

R1/12

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

FRV *Scotia*

Cruise 1899S

REPORT

13 November - 5 December 1999

Personnel

- A P Robb (In charge)
- A W Newton (13-28 November)
- G H Henderson
- C G Davis
- M Mathewson
- R Watret
- I Penny
- K Hughes PhD Student (28 November - 5 December)
- S Moore Visitor (22-27 November)

Project: MFO1t, Out-turn 23 days.

Gear: GOV Trawl (BT137) with ground gears C/A (with belly lines) and 20 mm codend.

Objective

- To participate in the ICES coordinated Western Division Bottom trawl survey.
- To carry out a comparative fishing exercise with the *Celtic Voyager*.
- To collect temperature and salinity data.

Area

West of Scotland, NW Ireland, Irish Sea.

Narrative

Scotia sailed from Aberdeen at 1230 hours on 13 November and proceeded north and west towards the survey area. Work commenced the following day at the Butt of Lewis station and continued westward and then southward until the evening of 16 November when bad weather stopped operations. The survey recommenced the following day and the stations to the west and north of Ireland along with those in the Clyde and the Irish Sea were completed by the evening of 21 November. *Scotia* then proceeded to the Dublin Bay area to rendezvous with the *Celtic Voyager* on the morning of 22 November. The opportunity was taken for an exchange of scientific staff to take place. Comparative fishing hauls were carried out between 0800 hours and 1800 hours each day. In the evening *Scotia* continued with programmed survey stations wherever possible. Gale force conditions on Friday 26 November prevented *Celtic Voyager* leaving port for the trawling area. *Scotia* dodged her way south and docked in Dublin at 2300 hours for the port call. The ship sailed on the morning of the 28th and proceeded to the

remaining Irish Sea stations around the Isle of Man. However bad weather conditions prevented work starting until the following day. Progress was short lived as 24 hours later extremely poor sea conditions forced *Scotia* to steam north and seek shelter in the South Minch. On 1 December fishing recommenced in less than ideal conditions and all of the remaining southerly stations with the exception of one rectangle were completed. Work continued northwards and the last survey trawl was completed at 2215 hours on 4 December. *Scotia* then proceeded to Aberdeen docking at 1100 hours on Sunday 5 December.

Results

Trawling

Despite mixed conditions only one station was not sampled due to the weather. One other station was invalid due to trawl gear damage. A total of 57 valid survey hauls were carried out with the GOV trawl. Hauls were of 30 minutes duration. The scanmar system was used to monitor headline height, wing spread, door spread, distance covered and net speed during each haul. Bottom temperature was recorded using a mini logger attached to the trawl.

Table 1 gives the catch weights for each of the major species and Table 2 gives the provisional indices for the main species caught during the survey. The indices for haddock and whiting indicate an improvement in recruitment whereas the index for Norway pout shows a reduction on the 1998 value. The indices for the pelagic species will be the subject of further revision.

A total of 20 comparative fishing hauls were carried out with the *Celtic Voyager*. The data will be jointly analysed by the Marine Laboratory, Aberdeen and by the Marine Fisheries Services Division, Dublin. The results will be published at a later date.

The thermosalinograph was run throughout the cruise to record surface temperature and salinity.

A variety of fish samples were deep frozen and brought back to the laboratory.

