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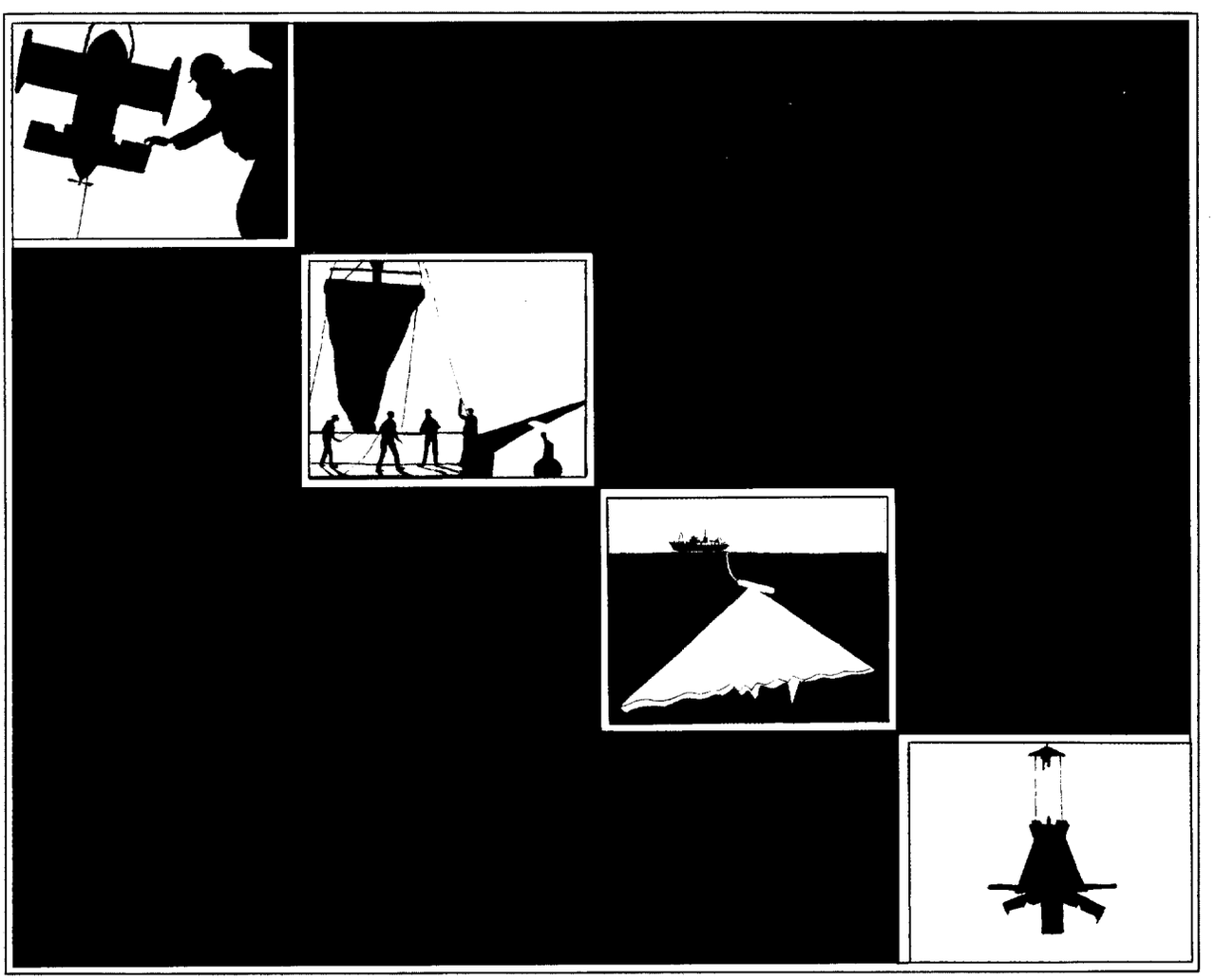
P A B Jackson M H Thurston & A L Rice

Report No 281 1991



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DOCUMENT DATA SHEET

AUTHOR
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PUBLICATION DATE 1991

TITLE

Station data for the IOS Benthic Biological Survey of the Porcupine Seabight region (NE Atlantic) 1977-89.

REFERENCE

Institute of Oceanographic Sciences Deacon Laboratory, Report, No. 281, 88pp.

