5361

R1/12

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

FRV *Scotia*

Cruise 1800S Part I

REPORT

12-30 November 2000

Personnel

A P Robb (In charge)
C G Davis
M Mathewson
J McWilliam
I Penny
B Ward

Project: MFO1t Out turn 19 days

Gear

GOV trawl (BT137) with belly lines and 20 mm cod-end
Ground Gear C and A

Objective

1. To participate in the ICES coordinated Western Division Demersal trawl survey.
2. To obtain temperature and salinity data at each trawl position.

Area: West of Scotland , NW Ireland, Irish Sea

Narrative

Scotia sailed from Aberdeen at 1330 hours on 12 November and proceeded north towards the survey area. Fishing commenced the following day in statistical rectangle 46E6 and continued steadily westward and then southwards down the outside of the Hebrides. There was only a very short interruption for bad weather on the morning of 17 November. Generally, fishing operations were carried out each day between 0630 hours and 2300 hours. On the afternoon of 19 November, problems developed with one of the engines and the ship eventually had to anchor in Blacksod Bay for 24 hours, whilst repairs were carried out. Fishing recommenced late the next day and the outer, western stations and most of the Irish Sea stations were completed successfully before *Scotia* docked in Dublin at 1030 hours on 25 November for the port call. During this period the opportunity was taken for a Wartsila engineer to carry out further work on the engines. *Scotia* sailed at 1100 hours the next day and worked steadily northwards without interruption. The final trawl was completed at 1900 hours on 29 November. *Scotia* then proceeded to Scrabster for the staff changeover, arriving at 1100 hours on Thursday 30 November.

Results

Despite mixed weather conditions, the survey was successfully completed. Seventy-one valid tows were carried out with the GOV trawl. Hauls were of 30 minutes duration. The depths sampled ranged from 30-460 metres with hauls at varying depth strata being carried out in seven different rectangles. The Scanmar system was used to monitor the net performance during each haul. The trawling positions and the route followed are shown on the accompanying chart.

Table 1 shows the catch weights by haul 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, whiting and mackerel show a reduction on the 1999 values, whereas the indices for Norway pout and herring show a small improvement in recruitment.

The CTD was deployed at each trawling station and the thermosalinograph was run continuously throughout the cruise.