A P Robb
13 March 2000

Seen in draft: Captain D Hodge

Table 1

Total Catch Weight (kgs) of Main Species Caught Per Half Hours Fishing

Haul no	Rect	Cod	Haddock	Whiting	Saithe	Norway Pout	Herring	Mackerel	Total Catch
494	46E3			49.5		62.8	36.0	0.4	209
495	46E2	1.6	74.8	0.8			42.8		160
496	45E2		12.8	6.3		0.1	18.0	8.8	165
497	45E1	3.2	33.8	41.4		123.0	45.0		312
498	45E0	6.0	19.6			0.4	18.0		405
499	44E0		65.8	18.5		28.5	74.9		225
500	44E1		12.8	0.7		106.5	5.4		167
501	43E1		8.8	7.0		0.2	30.8	2.6	175
502	43E0		95.6	13.8	0.8	9.6	14.9	1.4	178
503	42E0	2.8	11.8	0.3	22.4	0.1			1,002
504	42E1	5.3	1.3	0.8		34.2	48.8		135
505	41E1		39.7	5.6		35.3	64.4		191
506	41E0	3.8	23.0		1.8	0.1			262
507	40E0	6.0	162.1	4.8			57.3	0.3	512
508	40E1		51.9	60.4		7.8	3.4		218
509	39E0		34.4	4.0	0.7	0.3	7.8	5.6	89
510	36D8		14.8	4.3		0.5	1.1		223
511	36D9	4.8	257.3	1.4		3.2	7.2		503
512	37D9		51.3	4.8			56.8	2,875.6	3,010
513	38D9		97.6	5.6	0.4	0.1	9.7		195
514	38E0		41.3	64.6		2.6	1.3	62.2	243
515	37E0		55.1	118.9		25.9	0.8	88.9	367
516	37E1		1.6	0.8		0.1	59.4	3,740.3	3,859
517	38E1			10.9		3.2			64
518	39E1		10.4	29.6			0.6	27.7	160
521	39E3	4.3	3.2	1.3			0.2		42
522	39E4	0.1	1.4	97.9		0.2	1.0	0.6	115
523	39E5		2.6	235.1		2.0	0.1		252
524	38E5	10.2	12.7	201.2		1.3	0.1		291
525	38E6	6.6	8.0	201.4		0.1	2.6	0.1	431
526	37E6	4.4	1.0	247.3			1.2	0.1	384
527	37E5		0.7	32.2			0.7	1.8	284
528	36E6	1.6	10.0	169.3			0.2	0.5	211
529	36E5	0.8	8.2	50.7		31.4	0.1		158
530	35E4	1.0	558.1	849.0		81.6	3.2		1,614
531	36E4		1.8	138.3		0.7	2.2		160
532	37E4		0.1	189.0		9.4	0.1		210
533	37E5	10.2	0.2	149.0		19.0	30.5	0.1	247
534	38E4	21.6	1.8	13.9		4.0	0.2		74
535	40E3		0.1	256.0			0.1		296
536	43E2		0.5	10.0		35.9	1.0		126
537	43E3		1.7	16.6		27.1	3.2	0.1	214
538	42E3	0.8	0.1	45.5		88.4	0.1		262
539	42E2		0.6	52.8		9.6	0.5		126
540	41E2		12.4	5.9		1.5	0.3		36
541	41E3		3.2	60.0					95
544	44E3	1.9	58.1	190.2		26.6	1.0		335
545	45E4		12.0	20.2		14.4	2.6		77
546	45E3		11.4	54.9		48.0	0.3		187
548	46E4		30.9	7.0		0.7	0.6	0.6	74
549	47E3	36.6	53.7				0.2		172
550	47E4	4.6	20.5			0.1	0.5		36
551	47E5	0.4	40.2	3.3			1.0		117
552	47E6	0.4	40.2	3.3			1.0		117
553	46E5		61.2	24.6		9.0			153
554	46E5		72.9	50.0		10.2	23.2	1,331.3	1,602
555	46E6		12.0	28.0		3.0			62

Table 2

November West Coast Survey Numbers at Age Per 10 Hours Fishing

	Year	No Hauls/Age	0	1	2	3	4	5	6
Cod	1996	28	0	1	14	5	3	1	0
	1997	42	1	11	2	1	1	1	0
	1998	37	+	5	9	1	0	0	0
	1999	39	2	4	6	9	1	0	0
Haddock	1996	28	2,907	761	656	70	137	57	24
	1997	42	3,713	1,359	282	151	25	26	14
	1998	37	399	1,640	486	148	137	17	33
	1999	39	4,670	366	574	267	92	68	11
Whiting	1996	28	5,154	1,908	1,116	570	188	51	6
	1997	42	8,001	2,869	951	323	160	46	12
	1998	37	1,852	2,713	1,124	149	100	20	1
	1999	39	8,203	2,338	582	141	33	24	1
N Pout	1996	28	83,945	16,480	10,614	49	0	0	0
	1997	42	23,730	9,594	1,131	808	0	0	0
	1998	37	51,210	7,874	4,226	13	14	0	0
	1999	39	20,784	2,295	304	140	0	0	0
Herring	1996	28	5	496	1,142	1,623	494	399	164
	1997	42	57	82	382	644	467	473	204
	1998	37	86	59	351	522	533	625	262
	1999	39	37	247	99	493	277	285	357
Mackerel	1996	28	426	3,933	327	46	2	3	0
	1997	42	873	102	16	4	4	1	1
	1998	37	4,904	54	11	3	0	1	0
	1999	39	549	3,631	451	101	3	35	1

Scotia West Coast November 1999