ABSTRACT

This report summarizes station data for benthic and near-bottom samples taken within the IOS benthic biology programme in the Porcupine Seabight and on the adjacent Porcupine Abyssal Plain between 1977 and 1989.

KEYWORDS

ABYSSAL ZONE
ATLANTIC(NE)
BATHYAL ZONE
BENTHOS
BIOLOGICAL DATA
PORCUPINE ABYSSAL PLAIN
PORCUPINE SEABIGHT
STATION LIST
ZOOBENTHOS

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INTRODUCTION

This report amplifies the general introduction and account of the Institute of Oceanographic Sciences benthic biology programme in the Porcupine Seabight and on the adjacent Porcupine Abyssal Plain (RICE *et al.* in press). The ensuing lists bring together all available station data for deployments undertaken within that programme together with investigations of the water column within the benthic boundary layer.

The introduction is followed by a glossary of gears employed within the programme and a series of tables. A summary of cruises (Table 1) precedes the main station list (Table 2). Individual gears are listed in order of increasing mean depth of collection (Tables 3-13) and by depth in relation to season (Tables 14-17). A chart of the bathymetry of the Porcupine Seabight is provided (Fig. 1) together with plots of the sampling localities of the more frequently used gears (Figs 2-5).

The area investigated is centred on the Porcupine Seabight (Fig. 1), and is limited by the 200m isobath of the Celtic Shelf, the Porcupine Bank and the ridge between it and the Celtic Shelf, the Goban Spur, and, to the southwest, the foot of the continental rise at about 4600m. Stations worked at the European Community Site (48°50'N, 16°30'W, 4850m) are not included.

During the years 1977 to 1986 inclusive, 24 cruises devoted entirely or in part to benthic biology visited the area. Since 1986, the programme has been focussed more on abyssal studies and little collecting effort has been expended on the Seabight area. Such stations as have been worked are included herein.

The ultimate origins of IOS biology lie with the prewar 'Discovery' Investigations in the Southern Ocean. This investigation used Scott's *Discovery* and, from 1929, RRS *Discovery* II. The National Institute of Oceanography (NIO) was founded in 1949 and incorporated the 'Discovery' Investigations in 1952. *Discovery* II was operated by NIO until 1962 when she was replaced by the present RRS *Discovery*. Throughout this period, and up to the present time, *Discovery* stations have been numbered serially. Series numbers following the station number have been used latterly to distinguish multiple sampling at a single station. From the commissioning of the present *Discovery*, cruises also have been numbered serially (DRAPER *et al.* 1990).

While some of the cruises covered by this report took place on *Discovery* and used the *Discovery* station numbering system, many utilized RRS *Challenger* while a few were multinational in character and took place on foreign vessels (Table 1). The use of different ships has led to the need for unique identification of stations worked from those ships. There has been no consistency in the way in which the various parent organizations running these ships designate cruise and station numbers. Consequently, all cruises on ships other than *Discovery*, during which benthic biology sampling was undertaken have been assigned a three digit cruise number starting with 501 to which a two digit station number is appended. A series number would follow if appropriate. Thus 51420#4 is the fourth gear operation at the twentieth sampling locality on cruise 514.

Although many of the cruises detailed in this station list were organized by IOS and dedicated to the benthic biology programme, others were not. Different organizations with different objectives resulted in inconsistencies in station data included in cruise reports. Where such inconsistencies occurred, reference has been made to original logs and data files where possible. However, for some of the earlier cruises, such files no longer exist, and in other cases the data recorded were incomplete.

Several cruises were joint ones between the Scottish Marine Biological Association (SMBA) and IOS. These were devoted primarily to demersal fish biology. Samples were required at 250m vertical intervals and positions of the hauls, other than a general indication of geographical location, were considered to be of secondary importance. As a consequence, only a single set of coordinates (position of ship at gear first contact with the bottom) and a distance run derived from the electromagnetic two-component log were recorded.

It has been traditional policy to equate station positions with ship positions. While satisfactory for vertically deployed gear and for midwater tows, this approach is inadequate for benthic towed gears in some circumstances. Attempts to resample specific small areas in broken topography failed or were delayed because of difficulty in relocating the original sites. Also, differences between the scope to depth ratio at first and last bottom contacts have occurred frequently, and are indicative of differences in distance travelled by net and ship. If such differences are not resolved, hauls cannot be used quantitatively. The bathymetric range and abundance of some species are very sharply delineated (see RICE *et al.* 1990) so much so that precise positioning is necessary for accurate fixation of such peaks and limits.