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

A Robb
21 March 2001

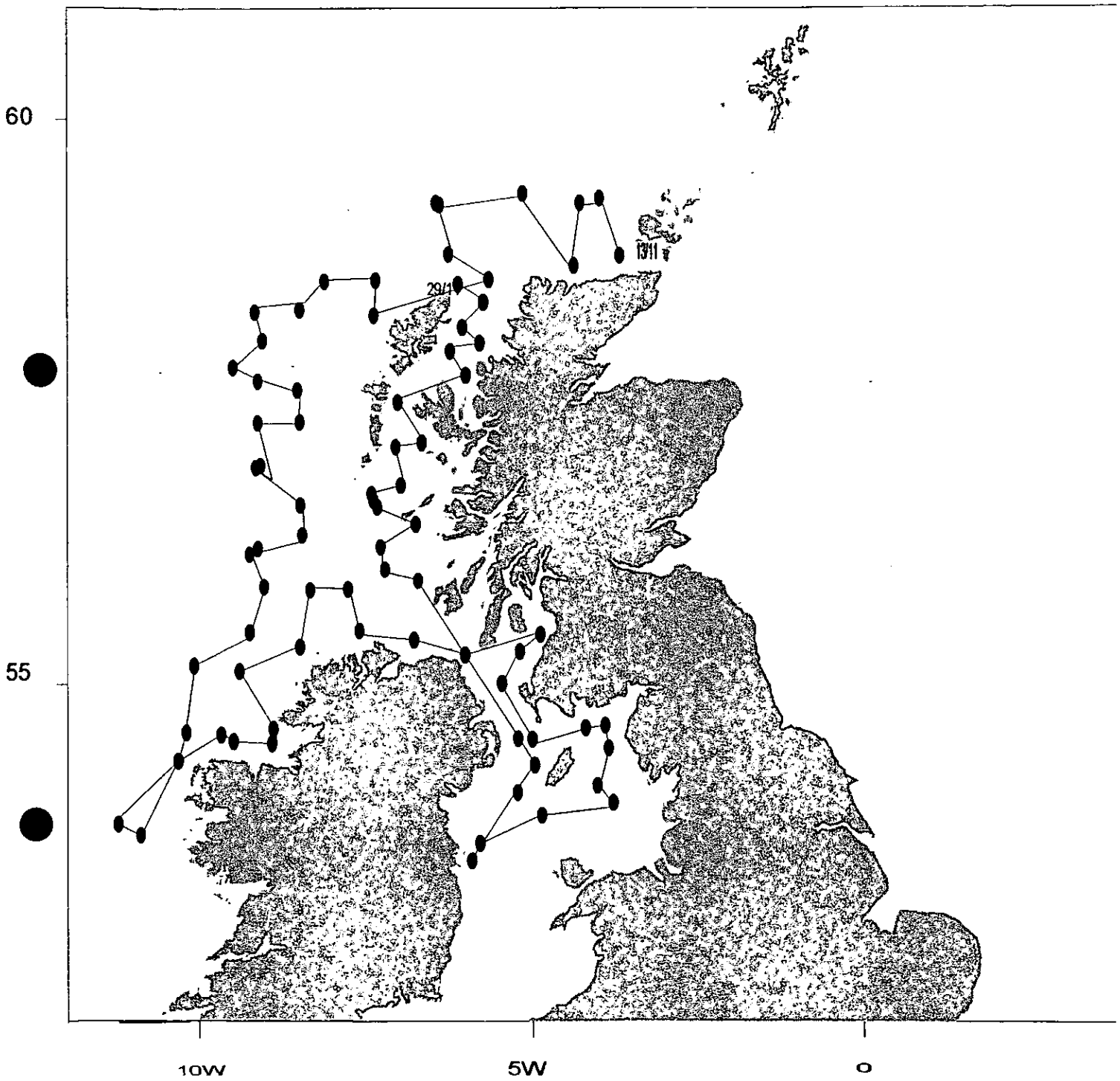
Seen in draft: P Ramsay

Table 1 Total Catch Weights (kgs) of main species caught per half hours fishing

Haul no	Rect	Depth (m)	Herring	Sprat	Mackerel	Cod	Haddock	Whiting	Npout	Total catch
522	46E6	103	0.2	0	6.1	0	71.1	43	0.8	121.2
523	47E6	126	0.6	0.2	0	0.9	294.7	47.8	34.7	378.9
524	47E5	95	37.7	0	0.1	0.6	170.5	17.7	5.6	232.2
525	46E5	87	3.6	0.1	1.1	0.5	109.7	409.5	0	524.5
526	47E4	140	1.3	0	1.5	2.6	189	95.9	45.4	335.7
527	47E3	120	0	0	0	0	0	0	0	0
528	47E3	150	1	0	0	4.4	21.2	13.6	45.2	85.4
529	46E3	113	10.9	2.8	0.4	0	115.1	23.8	23	176
530	46E4	130	0.9	0	0	0	115	258.5	61.4	435.8
531	45E2	75	118.2	0	26.1	0	22.2	32.8	0	199.3
532	46E2	112	0.2	0	0	1.8	195	3	0.1	200.1
533	46E1	260	0	0	0	0	1	0	0.6	1.6
534	45E1	170	9.4	0	0.2	0	24.6	4.9	8.8	47.9
535	45E0	360	0	0	0	0	2.1	0	1	3.1
536	45E0	190	65	0	0	0.5	19.4	94.1	42.1	221.1
537	44E0	300	0	0	0	0	0	0	0.8	0.8
538	44E0	156	1.1	0	0	0	42.1	59	244	346.2
539	44E1	159	0.1	0	0	0	18	8	15.2	41.3
540	43E1	160	0	0	0	0	5.8	9.2	46.9	61.9
541	43E0	156	52.5	0	0.4	0.6	191.5	45.6	17.1	307.7
542	42E0	460	0	0	0	0	0	0	0	0
543	42E0	155	4.8	0	0	0.3	52.7	0	0	57.8
544	42E1	173	2.2	0	0	0	0	0.3	16.9	19.4
545	41E1	146	1.6	0	0.3	0	4.1	2	8.1	16.1
546	41E0	170	21.5	0	0	0	128.2	22.3	0.2	172.2
547	41E0	450	0	0	0	7.2	2.6	0	0	9.8
548	40E0	146	0.9	0	0	11.9	36.2	7.8	0	56.8
549	39E0	146	0.6	0	0	0	25.4	0.7	3.4	30.1
550	39D9	450	0	0	0	0	0	0	0	0
551	38D9	112	45.7	0	87.1	0.5	135.7	20.9	8.4	298.3
552	36D9	150	0.6	0	0.4	0	67	2.8	1.8	72.6
553	36D8	196	0	0	0	0	0.2	0.3	14.6	15.1
554	37D9	105	1.1	0.4	12.8	1	74.1	20.4	1.5	111.3
555	38E0	106	5.6	251.4	14.2	0	56	49.6	2.4	379.2
556	37E0	95	9.1	141.7	2	0.4	94.4	219.9	54	521.5
557	37E1	79	202.2	3.6	3058.7	0	2.3	1	0	3267.8
558	38E1	70	0.6	20.4	0	0	0	91.7	1.8	114.5
559	39E0	102	32.6	0	16	0.8	19.6	11	1.1	81.1
560	39E1	97	2.2	0	24.8	0	15.4	35.2	0	77.6

