R1/12

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

FRV *Scotia*

Cruise 1408S

Report

7 – 28 November 2008

Personnel

C G Davis	SIC
M Mathewson	
C Main	
I Penny	
M Campbell	
R Watret	
C Aires	(Student)
M Johnson	(Irish Government Observer)
N Collie	(Part 1)
N Morrison	(Part 1)

Out-turn days per project: 22 RV0811

Fishing Gear

GOV trawl (BT137) with belly lines & ground gear C

Objectives

1. To participate in the ICES co-ordinated Western Division Demersal Trawling Survey.

2. To obtain temperature and salinity data at each trawling position.

3. To collect additional biological data in accordance with the EU Data Directive 1639/2001.

4. To identify and record all invertebrate species caught.

5. To undertake hydrodynamic performance trials of the new underwater video multiplexer

Narrative

Scotia sailed from Aberdeen at 1000hrs on 7 November and proceeded northwards toward the survey area. Whilst en-route, the opportunity was taken to deploy and check the operation of the trawl gear; in particular to measure the gear dimensions under strain.

Fishing commenced the next day at 0630hrs at the station in rectangle 47E6. The medium term weather forecast was reasonable for this time of year and we took advantage of this to progress westward and southwards for the next eight days. The weather did not actually turn out to be as favourable as forecast, but fortunately not poor enough to bring trawling

operations to a complete halt, allowing us to survey all the exposed stations to the west of the Hebrides.

On the morning of Sunday 16 *Scotia* was located to the west of Ireland on the shelf edge at position 58deg 44min north 11deg 14min west. At 0700hrs on this morning we were deploying the first trawl of the day when a member of the deck crew sustained a head injury as an indirect result of a winch malfunction. After the casualty had received appropriate first aid he was then examined by *Scotia's* Captain and the decision was taken that the casualty should be put ashore for further medical treatment and evaluation. *Scotia* made best possible speed on a course for Galway bay to rendezvous with a lifeboat from the Irish Lifeboat Service. *Scotia* rendezvoused with the lifeboat at 1300hrs, where the casualty was transferred and taken ashore by the Irish Coastguard. At this time advice was received from MVM and FRS and as a result *Scotia* made passage to Belfast so that an engineer from 'Scantrol' could be expedited to the ship from Norway.

Scotia docked alongside Belfast at 1600hrs on Monday 17.

Due to these unforeseen circumstances, the cruise half landing was altered and took place on Tuesday 18 to allow the 'Scantrol' engineer to continue his investigations.

Scotia sailed from Belfast at 0800hrs, with the 'Scantrol' engineer aboard to further scrutinize the winch systems whilst they were in operation and under strain. This was undertaken whilst surveying stations in the Clyde area. After successfully identifying a fault in the winch systems and resolving this to a level acceptable to enable continued operation, the 'Scantrol' engineer was transferred by small boat at Greenock.

Stations to the west and north of Ireland were successfully covered over the next 3 days, until storm force 10 and violent storm force 11 winds forced *Scotia* to spend the whole of Sunday 23 dodging head to wind at the Stanton banks.

Scotia resumed work the following morning and continued with little weather related difficulties up through the South and North Minch's, ending the survey along the north coast of Scotland.

Results

Trawling

For the majority of the survey, *Scotia* was fortunate to have reasonable weather conditions for the time of year. As a result, only one and a half days were lost due to weather. A further 2 days were lost due to injury situation and winch repairs. This resulted in the trip achieving a total of 73 trawl hauls with the GOV. Of this total, 5 were assigned as foul hauls due to the level of gear damage sustained. Of the remaining 68 hauls, 60 were undertaken in ICES area VI.

The Scanmar gear monitoring system and the NOAA bottom contact sensor were used throughout the survey to observe the gear performance.

The trawl positions are shown on the attached chart.

.Table 1 summarises the historical and current survey indices for the major species caught in ICES area VIa.

Length, weight, sex and maturity were collected from all species listed in the EU Data Collection Regulation (EC) No 1639/2001.

All invertebrate species present in the trawl catches were identified and recorded.

Hydrography

The thermosalinograph was run continuously throughout the cruise.
The CTD was deployed at each station to obtain temperature and salinity profiles.

Biological sampling

Biological data was recorded for a number of species in accordance with the requirements of the EU Data Regulations.

All invertebrate species caught were identified (where possible) to species level.

DNA samples from Smooth Hound were collected for analysis by University College Dublin.