A partial resolution of these problems can be achieved by estimating gear positions at first and last bottom contacts. Simple triangulation has been used for such calculations on the assumption that the gear follows the ships track, and that the trawl wire is straight. Evidence to suggest that the first assumption is justified comes from the good agreement found between echo-sounding depths and net monitor depths during hauls made across relatively steep slopes. Any non-linearity of the trawl wire is unlikely to differ significantly at first and last bottom contacts of the gear. Therefore triangulation errors are likely to be comparable and the distance travelled is little affected by such non-linearity as may occur. Non-linearity of the towing wire will result in an overestimation of the distance of the gear from the ship. However, even if the wire falls into a substantial catenary, the induced error in gear position is small and likely to be within the circle of error of satellite navigation positioning, at least until the recent access to the GPS navigation system. The relatively small errors arising from these assumptions are outweighed by the gain in accuracy of the absolute and relative start and end positions.

Up to and including cruise 511, the positions in the station list are those of the ship, but for many subsequent cruises (exceptions 513, 515, 518, 521, 169) best estimates for location of the gear have been used.

The epibenthic sledge (BN1.5) is fitted with an odometer wheel which is monitored during the haul, giving a real-time readout of distance travelled (RICE *et al.* 1982). For reasons which are not entirely clear, the odometer underestimates the distance travelled. Photographic evidence suggests that, once on the sea floor, the sledge remains in full contact with the bottom for the duration of a haul in almost all cases. Potential causes for the disparities between odometer distances and the haul length based on calculated geographical positions at the start and end of the haul are slippage of the wheel on the seafloor, and, possibly, incomplete correlation across the magnetic linkage between the wheel and the net monitor. This problem is reflected in the two sets of area-fished figures included in the station list. One set is derived from the odometer reading and the other from the geographical coordinates. Despite the errors inherent in deriving gear positions from satellite navigation data, it is probable that this method gives a closer approximation to reality than does the odometer reading.

The seasonal distribution of samples is uneven, with winter months poorly covered because of a combination of adverse weather and loss of cruises. The most complete coverage was achieved with trawls (OTSB14 and Granton) from which samples were obtained at most depths and in most months between February and November. Coverage with the epibenthic sledge was rather more restricted, being confirmed largely to March to September, with some depth zones unsampled in some months. Multiple core samples were restricted to the period April to September, with poor seasonal coverage of several depth zones, particularly at deeper levels.

Additional information on the conduct of cruises, and of the work undertaken, can be found in the appropriate cruise reports.

ACKNOWLEDGEMENTS

The very considerable amount of work which has been required to collect and sort samples and data has involved many people, both at sea and in the laboratory. We are most grateful to the captains and crews of the ships involved in the sampling programmes, to colleagues from IOS and other organizations for their help in dealing with catches at sea, and to members of the Ocean Instrumentation and Workshop Groups at IOS for their technical expertise. Our especial thanks go to Mr. Frank Dunning, fishing skipper extraordinary for help at sea, to Dr. Phil Pugh for assistance with the IOSDL Biological Database, to Mr. Peter Hunter for the bathymetric chart of the Porcupine Seabight, and to Mrs Pam Talbot for producing the final version of this report.

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GLOSSARY

BN1.5/3F. Fine mesh net epibenthic sledge. Double height sledge (RICE *et al.* 1982) similar to BN1.5/3M (q.v.) except all nets of 1mm mesh.

BN1.5/3M. Triple net epibenthic sledge. Sledge 2.3m wide between skids (RICE *et al.* 1979) with 70cm wide 1mm mesh net centrally and two 80cm wide 4.5mm mesh nets laterally. Fitted with odometer wheel and time-lapse camera. From Cruise 506 onwards, a double height frame was used, incorporating a suprabenthic net (SBN 0.5, q.v.) and revised camera position (RICE *et al.* 1982).

BN1.5/C. Coarse mesh net epibenthic sledge. Double height sledge (RICE *et al.* 1982) fitted with single full width 4.5mm mesh net.

BN1.5/P. Photosledge. Epibenthic sledge (RICE *et al.* 1982) fished without benthic nets and with or without suprabenthic net (SBN 0.5, q.v.).

BSNACK. Bathysnack. Baited version of Bathysnap (q.v.).

