

R1/12

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FRV *Scotia*

Cruise 1195S

REPORT

3-23 August 1995

Personnel

K A Coull	HSO (in charge)
J R Hutcheon	SO (3-19 August)
D S Beveridge	SO
K J Peach	SO
J Drewery	ASO
F Burns	ASO
M Mathewson	ASO (19-23 August)

Objective

To undertake a demersal trawling survey of the North Sea.

Out-turn days per project: 21 days DAC1

Narrative

Scotia sailed from Aberdeen at 1030 hours on 3 August and commenced work on the trawling stations off the east coast of Scotland. During the second haul of 4 August it became clear that one of the trawl doors was not operating properly. Due to the time lost in changing the trawl doors, work was limited to four stations for the day. With weather conditions being favourable *Scotia* was able to complete the stations off the east coast and the southern part of the survey area before entering Danish territorial waters on 7 August. Work continued uninterrupted on the eastern edge of the survey area until *Scotia* docked at Stavanger on 11 August for the mid-cruise break. The vessel sailed the following morning and continued to work northwards, clearing the Norwegian sector at midnight on 14 August. A deterioration in weather conditions in the early hours of 16 August resulted in the vessel moving from the west of Shetland to the east of the islands where better conditions allowed work to continue. Trawling continued in the Shetland and Orkney regions until the evening of 19 August when *Scotia* had to stop off at Macduff to land one of the scientific staff who had taken ill and pick up a replacement. The vessel then restarted work off the north east coast before completing the survey area on 22 August. *Scotia* docked in Aberdeen on the evening of 22 August.

Results

The survey area was fully covered with a total of 87 valid hauls being completed. Water samples and temperatures were collected from 67 stations.

The number of 0-group haddock and whiting caught per hour in each statistical rectangle are shown in Figures 1 and 2 respectively. The numbers of cod, haddock, whiting, saithe and Norway pout caught per 10 hours fishing during the August ground fish surveys since 1982 are shown in Tables 1, 2, 3, 4 and 5 respectively. While the numbers of 0-group haddock caught were below the average, the number of 1-group (1994 year class) were the highest since the survey commenced. The number of 0-group whiting caught were greater than the previous two years and above the series average. Catches of 1-group Norway pout caught were considerably higher than in any of the previous surveys.

Length frequency, haul summary data and age data for cod, haddock, 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 and distance covered during each haul.

K A Coull
6 December 1995

Seen in draft: John Nichols (Master)

Table 1: Results from Scottish surveys conducted in August

Numbers of cod per 10 hours fishing - North Sea										
Survey year	Valid hauls	Age								
		0	1	2	3	4	5	6	7	8
1982	77	0.2	61.4	35.1	57.2	18.3	9.2	5.9	1.4	0.5
1983	79	2.3	32.5	78.0	18.1	19.7	7.5	2.3	1.5	0.0
1984	82	0.0	81.9	39.1	25.3	5.0	5.7	1.6	0.5	0.2
1985	83	0.0	6.6	114.3	19.7	11.2	3.0	2.4	0.6	1.0
1986	80	0.7	80.1	10.4	39.6	5.7	3.9	1.9	0.6	0.0
1987	73	0.0	21.9	69.5	3.4	9.2	2.9	0.7	0.2	0.0
1988	86	1.3	16.2	28.8	16.5	2.5	3.3	1.2	0.4	0.0
1989	86	0.3	56.1	13.5	16.8	9.5	2.0	0.8	0.5	0.0
1990	85	2.9	11.4	49.0	5.9	7.4	2.6	0.9	0.8	0.0
1991	90	1.4	30.3	15.4	13.3	1.3	0.6	0.4	0.2	0.0
1992	87	0.5	64.2	19.3	7.2	6.7	2.9	1.8	1.2	0.2
1993	87	3.6	34.7	74.9	10.1	2.5	1.2	0.3	0.0	0.1
1994	87	25.8	115.8	33.4	28.8	3.1	1.2	0.7	0.2	0.0
1995	87	0.0	47.5	144.3	13.0	8.5	1.1	0.7	0.4	0.0

