotia 0699S