BSNAP. Bathysnap. Free-fall time-lapse camera system (LAMPITT & BURNHAM, 1983) photographing $2m^2$ of seafloor. Various configurations of supporting framework have been used, but height and angle of camera have remained constant.

CR. Corer-respirometer. A free-fall package with four small Smith-MacIntyre grabs each fitted with oxygen sensors.

CTD. Conductivity-temperature-density instrument. Sometimes fitted with rosette multisampler (MS, q.v.).

CYANA. French submersible operated by Centre National pour l'Exploitation des Océans (CNEXO).

DN. Dinoflagellate net. A 61µm opening and closing net set in the triangular space between closing bridles of RMT1 (q.v.).

GC. Gravity corer.

GRANTON. Granton trawl. Commercial twin-warp otter trawl with 20.6m headline and footrope (GORDON & DUNCAN, 1985).

MARTRAP. Mark and recapture trap. A free-fall instrument package for use in conjunction with a submersible (*Cyana*) and designed to study necrophagous amphipod foraging ranges.

MC. Multiple corer. Twelve-core SMBA multiplecorer. (BARNETT *et al.* 1984).

MCR. Multiple corer respirometer. SMBA multiple corer (MC, q.v.), suspended close to sea floor after sampling, for community respirometry studies (PATCHING *et al.* 1986).

MS. Multisampler. Water bottle rosette used in conjunction with CTD (q.v.).

OTSB14. Semiballoon otter trawl. 13.7m headline otter trawl fished on a single warp (MERRETT & MARSHALL, 1981).

POGOSNAP. Bottom-trigger camera. IOSDL Mark 4 camera deployed on a vertical wire and operated by a bottom-contact switch.

RMT1. $1m^2$ rectangular midwater trawl. Opening and closing net with 0.32mm mesh usually fished in conjunction with RMT8 (q.v.) as combination net (RMT1+8) (BAKER *et al.* 1973) or in triplicate as multiple net (RMT1+8M) (ROE & SHALE, 1979).

RMT8. $8m^2$ rectangular midwater trawl. Opening and closing net usually fished in conjunction with RMT1 (q.v.).

SBC. Spade box corer. Modified $0.25m^2$ USNEL box corer (HESSLER & JUMARS, 1974).

SBN 0.5. Suprabenthic net. Near-bottom plankton net of $0.5m^2$ mouth area and 0.32mm mesh fitted in upper tier of BN1.5 (q.v.).

SEDTR. Sediment trap of mouth area $0.13m^2$ (400mm I.D.) with single closing sample cup. Deployed singly or in multiples on vertical mooring.

SWT. Single warp trawl. Box trawl with 11.4m headline and 16.4m footrope (GORDON & DUNCAN, 1985).

TAMPH. Amphipod trap. A free-fall rig consisting of two rosettes, each holding six baited 2L traps, the lower rosette set 1-2m off the seafloor and the upper 10m off.

TRAP B. Benthic fish trap. Large rectangular fish trap with fine mesh floor and internal camera. Usually equipped with simple 'drainpipe' amphipod traps (THURSTON, 1979).

TSST. Time series sediment trap. Sediment trap of mouth area $0.14m^2$ (420mm I.D.) fitted with honeycomb baffle and a carousel of 9 sample bottles set to rotate at preset intervals. Deployed singly or in multiples on vertical mooring.

7L WB. Seven litre water bottle.

