

R1/12

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FRV *Scotia*

Cruise 1698S

REPORT

22-30 September 1998

Personnel

A Robb	B2 (In charge)
J Hislop	C1
K Peach	B1
P Clark	A4
J McWilliam	A4
F Burns	A3
T Blasdale	Contract
S Mormede	Phd Student
S Fleming	Visitor
A Reid	JNCC
P McGarr	Visitor

Out turn days per project: MFO1t, nine days

Gear

Deep water trawl (BT 184), Methot Net

Objectives

1. To map the composition, distribution, and abundance of shelf edge and slope species, including anglerfish and megrim.
2. To collect material from deep water and mesopelagic species for mercury analysis.
3. To collect basic biological information, including data on length weight relationships.

Area

West of Scotland, Rockall Trough, Shelf edge and slope from 56°N to 59°N

Narrative

Scotia sailed from Aberdeen at 1200 hours on 22 September and proceeded to the survey area off the west coast of Scotland. Fishing commenced on the afternoon of the next day in rectangle 46E1. Over the next five days work progressed southwards. Generally, trawling was carried out between 0630 hours and 2200 hours. During the night, sampling was carried out using the Methot net. The survey was completed successfully on the afternoon of 28 September in rectangle 41E0. The ship then steamed for Aberdeen docking at 0600 hours on 30 September.

Results

Twenty trawl hauls were carried out along depth contours ranging from 300 m to 1,100 m. Figure 1 shows the survey area and trawl positions. Gear damage occurred in only one haul, caused by the failure of the trawl floats at depth. The wealth of information provided by Skipper Bruce Thain of Peterhead proved invaluable to the success of the survey. Table 1 gives the catch summary for the main species caught.

Total catches ranged from less than 0.5 tonnes to about two tonnes. The composition of the catch varied with the area and with the depth. One feature of the catches was the numbers of juvenile grenadiers and rabbit fish which were caught. Table 2 gives a very provisional summary of the changes in catch composition with depth. Further analysis of the data will be carried out in the Laboratory. Measurements were made on 44 different species to determine weight length relationships. These are summarised in Table 3.

Nineteen hauls were carried out with the Methot net. These were successful in obtaining large numbers of myctophids for mercury analysis.

Various fish samples were deep frozen and taken back to the Laboratory for analysis.

A Robb
7 October 1998

Seen in draft: P Ramsay, Master

Species/Haul No	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455
Rect	46E1	46E1	45E0	45E0	45E0	44E0	44E0	44E0	44E0	43E0	43E0	43E0	43E0	42E0	42E0	42E0	42E0	41E0	41E0	41E0
Depth (m)	270	597	530	852	1134	626	650	900	650	409	700	850	770	709	780	890	622	966	700	730
Duration(mins)	160	178	141	180	180	150	180	75	120	105	135	180	77	70	120	50	150	130	30	175
Angler			3	14		65	23	33	36	48	6	369	67		44	2	12			74
Bairds Smoothhead		37		28	49		23	20	23		12	57		17	7	37	39	56		38
Blackfish				2																
Blue Ling		15	5	67	3	8	37	11	16		32	24	5	2	12	10	6	23		16
Blackmouth Dogfish						6									2				3	17
Black Scabbard					37		3	16			187	151	5	158	834	202	108	48	5	
Blue Whiting	864	111	213			143	12		40	360	25	19	8		4				8	51
Bluemouth	181	151	184			61			46	215	99	7	7		34	3			10	
Bullseye											2	12		20	5	2				31
C. crepidater			67								139	29	24	1504	620		8	7		
Cod	3								10	6										
Conger Eel									51						4					
Flats (mixed)	62		77					15	38	22		4			7	8		3	12	
Greater Argentine	82	374	968	13					105	2				2				3	8	
Greater Forkbeard		63	32	15		40	23	8	82	71	49	12	6	24	48	2	6	4	7	40
Haddock	62																			
Hake	68	46	139			35			10	34	8									4
H johnsonii								17	17		4									5
Hollowsnout Rat Tail			7																	
Jelly Cat																			6	
Kitefin Shark															12					6
Knifetooth Dogfish															10					9
Large eyed Rabbit Fish								9												
Leafscale Gulper										87	66	8	37	113		84	29			
Lepidion eques		85	45	46		12	34	32	92		41	22	8	43	129	27	51	74	6	47
Lesser Argentine	14																			
Ling			3						45											
Mora mora				9													3			
Mouse Cat Shark																		8		
Portuguese Dogfish				17							28			16	12			20		
N. Pout	157								5	51	11	20	13	13	19	5	20	14	23	191
Rabbit Fish		629	99	16			11		5	51	11	20	13	13	19	5	20	14	23	191
Redfish			3			3														
Roundnose Grenadier		53	15	462	44	25	221	91	31	24	29	317	32	39	111	79	198	331	6	26
Saithe	64									3										
Sharks (mxd)						17	17		54	18					31				5	
Shovelnosed Shark			3		7							7	7	11				6		15
Silvery Pout	298								26	30									3	
Six Gill Shark															40					
Skate (mxd)									12	14										
Smoothhead								17												
Smooth Rat Tail						5							3		3	5	18	23		15
Spiny Eels							6													
Squid			9	5		11			4		8	10	6					8		11
Torsk		14	11	9		6	40	8	41	4	11			35	25			8		
Velvet Belly						7														
Witch						47		16				10								
Total Catch (kgs)	1854	1577	1884	686	157	469	449	301	457	1150	839	1160	201	1918	2090	412	557	663	87	615
Total Catch (Bkts)	58	49	59	21	5	15	14	9	14	36	26	36	6	60	65	13	17	21	3	19