Table 2: Results from Scottish surveys conducted in August

Number 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

Table 3: 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

Table 4: Results from Scottish surveys conducted in August

Numbers of saithe per 10 hours fishing - North Sea										
Survey year	Valid hauls	Age								
		0	1	2	3	4	5	6	7	8
1982	77	0.4	8.4	6.8	13.7	27.0	6.9	11.1	1.9	2.2
1983	79	0.0	38.4	5.0	3.7	14.0	21.0	11.0	5.5	4.0
1984	82	0.0	5.8	83.9	264.7	67.4	11.4	12.7	1.4	0.7
1985	83	0.0	0.4	500.7	401.4	33.9	9.6	5.9	11.7	0.9
1986	80	0.0	0.0	31.6	431.8	43.6	5.2	1.5	0.6	0.4
1987	73	0.2	0.3	1.7	17.0	60.8	6.8	1.4	0.8	1.0
1988	85	0.0	0.5	3.5	14.3	10.2	18.7	2.7	0.3	0.8
1989	86	0.0	1.8	2.9	13.2	12.8	4.9	7.7	2.2	1.0
1990	85	0.0	0.7	31.3	40.1	5.9	4.0	2.0	2.2	1.0
1991	90	0.0	3.8	7.0	31.8	6.2	0.8	0.3	0.6	1.8
1992	87	0.0	0.8	3.1	18.4	47.8	8.9	1.2	1.0	0.0
1993	87	0.0	2.2	20.1	78.9	23.8	15.4	1.8	0.1	0.0
1994	87	0.2	0.0	8.1	13.9	27.8	17.2	9.3	1.3	0.5
1995	87	0.0	0.0	2.7	139.2	28.9	22.2	7.7	1.8	0.4

Table 5: Results from Scottish surveys conducted in August

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	0	+	
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	-	-	-	