TABLE 1.
Summary of Cruises

Ship	Cruise	IOSDL Biology Cruise No.	Stations	Dates	IOSDL Cruise Report No	Organising Body if not IOSDL
DISCOVERY	88	88	9637-9641	23 Oct-16 Nov 1977	65	
DISCOVERY	92	92	9752-9791	04 Apr-23 May 1978	70	
CHALLENGER	8/79	505	50501-50526	29 May-11 Jun 1979		SMBA
CHALLENGER	9/79	506	50601-50613	29 Jun-11 Jul 1979	89	
DISCOVERY	105	105	10105-10162	29 Aug-23 Oct 1979	82	
CHALLENGER	15/79	507	50701-50717	09 Oct-24 Oct 1979		SMBA
CHALLENGER	11/80	508	50801-50824	28 Jul-11 Aug 1980		SMBA
CHALLENGER	17/80	509	50901-50915	04 Nov-16 Nov 1980	107	
CHALLENGER	7/81	510	51001-51027	28 Apr-12 May 1981		SMBA
CHALLENGER	8/81	511	51101-51113	18 May-01 Jun 1981	119	
CHALLENGER	14/81	512	51201-51217	14 Sep-01 Oct 1981	135	
CHALLENGER	3/82	513	51301-51319	12 Feb-26 Feb 1982		SMBA
CHALLENGER	5/82	514	51401-51420	23 Mar-05 Apr 1982	140	
CHALLENGER	6/82	515	51501-51508	08 Apr-20 Apr 1982		SMBA
CHALLENGER	10/82	516	51601-51622	15 Jul-26 Jul 1982	146	
CHALLENGER	6/83	517	51701-51736	07 Apr-08 May 1983	159	
CHALLENGER	13/83	518	51801-51813	16 Sep-02 Oct 1983		SMBA
FREDERICK RUSSELL	6/84	519	51901-51902	07 Apr-13 Apr 1984	162	
CHALLENGER	5/84	520	52001-52026	11 Aug-28 Aug 1984	175	
CHALLENGER	9/84	521	52101-52110	29 Oct-13 Nov 1984		SMBA
CHALLENGER	6A/85	522	52201-52218	13 Jun-28 Jun 1985	178	
DISCOVERY	158	158	11263-11301	12 Apr-12 May 1986	189	
LE SUROIT	CYAPORC	523	52329-52342	10 Jul-08 Aug 1986		IFREMER Brest
CHALLENGER	8/86	524	52401-52405	25 Nov-18 Dec 1986	196	
DISCOVERY	169	169	11639-11705	12 Aug-31 Aug 1987		Univ. Southampton
DISCOVERY	170	170	11705-11719	04 Sep-23 Sep 1987	199	
DISCOVERY	175	175	11792-11794	18 Jun-15 Jul 1988	204	
METEOR	6-7B	526	52601-52606	29 Apr-14 May 1988		IHF Hamburg
DISCOVERY	185	185	11906-11908	18 Aug-17 Sep 1989		

TABLE 2.
Station List

(a) For benthic towed gears, the positions given for cruises 88, 92, 505, 506, 105, 507-511, 513, 518, 521 and 169 are ship positions, and the positions for cruises 512, 514, 516, 517, 520, 522, 158, 524, 526 and 185 are gear positions. See text for further discussion.

(b) Areas fished by BN1.5/3F, BN1.5/3M, BN1.5/C, GRANTON, OTSB14 and SWT; volumes fished by RMT1, RMT8 and SBN 0.5.

(c) Areas for various configurations of BN1.5 and volumes for SBN 0.5 based on odometer readings.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
9637	1	07.11.77	0943-1345	49 48.8	14 03.8		
9638	1	08.11.77	2147	49 52.6	13 56.1		
9638	2	09.11.77	0256-0428	49 50.2	14 07.3	49 50.3	14 12.6
9639	1	12.11.77	1458-1733	49 52.6	13 56.4		
9640	1	13.11.77	0400-0611	50 03.2	13 50.6	50 08.0	13 52.7
9641	1	14.11.77	0117	50 01.5	13 45.8		
9752	1	07.04.78	0121-0220	51 16.3	11 42.5	51 18.6	11 42.8
9752	2	07.04.78	0804	51 18.2	11 43.7		
9753	3	07.04.78	1544-1745	50 54.9	12 15.6		
9753	4	07.04.78	2034-2218	50 54.9	12 12.0	50 56.5	12 14.8
9753	7	08.04.78	1120-1202	50 54.5	12 10.9	50 54.8	12 11.4
9753	8	08.04.78	1512-1612	50 54.6	12 11.1	50 55.6	12 12.7
9754	3	09.04.78	0023-0127	51 08.4	12 01.5	51 09.5	12 01.8
9756	3	11.04.78	1137-1310	49 48.0	14 14.8	49 48.8	14 19.3
9756	5	12.04.78	0728-0928	49 49.3	14 05.7	49 52.3	14 10.7
9756	8	13.04.78	1315	49 53.6	13 57.9		
9756	9	13.04.78	2030-2125	49 47.1	14 01.5	49 48.5	14 02.0
9756	11	14.04.78	1813-2143	49 49.7	14 04.7	49 54.6	14 11.8
9756	14	15.04.78	0834-0934	50 04.0	13 55.6	50 04.3	13 53.2
9757	1	16.04.78	1751-1904	49 12.2	11 35.1		
9758	1	16.04.78	2207-2251	49 08.8	12 09.7		
9759	1	17.04.78	0222-0339	49 31.4	12 38.0		
9760	1	17.04.78	0540-0656	49 40.1	12 52.3		
9761	1	17.04.78	0855-1038	49 50.3	13 07.2		

(d) Areas and volumes for SBN 0.5, are based on start and end positions, either those quoted or more precise values, unless indicated otherwise.

