

R1/12

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FRV *Scotia*

Cruise 0597S

REPORT

10-30 April 1997

Half Landing: 18-19 April - Esbjerg

Personnel

A W Newton	SSO
K A Coull	SSO
J A King	HSO
K J Peach	SO
C G Davis	SO
M Snow	SO
M C Mathewson	ASO
F N Burns	ASO
I Penny	ASO

Objective

To participate in a coordinated groundfish survey in the North Sea.

Out-turn Days Per Project:: 21 days DAC1

Narrative

Sailing was delayed by three hours whilst repairs were made to the port trawl winch and to a burst pipe in the engine room; the vessel finally sailing at 1400 hours on 10 April. During the next eight days survey work was conducted continuously in the middle North Sea with a break in Esbjerg on Friday 18 April when two scientists were disembarked. After Esbjerg *Scotia* continued surveying in a general north-west direction until all assigned stations were completed. During the course of the cruise 10 hours were lost through bad weather but the lost time was made up and all objectives of the trip were completed before *Scotia* docked in Aberdeen on Wednesday 30 April.

Results

A total of 72 hauls were made using the GOV trawl. For the majority of the survey the ground gear consisted of the standard set of 152 mm rubber discs but the latter were replaced with 305 mm bobbins for the stations in the northern North Sea. Short (47 m) sweeps were used for all tows. Each haul was monitored for headline height, wingend and door spread using the Scanmar system. This cruise is part of an internationally coordinated survey and final results will not be available until later in the year; Table 1 shows the comparative year class strengths of three major demersal species as derived from Scottish data only.

As part of an ongoing research project into Viral Haemorrhagic Septicaemia (VHS) blood and tissue samples were obtained from eight different species (see Table 2).

Bottom and surface temperatures and salinities were taken at every valid trawling station.

A W Newton
19 June 1997

Seen in draft: Captain J Nichols

Table 1 Results from Scottish surveys May/June 1991-97

Numbers of Cod per 10 Hours Fishing

Survey Year	Valid Hauls	<----- Age ----->								
		0	1	2	3	4	5	6	7	8
1991	54	0.2	14.9	31.4	39.4	6.1	4.9	2.2	0.4	0.4
1992	69	0.0	190.8	53.3	13.8	6.1	0.5	0.9	0.6	0.0
1993	71	0.0	48.2	144.6	22.4	4.0	2.2	0.3	0.0	0.1
1994	75	0.0	20.3	34.1	24.4	4.5	0.6	1.0	0.4	0.0
1995	65	0.4	42.7	204.7	29.0	9.3	3.0	1.2	0.1	0.5
1996	71	0.0	7.7	56.6	29.6	6.3	3.4	1.2	0.0	0.1
1997	72	0.0	28.3	19.2	10.3	3.9	1.2	1.4	0.6	0.1

Numbers of Haddock per 10 Hours Fishing

Survey Year	Valid Hauls	<----- Age ----->								
		0	1	2	3	4	5	6	7	8
1991	54	3	4087	493	76	15	46	3	1	1
1992	69	0	8196	2854	177	27	3	10	+	0
1993	71	0	11963	2680	925	36	4	+	4	1
1994	75	0	1295	3838	341	109	3	+	0	0
1995	65	0	12539	1186	1549	88	40	1	6	0
1996	71	1	1922	6889	302	282	12	10	2	+
1997	72	0	3144	1472	2213	73	65	3	2	0

Numbers of Whiting per 10 Hours Fishing

Survey Year	Valid Hauls	<----- Age ----->								
		0	1	2	3	4	5	6	7	8
1991	54	0	9490	3856	2286	374	123	51	2	0
1992	69	0	12976	4750	1142	428	114	45	13	1
1993	71	0	10467	4149	2086	517	485	36	28	2
1994	75	0	6540	3571	855	238	90	75	4	7
1995	65	2	19161	7730	2619	442	221	41	28	1
1996	71	+	4402	4962	2230	833	125	59	17	4
1997	72	0	1407	2260	1802	643	140	13	15	+

Table 2 Summary of total numbers of fish species sampled for VHS

J.A. King 17 April 1997

SCOTIA CRUISE 0587S 10 April to 18 April 1997
Summary of Total Numbers of Fish Species Sampled for VHS

Date	Seedling Head No.	VHS Head No.	Statistical Sq.	Total Numbers of Fish Sampled per Head								Total No. Fish Sampled		
				CO	NK	WH	HE	SP	SE	RO	GR			
10/04	105	1	43E6	1	30	30	30	0	0	0	0	0	0	
	106	2	42E7	0	0	30	30	30	0	0	0	0	0	
11/04	107	3	41E7	21	0	30	30	0	0	0	0	0	0	
	108	4	40E9	0	30	0	30	30	0	0	0	0	0	
	109	5	40E8	19	30	0	30	30	0	0	0	0	0	
	110	6	39E8	0	0	0	30	0	0	0	0	0	0	
	111	7	40F0	0	30	0	30	30	0	0	0	0	0	
12/04	112	8	39F0	0	30	0	30	30	0	0	0	0	0	
	113	9	38E9	0	30	0	30	30	0	0	0	0	0	
	114	10	38E9	30	0	1	30	0	0	0	0	0	0	
	115	11	39F0	0	30	0	30	30	0	0	0	0	0	
	116	12	40F1	0	30	30	30	0	0	0	0	0	0	
13/04	117	13	40F2	10	30	0	30	0	0	0	0	0	0	
	118	14	38F2	0	0	0	30	30	0	0	0	0	0	
	119	15	38F1	0	0	0	30	30	0	0	0	0	0	
	120	16	38F0	0	0	0	30	30	0	0	0	0	0	
	121	17	36F1	0	0	0	30	30	28	0	0	0	0	
14/04	122	18	36F2	0	0	0	30	30	0	3	0	0	0	
	123	19	36F3	0	0	0	30	0	4	0	0	0	0	
	124	20	36F5	2	0	0	30	30	1	3	0	0	0	
	125	21	36F4	6	0	0	30	30	0	12	0	0	0	
	126	22	38F4	1	0	0	30	30	0	3	0	0	0	
15/04	127	23	38F3	0	0	0	30	0	0	0	0	10	0	
	128	24	40F3	0	26	30	30	0	0	0	0	0	0	
	129	25	40F4	0	0	0	30	0	31	0	0	0	0	
	130	26	40F5	1	0	30	30	0	0	0	0	0	0	
	131	27	40F6	1	0	0	30	30	0	0	0	0	0	
16/04	132	28	38F5	0	0	30	30	30	10	0	0	0	0	
	133	29	38F6	3	0	30	30	30	5	0	0	0	0	
	134	30	38F7	0	0	0	30	30	60	0	0	0	0	
	135	31	39F7	0	0	0	30	0	0	0	0	0	0	
			Total	95	286	241	930	570	139	21	10	0	0	
													Total No. Fish Sampled	2302

Note: CO = cod; HK = haddock; WH = whiting; HE = herring; SP = sprat; SE = sand eel; RO = rockling; GR = gurnard

Track Chart of FRV 'Scotia' 10-30 April 1997