Camera Trials

The main objective was to maintain a pitch angle of 5 degrees or less whilst towing the camera sledge at approximately 2.5 knots. 10 successful deployments were made during the first half of the survey and by making various modifications to the sledge the desired angle was achieved. Poor weather conditions and a problem with camera interference prevented us from being able to assess the quality of video footage taken from just above the seabed.

C G Davis
16 January 2009

Table 1. West Coast Q4 IBTS Area VIa, Numbers at Age per 10hrs Fishing Effort.

Year	Hauls	0	1	2	3	4	5	6
Cod								
2000	53	0	16	3	0	0	0	0
2001	58	1	2	9	1	1	0	0
2002	64	1	10	3	7	1	0	0
2003	63	1	2	11	3	1	0	0
2004	59	0	5	4	0	+	0	0
2005	63	+	2	3	0	1	+	0
2006	58	0	17	6	1	1	0	0
2007	75	0	72	216	17	9	0	7
2008	**60**	**25**	**80**	**50**	**111**	**6**	**0**	**0**
Haddock								
2000	53	2959	4231	147	191	59	25	5
2001	58	3083	2219	3563	48	138	22	12
2002	64	2943	1709	1770	2841	34	50	24
2003	63	293	2023	965	1470	639	28	17
2004	59	542	574	1068	410	649	524	5
2005	63	286	419	409	410	223	309	87
2006	58	19	543	233	162	281	79	100
2007	75	3566	808	11927	852	1165	753	340
2008	**60**	**153**	**1279**	**1077**	**7693**	**469**	**739**	**394**
Whiting								
2000	53	4434	4055	789	160	9	7	1
2001	58	9615	1957	1420	155	40	12	2
2002	64	14658	1591	621	479	30	9	5
2003	63	9932	3446	567	338	83	27	4
2004	59	5923	1758	940	83	57	62	1
2005	63	2297	308	318	76	9	4	1
2006	58	415	296	140	101	35	8	3
2007	75	39615	4005	2430	625	458	248	3
2008	**60**	**45794**	**2082**	**634**	**1117**	**227**	**179**	**28**
Saithe								
2000	53	0	0	1	1	0	0	0
2001	58	0	+	50	15	2	0	0
2002	64	0	1	8	6	1	0	0
2003	63	0	**+**	25	5	1	+	0
2004	59	0	0	14	8	1	+	0
2005	63	0	+	4	6	3	+	0
2006	58	0	1	10	6	1	0	0
2007	75	0	69	2121	117	28	22	11
2008	**60**	**0**	**0**	**29**	**37**	**2**	**4**	**4**
Year	**Hauls**	**0**	**1**	**2**	**3**	**4**	**5**	**6**

N.Pout

2000	53	25311	5984	2166	302	23	0	0
2001	58	34355	2498	1977	112	0	0	0
2002	64	59207	5843	493	355	8	0	0
2003	63	10549	7715	2291	108	92	0	0
2004	59	5281	4021	1757	530	0	0	0
2005	63	3118	455	143	117	31	0	0
2006	58	4351	1119	126	24	14	0	0
2007	75	7352	455	528	22	10	1	0
2008	**60**	**73002**	**9979**	**2739**	**1832**	**12**	**0**	**0**

Herring

2000	53	153	208	242	112	333	169	15
2001	58	223	121	3335	1452	588	1186	72
2002	64	144	94	124	230	18	31	7
2003	63	95	8861	5227	1124	1251	111	19
2004	59	433	194	807	1717	1903	2806	26
2005	63	292	252	251	194	482	527	30
2006	58	102	23	940	566	423	913	660
2007	75	3278	9687	3007	1916	1229	2568	4047
2008	**60**	**470**	**159**	**485**	**905**	**1628**	**621**	**1166**

Mackerel

2000	53	102	98	118	47	9	1	1
2001	58	720	15	58	32	17	1	1
2002	64	12045	270	91	154	42	5	8
2003	63	1244	771	460	72	62	10	8
2004	59	23476	2095	8543	1591	262	108	10
2005	63	30446	5299	730	1694	492	138	6
2006	58	10040	2110	692	148	217	89	6
2007	75	3910	14288	7191	3786	1119	253	95
2008	**60**	**10447**	**8061**	**20627**	**8111**	**2122**	**42**	**2**

+= < 0.5

2008 Q4 W.Coast IBTS Trawl Station Locations
(Stations in red crosses are foul / invalid)