(e) Area swept by central fine mesh net.

(f) Positions approximate because of failure of satellite navigation system.

(g) Area based on distance run as measured by electromagnetic two-component log.

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
9637	1	CTD	1-3940			Corrected lower depth 3740m.
9638	1	TRAP B	3921-3921			Trap failed to surface.
9638	2	OTSB14	4043-4104		54496	Pinger lost from bracket. No distance.
9639	1	CTD	20-3820			
9640	1	OTSB14	3749-3757		79448	
9641	1	OTSB14	0-0			Haul aborted, due to high winds.
9752	1	OTSB14	1007-1042		36774	Belly torn.
9752	2	TRAP B BCAM	1017-1017			Recovered 0650 09.04.78.
9753	3	CTD MS	0-1976			WB at 1976, 1500, 1000, 500 and 5m.
9753	4	OTSB14	1942-1947		37961	Doors intermeshed.
9753	7	BN1.5/3M	1942-1942		1846 565(e)	
9753	8	OTSB14	1942-1942		22635	
9754	3	BN1.5/3M	1484-1484		4736 1449(e)	
9756	3	OTSB14	4080-4156		48004	
9756	5	OTSB14	4012-4020		70181	
9756	8	TRAP B BCAM	3852-3852			Recovered 1730 15.04.78.
9756	9	BN1.5/3M	4039-4069	1250 382(e)	6096 1865(e)	
9756	11	RMT1	4100-4200		9847	Flow dist. 11.98 km.
		RMT8 DN			115996	Nets tangled - no catch.
9756	14	BN1.5/3M	3680-3697	1445 442(e)	6659 2035(e)	
9757	1	CTD MS	3-615			WB at 615, 500, 375, 250, 125, 100 and 3m.
9758	1	CTD MS	3-962			WB at 962 and 6m.
9759	1	CTD MS	3-1492			WB at 1200, 1300 and 6m.
9760	1	CTD MS	3-1984			WB at 1984 and 6m.
9761	1	CTD MS	3-2416			WB at 2416 and 6m.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
9762	1	17.04.78	1338-1555	50 09.7	13 35.1		
9763	1	17.04.78	1837-2015	50 23.8	13 53.1		
9764	1	17.04.78	2049-2155	50 26.8	13 56.9		
9765	1	17.04.78	2324-0026	50 35.2	14 08.4		
9766	1	18.04.78	0149-0225	50 43.0	14 19.1		
9767	1	18.04.78	0736-0819	51 03.7	14 21.1		
9768	1	18.04.78	1059-1147	50 43.5	14 19.1		
9769	1	18.04.78	1734-2031	49 53.6	14 01.1		
9770	1	19.04.78	0141-0337	50 29.7	13 07.4		
9771	1	19.04.78	1108-1255	50 56.2	12 20.0		
9772	1	21.04.78	0201-0254	51 08.4	12 01.6		
9774	1	21.04.78	1032-1148	51 04.4	11 59.3	51 05.2	12 03.4
9775	2	21.04.78	1833-2316	50 58.9	12 21.8	50 48.3	12 29.1
9775	3	22.04.78	0332-0442	50 56.8	12 22.4	50 55.7	12 19.2
9776	1	23.04.78	0917-1017	49 29.4	11 38.4	49 27.0	11 37.7
9776	2	23.04.78	1223-1309	49 22.7	11 36.0	49 21.5	11 35.6
9777	1	23.04.78	1755-1810	49 15.6	11 12.9		
9777	2	23.04.78	1910-2047	49 15.1	11 14.9	49 14.5	11 21.1
9778	1	24.04.78	0436-0538	49 14.6	12 07.1	49 17.1	12 06.3
9779	1	24.04.78	1130-1227	49 22.3	12 49.1	49 20.7	12 49.5
9780	1	24.04.78	1546-1722	49 11.8	12 59.0		
9782	1	25.04.78	0840-1042	49 03.8	13 03.1		
9783	1	25.04.78	1311-1428	49 03.9	12 53.0		
9784	1	25.04.78	1532-1636	49 04.8	12 43.8		
50502		01.06.79	0104-0211	51 56.2	13 34.8	51 54.3	13 35.2
50503		01.06.79	0629-0738	51 37.1	13 14.6	51 35.0	13 15.4
50504		01.06.79	1616-1701	51 54.4	12 53.9	51 56.7	12 50.1