August 1995 Whiting 0-group nos/hour

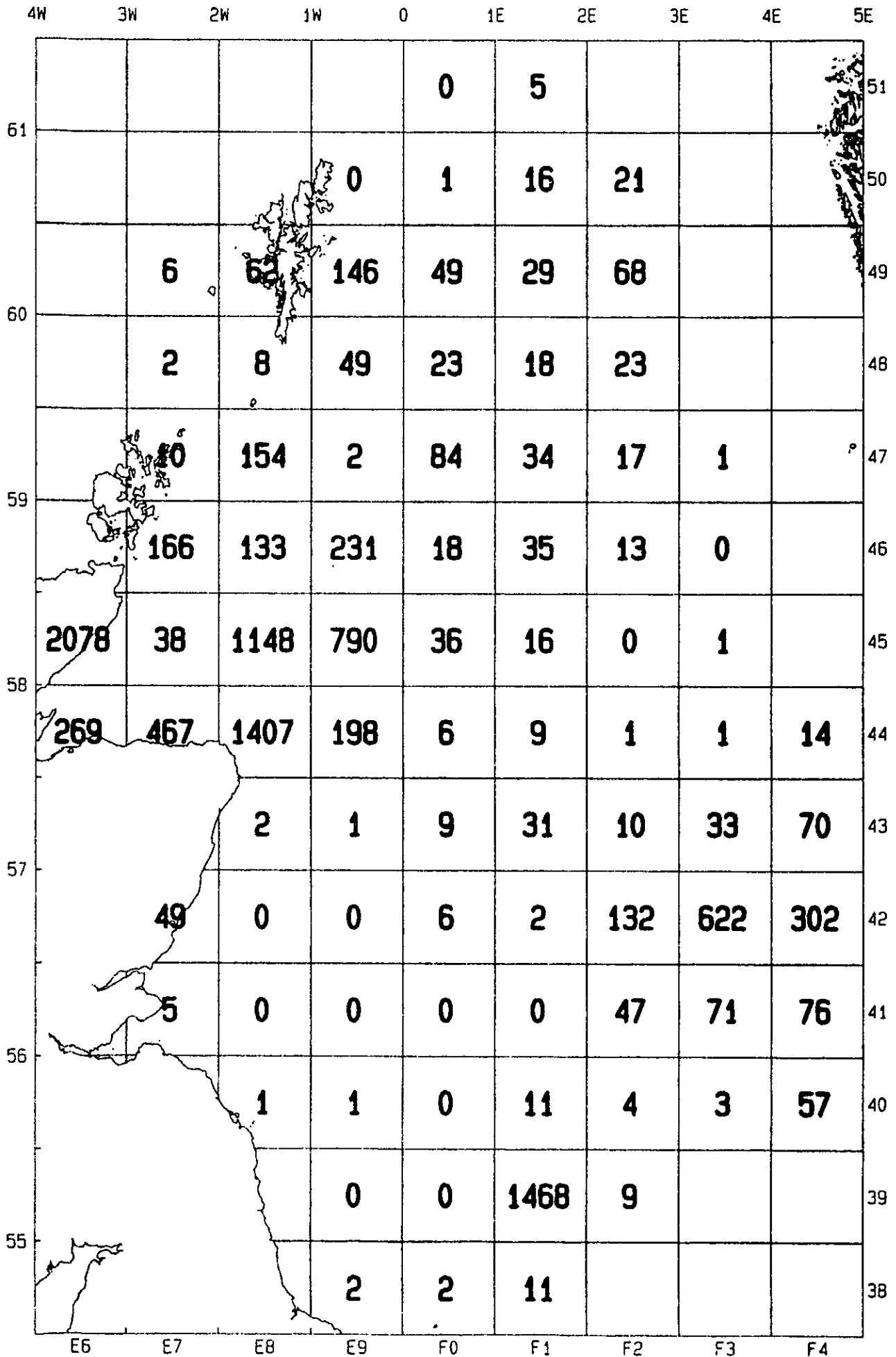


FIGURE 1

August 1995 Haddock 0-group nos/hour

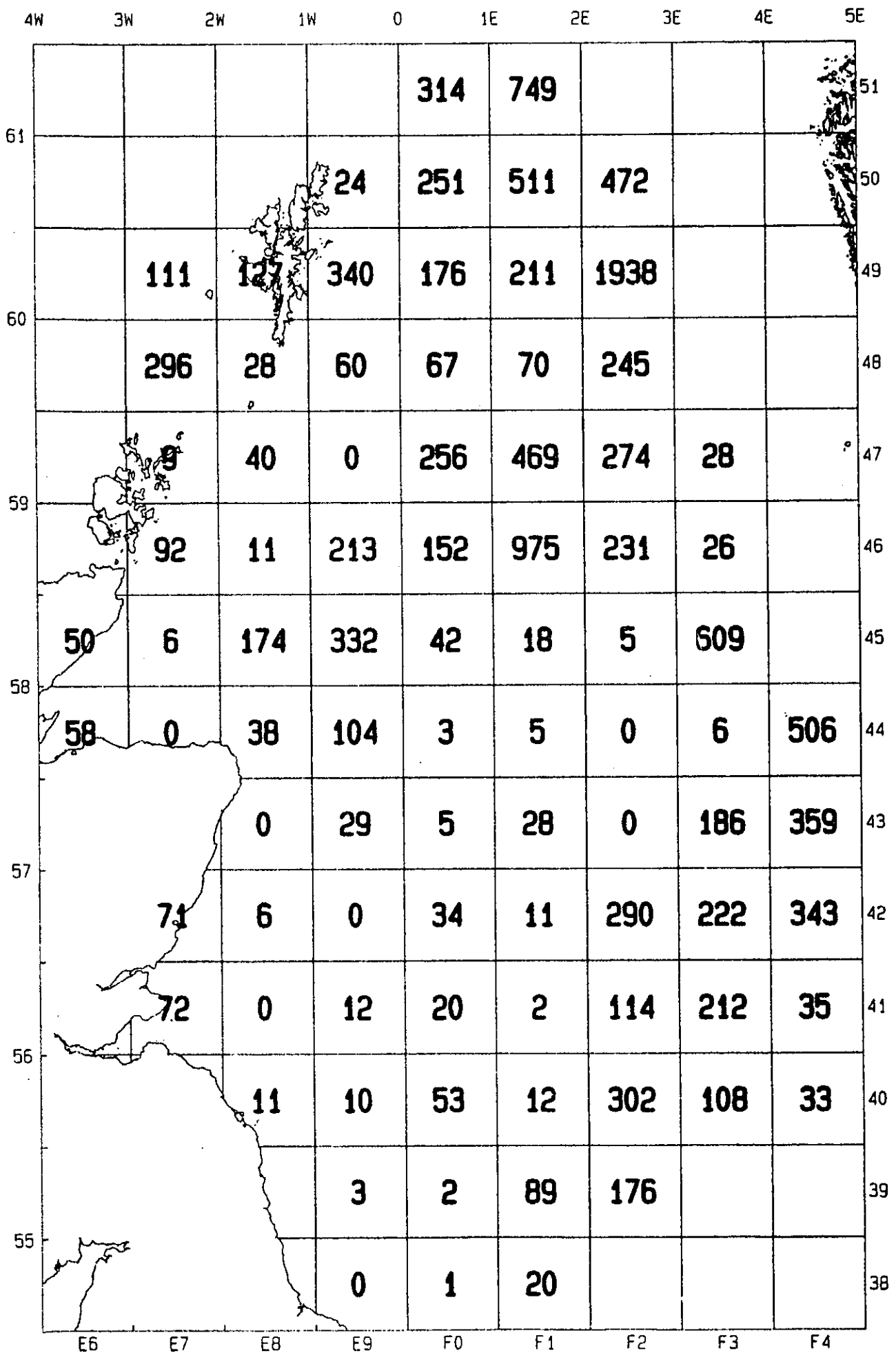


FIGURE 2

Scotia 3 - 23 August 1995 Cruise 1195S

