

R1/12

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FRV *Scotia*

Cruise 1597S (Part 1)

REPORT

21-24 November 1997

Loading: Aberdeen
Unloading: Aberdeen

Personnel

A D McIntosh	HSO (in charge)
D C Moore	SSO
P J Copland	HSO
D J Bova	SO
E Dalgarno	ASO
N A Brown	ASO

Fishing gear: Prawn trawl BT118; 3 m Beam trawl

Out-turn per project: 4 days; CAP1

Objectives

1. To trawl for *Nephrops* and haddock (and retain any flatfish species caught) at specific sites inside and outside the FEPA exclusion zone around the Captain Oilfield.
2. To collect sufficient sediment samples from grids of stations specific sites within and outwith the FEPA exclusion zone to fully describe these areas and to verify the RoxAnn data.
3. To employ RoxAnn and side scan sonar to delineate and describe specific areas within the FEPA exclusion zone.

Narrative

After all scientific equipment had been loaded and all personnel were aboard by 1500 hours, due to the weather conditions *Scotia* eventually departed from Aberdeen at 2100 hours on 21 November and made passage for the outer Moray arriving on site west of the Captain Field and commenced collecting data by RoxAnn at 0800 hours on 22 November. A period was dedicated to the collection of RoxAnn data from both areas under examination. In both areas a series of parallel transects were conducted. The total linear track length in the western area was 71 km. RoxAnn also used the hull mounted transducer to collect data for an additional 53 km of track during trawling and Sidescan operations. The area of interest was covered extensively and by 1500 hours, when any further work in this area, by side scan sonar or fishing was not possible due to the weather conditions, *Scotia* then moved to the south eastern site where a further survey was conducted using RoxAnn. By 1900 hours, an area covering the intersect of the three trawls taken on the previously survey had been completed. The total linear track length in the south eastern area was 34.5 km. With the weather was worsening, the RoxAnn gear was recovered and taken aboard.

Scotia dodged for two hours before a weather window made it possible to shoot the trawl. This had to be done in an east-west direction due to the weather conditions. Haddock, *Nephrops* and samples of three flatfish species were collected and treated accordingly for storage. Passage was made to the western

area where a further three trawls were taken overnight, finishing at 0600 hours on 23 November. Sufficient examples of the species caught were frozen for subsequent analyses. Fifty *Nephrops* from each haul were measured and examined for the presence of *Hematodinium*.

Because of the slight moderation in the weather at this time it was decided to launch the side scan sonar and an extensive survey commenced at 0630 hours along and around the area of interest (Trawl 3). A number of transects parallel to Trawl CF3 were conducted in order to establish the existence of surface objects in the immediate area. An area extending to 450 m on each side of trawl CF3 with a track length of 37 Km was investigated with no significant contacts being found. The system was however able to detect the tracks left by the sampling trawls conducted the previous day.

In general the area was very flat with no significant natural features. By 1500 hours the weather was freshening considerably and this element of the work having been successfully completed, was halted at 1630 hours and the gear recovered.

Two further trawls on the western side were taken between 1630 and 2000 hours on 23 November. A further trawl was to be taken on the south eastern area, but due to the worsening weather conditions further work around the Captain Field could not be undertaken and passage was made to the Moray coast where a further trawl was taken for fish reference material. *Scotia* then made passage for Aberdeen, docking at 2200 hours on 24 November, when all samples were transferred to the Marine Laboratory and suitably stored for subsequent analyses.

Results

Extensive coverage of both areas was provided by RoxAnn and in addition, on the western side, by side scan sonar.

Statistics

RoxAnn track using towed body.

Area 1 (western block)	71 km
Area 1 Total Area	8.5 km ²
Area 2 (eastern block)	34.5 km
Area 2	14 km ²

Additional RoxAnn track collected in Area 1 using a hull transducer.

Trawling	16 km
Sidescan	37 km

Approx 10 hours of sidescan work was carried out.

The fish and shellfish obtained from trawls in the western area of the Captain Field provided samples as follows:

	CF19	CF20	CF21	CF22	CF23
<i>Nephrops</i>	340	200	200	200	100
Haddock	13	30	30	30	25
Plaice	5	10	7	7	3
Lemon sole	4	5	2	2	
Witch	6	10	10	4	2

The fish and shellfish obtained from trawl in the south eastern area of the Captain Field provided samples as follows:

	CF18
<i>Nephrops</i>	560
Haddock	30
Plaice	3
Lemon sole	2
Witch	9

The fish and shellfish obtained from trawl in the reference area off the Moray coast provided samples as follows:

	CF24
<i>Nephrops</i>	200
Haddock	30
Plaice	10
Lemon sole	3

Index of occurrence of *Hematodinium* in *Nephrops*

Trawl number	Stage	Number observed	Size range mm
CF19	No <i>Hematodinium</i> observed		25-42
CF20		1	19-43
CF21	No <i>Hematodinium</i> observed		20-41
CF22		1	27-45
CF23		1	24-45
CF24		1	24-45
CF25		1	25-41

Objective number 2 could not be accomplished due to the severe weather conditions precluding the sampling gear being deployed and recovered successfully and safely.

Results from taste panel assessment and from hydrocarbon analyses of fish and shellfish samples will become available in due course.

A McIntosh
7 January 1997

Seen in draft: Capt D Fraser (OIC *Scotia*)

Captain Field Survey - 21-24 November 1997