Table 2. Main Species, Average catch weight (kgs)per hour, by depth strata

Depth Strata (m)	500	600	700	800	>=900
Angler	7	16	17	34	7
Bairds Smoothhead	3	9	6	20	15
Blackfish					
Blue Ling	2	5	5	14	5
Blackmouth Dogfish		1	2		
Black Scabbard		14	108	74	12
Blue Whiting	164	26	9	3	
Bluemouth	80	16	14	2	
Bullseye			5	2	
C.crepidater	7	1	280	2	1
Cod	2				
Conger Eel	7				
Flats (mixed)	19	4	4	2	
Greater Argentine	157		2	1	
Greater Forkbeard	19	20	16	5	2
Haddock	6				
Hake	30	6	1		
H johnsonii		3	1		3
Hollowsnout Rat Tail	1				
Jelly Cat			2		
Kitefin Shark			1		
Knifetooth Dogfish			1		
Large eyed Rabbit Fish					2
Leafscale Gulper		11	22	6	3
Lepidion eques	12	24	26	17	15
Lesser Argentine	1				
Ling	7				
Mora mora				1	
Mouse Cat Shark					1
Portuguese Dogfish			3	2	4
N. Pout	15				
Rabbit Fish	71	4	25	5	2
Redfish					
Roundnose Grenadier	9	35	24	107	60
Saithe	6				
Sharks (mxd)	8		3	11	3
Shovelnosed Shark			3	1	1
Silvery Pout	32		3		
Six Gill Shark			3		
Skate (mxd)	2		1		
Smoothhead					3
Smooth Rat Tail		2	2	2	3
Spiny Eels					1
Squid	1	2	2	1	1
Torsk	3	8	8	4	2
Velvet Belly		1			
Witch		6		1	3

Table 3. Weight Length data;Species and No of observations recorded

Latin Name	Common Name	No observations
Hydrolagus mirabilis	Hydrolagus mirabilis	32
Bullseye	Epigonus telescopus	81
Round Nosed Grenadier	Coryphaenoides rupestris	40
Bairds Smoothhead	Alepocephalus bairdii	234
Redfish (mentella)	Sebastes marinus mentella	12
Softhead Rat tail	Malacocephalus cephalus	12
Hollowsnout Rat tail	Coelorinchus coelorinchus	116
Shovel nosed Shark	Deania calceus	14
Smooth Rat tail	Nezumia aequalis	210
Longnose Velvet Dogfish	Centroscymnus crepidater	70
Velvet Belly	Etmopterus spinax	57
Mouse Catshark	Galeus murinus	10
Mora	Mora mora	11
Bluntnout Smoothhead	Xenodermichthys copei	1
Blackfish	Centrolophus niger	4
Halargyreus johnsonii	Halargyreus johnsonii	108
Whit-throat Eel	Synaphobranchus kaupi	11
Bonaparte's Spiny Eel	Notacanthus bonapartei	47
Palid Sculpin	Cottunculus thomsonii	3
Lepidion eques	Lepidion eques	231
Johnson's Scabbardfish	Nesiarchus nasutus	3
Chemnitz's Spiny Eel	Notacanthus chemnitzii	48
Melanostigma atlanticum	Melanostigma atlanticum	3
Thornback Ray	Raja clavata	1
Skate	Raja batis	1
Shagreen Ray	Raja fullonica	3
Four-spot Megrin	Lepidorhombus bosci	48
Leafscale Gulper Shark	Lepidorhinus (Centrophorus) squamosus	27
Portuguese Shark	Centroscymnus coelolepis	50
Black Mouthed Catshark	Galeus melastomus	28
Guenthers Grenadier	Coryphaenoides guentheri	3
Antimora rostrata	Antimora rostrata	57
Murray's Longsnout grenadier	Trachyrhynchus murrayi	43
Rabbit Ratfish	Chimaera monstrosa	192
Fylla's Ray	Raja fyllae	3
Blue Ray	Breviraja caerulea	1
Deep Water Catshark	Apristurus laurussonii	17
Megrin	Lepidorhombus whiffiagonus	8
Knifetooth dogfish	Scymnodon ringens	12
Jelly Cat	Anarhichas denticulatus	1
Conger Eel	Conger conger	4
Darkie Charlie	Dalatias licha	2
Angler	Lophius piscatorias	80
Black Scabbardfish	Aphanopus carbo	129

Figure 1 . Trawling Positions Scotia 1698S (200, 500m, 1000m contours are shown)