Haul no	Rect	Depth (m)	Herring	Sprat	Mackerel	Cod	Haddock	Whiting	Npout	Total catch
561	40E1	149	0.3	0.3	0	0	59.2	55	0.5	115.3
562	40E2	135	1.1	0	0	0	30.6	70.8	129.9	232.4
563	39E2	57	7.4	0	0	1.8	34.5	5.5	0	49.2
564	39E3	80	0.4	0.2	0	8.6	3.2	174.6	0.7	187.7
565	39E5	60	0.6	0.1	0	0	1.6	67	0.6	69.9
566	39E4	51	0.9	0.1	0	0.2	0.7	77.5	1.8	81.2
567	38E5	50	2.8	0.7	0	9.4	24.6	325.1	0.1	362.7
568	38E6	30	3.4	5.2	0	2	1.8	44.4	0.1	56.9
569	37E6	35	3.6	21.5	0	3.2	10.6	81.8	0	120.7
570	37E5	30	0.2	0	0	15.7	0.1	203.4	0	219.4
571	36E6	35	0.4	0.6	1.8	3.6	0.1	5.4	0	11.9
572	36E5	53	0	0	0	34.8	33.4	46	6.2	120.4
573	36E4	78	0.6	3.7	0	0	0	131.8	1.6	137.7
574	35E4	45	4.7	0.8	0	1.7	26.8	66.1	4	104.1
575	37E4	71	0.4	1.5	0	0	0	48.9	7.8	58.6
576	37E5	101	1.5	3	0	4.5	0	34.2	7.8	51
577	38E4	125	0.2	2.8	0	3.7	0.1	10	29.6	46.4
578	40E3	50	0.1	0.8	0	0	6.8	44.6	0.1	52.4
579	41E2	112	7.8	8.2	4.8	0.8	28.1	57.6	64.7	172
580	41E2	91	0.1	0.1	0	0	22.4	64	75.4	162
581	41E3	80	12	0.3	0	0	0.2	154.9	7.5	174.9
582	42E2	150	1.2	0	0.2	0	82.3	59.4	50.7	193.8
583	42E2	176	2.4	0	0	21	15.2	188.7	48.2	275.5
584	42E2	190	0.6	0.1	0	0	1	7.9	63.1	72.7
585	42E3	156	0.6	0	0	2.2	0.4	33.2	207.2	243.6
586	43E2	135	0.1	0.1	0	0	3.3	17	17	37.5
587	43E3	130	0.6	0.1	0	1.6	4	33.5	16.2	56
588	44E3	85	0.8	2.4	0	0	8.4	8.6	0.3	20.5
589	44E4	150	0.2	0.2	0	0	1.7	18	54.9	75
590	45E4	123	0.5	0.1	0	1.2	18	44.7	39.6	104.1
591	45E3	120	0.1	0	0	3.6	8.8	40.5	74.9	127.9
592	45E4	104	0	0	0	0.5	118.3	88.3	51.1	258.2
593	46E3	85	0.6	1.7	3.6	0.6	153.1	38.5	0.7	198.8

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	+	15	9	1	0	0	0
	1999	39	2	4	6	9	1	0	0
	2000	53	0	16	3	0	0	0	0
Haddock	1996	28	2907	761	656	70	137	57	24
	1997	42	3713	1359	282	151	25	26	14
	1998	37	399	1640	486	148	137	17	33
	1999	39	4670	366	574	267	92	68	11
	2000	53	2959	4231	147	191	59	25	5
Whiting	1996	28	5154	1908	1116	570	188	51	6
	1997	42	8001	2869	951	323	160	46	12
	1998	37	1852	2713	1124	149	100	20	1
	1999	39	8203	2338	582	141	33	24	1
	2000	53	4434	4055	789	160	9	7	1
Saithe	1996	28	0	365	21	10	1	0	0
	1997	42	0	0	1	3	1	1	0
	1998	37	0	1	2	2	1	0	0
	1999	39	0	0	32	7	0	0	0
	2000	53	0	0	1	1	0	0	0
Norway Pout	1996	28	83945	16480	10614	49	0	0	0
	1997	42	23730	9594	1131	808	0	0	0
	1998	37	51210	7874	4226	13	14	0	0
	1999	39	20784	2295	304	140	0	0	0
	2000	53	25311	5984	2166	302	23	0	0
Herring	1996	28	5	496	1142	1623	494	399	16
	1997	42	57	82	382	644	467	473	20
	1998	37	86	59	351	522	533	625	26
	1999	39	37	247	99	493	277	285	35
	2000	53	153	208	242	112	333	169	15
Mackerel	1996	28	426	3933	327	46	2	3	0
	1997	42	873	102	16	4	4	1	1
	1998	37	4904	54	11	3	0	1	0
	1999	39	549	3631	451	101	3	35	1
	2000	53	102	98	118	47	9	1	1

Scotia November 2000