

R1/12

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FRV *Scotia*

Cruise 1399S

REPORT

4-24 August 1999

Personnel

K A Coull	In charge
M C Mathewson	
F N Burns	
J Drewery	
I Penny	
H Emmerson	
T Catchpole	Visitor (4-13 August)

Objective

1. To undertake a demersal trawling survey of the North Sea.
2. To obtain temperature and salinity data from surface and sea bed at each trawling location.
3. To obtain fish samples from the Piper Alpha area.

Out turn in days per project: 21 days MO1T

Narrative

Scotia sailed from Aberdeen on the morning of 4 August and commenced trawling at the station east of Peterhead. The vessel then worked in a northerly direction, completing stations in the Moray Firth, Orkney and west Shetland regions. *Scotia* then worked north east of Shetland and entered Norwegian waters on the evening of 7 August. The vessel then proceeded in a generally southerly direction, completing the stations in Norwegian waters by the evening of 11 August. Further stations were completed off the Danish coast before *Scotia* docked in Esjberg for the mid cruise break on 13 August. The vessel sailed again the following morning and resumed trawling on the stations on the eastern and southern part of the survey area before *Scotia* started working northwards on the morning of 17 August. Work continued uninterrupted until the morning of 22 August when the provisional survey area was completed. The opportunity was then taken to carry out several stations in the Fladen and Fair Isle area before carrying out three hauls in the vicinity of Piper Alpha. *Scotia* docked in Aberdeen on the morning of 24 August 1999.

Results

A total of 87 trawl stations were completed with a further three trawls carried out to obtain fish and shellfish samples from the Piper Alpha area for analysis back at the Laboratory. The CTD was deployed at each station when the weather conditions were suitable.

The provisional number of \emptyset -group haddock and whiting caught per 30 minutes (standard haul duration) in each statistical rectangle are shown in Figures 1 and 2 respectively. The numbers at age of haddock, whiting and Norway pout caught per 10 hours fishing since the survey series

commenced in 1982 are shown in Tables 1, 2 and 3 respectively. Although the numbers of \emptyset -group haddock, whiting and Norway pout caught are the highest recorded, conclusions should be left until results from other participating countries are available as there have been changes to the survey vessel, gear and survey boundaries over the last two years.

All length frequency data, haul summary information and age data for cod, haddock, whiting, saithe and Norway pout were punched at sea and stored on micro-computer. The Scanmar system was used throughout the cruise to monitor headline height, wing spread, door spread and distance covered during each haul.

K A Coull
15 September 1999

Seen in draft: David Hodge

TABLE 1

Results from Scottish Surveys Conducted in August

Numbers of haddock per 10 hours fishing - North Sea										
Survey year	Valid hauls	Age								
		0	1	2	3	4	5	6	7	8
1982	77	1,235	2,488	996	1,336	115	7	2	1	2
1983	79	2,203	1,813	1,611	372	455	53	12	1	1
1984	82	873	4,367	788	336	55	65	9	5	1
1985	83	818	1,976	2,981	232	103	14	22	4	2
1986	80	1,747	2,329	574	598	36	27	4	3	+
1987	73	277	2,393	704	106	128	8	5	1	2
1988	86	406	467	1,982	170	27	23	2	1	+
1989	86	432	886	214	574	31	4	7	1	+
1990	85	3,163	1,002	240	32	103	7	1	3	1
1991	90	3,471	1,705	178	21	5	16	2	+	1
1992	87	8,270	3,832	963	48	8	3	8	+	+
1993	87	859	5,836	1,380	269	6	4	1	3	+
1994	87	13,762	1,265	2,080	210	53	2	+	+	+
1995	87	1,566	8,153	734	926	74	28	2	0	0
1996	85	1,980	2,231	4,705	231	206	22	6	+	0
1997	87	972	2,779	849	1,397	66	56	6	+	+
1998	77	3,280	6,349	1,924	490	511	24	18	2	+
1999	87	54,072	1,556	931	562	161	133	5	5	+

TABLE 2

Results from Scottish Surveys Conducted in August

Numbers of whiting per 10 hours fishing - North Sea										
Survey year	Valid hauls	Age								
		0	1	2	3	4	5	6	7	8
1982	77	102	653	971	972	224	60	16	3	+
1983	79	210	563	578	407	511	116	17	3	5
1984	82	442	1,048	371	170	77	92	18	5	+
1985	83	169	1,577	973	247	63	36	18	10	+
1986	80	406	1,111	452	224	27	5	5	1	0
1987	73	120	1,405	1,150	208	77	16	3	+	+
1988	86	642	967	1,606	452	70	19	2	0	2
1989	86	427	4,043	741	733	157	13	6	1	0
1990	85	1,943	2,239	2,053	248	255	47	5	1	1
1991	90	1,379	1,769	950	759	51	40	9	+	0
1992	87	2,417	2,925	1,267	553	585	47	26	5	-
1993	87	247	3,169	1,168	423	156	182	6	11	+
1994	87	648	2,635	950	254	57	34	23	+	1
1995	87	1,243	4,176	2,010	903	196	58	22	15	3
1996	85	440	2,888	3,047	1,215	460	43	15	22	9
1997	87	317	1,824	1,434	1,191	319	122	17	8	+
1998	77	12,302	4,141	5,426	649	321	131	62	5	3
1999	87	13,409	4,930	1,752	502	268	105	48	10	0

TABLE 3

Results of Norway Pout Per 10 Hours Fishing - North Sea

Numbers of Norway pout per 10 hours fishing - North Sea										
Survey year	Valid hauls	Age								
		0	1	2	3	4	5	6	7	8
1982	77	80	9,913	439	220	1	-	-	-	
1983	79	133	4,895	908	10	0	-	-	-	
1984	82	19	6,151	688	83	5	-	-	-	
1985	83	47	6,357	1,731	54	0	-	-	-	
1986	80	384	3,887	538	89	15	-	-	-	
1987	73	74	3,379	226	11	1	1	-	+	
1988	86	137	382	2,092	44	3	-	-	-	
1989	86	15	3,817	214	143	13	-	-	-	
1990	85	579	2,062	510	15	5	-	-	-	
1991	90	97	7,317	423	62	0	-	-	-	
1992	87	122	17,146	2,213	240	4	-	-	-	
1993	87	17	5,804	3,291	204	1	-	-	-	
1994	87	1,360	3,872	1,063	58	3	-	-	-	
1995	87	368	24,383	2,336	208	13	-	-	-	
1996	85	1,270	4,117	3,210	78	7	-	-	-	
1997	87	10	21,536	1,300	319	13	+	-	-	
1998	77	26,281	9,382	10,270	52	39	-	-	-	
1999	87	36,030	17,837	1,799	369	62	4	-	-	

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SCOTIA VESSEL

Programmes - Mr J A Morrison then Dr J M Davies for approval. Reports - Mr J A Morrison for approval.
Circulation list on Director and file copies only.

Issue two copies of Record of Haul and Station Numbers pro-forma with Scientist-in-Charge's copy of *Scotia* and *Clupea* programmes. Two xerox copies of track chart for reports to be sent to Dr L Rickards. Original chart to be returned to Scientist-in-Charge of cruise.

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Mr P J Copland
Mr J Dunn
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