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
9762	1	CTD MS	6-2883			WB at 2949, 2503, 2017, 1526, 1280, 1031, 909, 783, 533, 284 and 6m.
9763	1	CTD MS	3-2400			WB at 2400 and 6m.
9764	1	CTD MS	3-1964			No bottles fired.
9765	1	CTD MS	3-1469			WB at 1469 and 6m.
9766	1	CTD MS	3-923			CTD failure - Station aborted.
9767	1	CTD MS	3-681			WB at 681, 500, 375, 250, 175, 100 and 6m.
9768	1	CTD MS	3-996			WB at 996 and 6m.
9769	1	CTD MS	3-3906			WB at 3508, 3012, 2519, 2021, 1528, 1030, 783, 531, 281 and 6m.
9770	1	CTD MS	3-2440			WB at 2440 and 6m.
9771	1	CTD MS	3-1976			WB at 2019, 1521, 1273, 1025, 900, 777, 653, 528, 280, 203 and 6m.
9772	1	CTD MS	3-1453			WB at 1453 and 6m.
9774	1	OTSB14	1494-1572		42974	
9775	2	RMT1 RMT8	1500-1900		12696 162679	Did not close until hauled to 1500m.
9775	3	BN1.5/3M	2012-2019	916 280(e)	9746 2979(e)	Weak link parted - fine net catch lost.
9776	1	OTSB14	800-808		38927	
9776	2	BN1.5/3M	770-785	1843 564(e)	5210 1594(e)	Weak link parted - camera failed.
9777	1	CTD MS	3-189			WB at 189, 150, 100 and 6m.
9777	2	OTSB14	205-280		65203	
9778	1	OTSB14	1016-1055		40699	
9779	1	BN1.5/3M	1398-1404	1917 587(e)	6879 2105(e)	
9780	1	CTD MS	4-1892			WB at 1397, 1392, and 1390m. CTD failure.
9782	1	CTD MS	4-2511			WB at 2569, 2012, 1521, 1273 1021, 895, 776, 654, 529, 281 and 6m.
9783	1	CTD MS	4-1978			WB at 1978 and 6m.
9784	1	CTD MS	4-1464			WB at 1464 and 6m.
50502		OTSB14	500		30532	Distance run 2.0nm.
50503		OTSB14	992-1042		34389	Distance run 2.3nm.
50504		GRANTON	970-975		76602	Representative catch retained. SMBA Ref. No. H40. Distance run 3.2nm.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
50505		01.06.79	2157-2242	51 44.1	12 46.3	51 43.2	12 50.6
50506		02.06.79	1035-1120	51 55.8	13 36.3	51 58.8	13 34.2
50507		02.06.79	1700-1745	51 50.6	13 18.2	51 53.8	13 16.4
50508		03.06.79	0641-0824	51 34.0	13 18.1	51 32.3	13 20.1
50509		03.06.79	1318-1423	51 14.7	13 16.3	51 13.5	13 19.2
50510		03.06.79	1825-1840	51 05.3	13 04.5	51 06.5	12 59.5
50511		04.06.79	1140-1312	50 32.4	13 01.4	50 31.4	12 55.6
50512		04.06.79	2257-0035	50 13.6	13 41.5	50 10.8	13 36.8
50513		05.06.79	0908-1040	50 07.6	13 58.3	50 04.2	14 02.0
50514		05.06.79	1655-1845	49 43.9	14 02.2	49 38.8	14 00.4
50515		06.06.79	0715-0900	49 43.9	15 04.6	49 46.9	15 08.2
50516		06.06.79		49 25.6	15 42.1		
50517		07.06.79	1030-1115	49 30.1	13 19.9	49 27.7	13 17.2
50518		07.06.79	1713-1914	49 27.3	13 21.1	49 30.1	13 26.8
50519		08.06.79	0225-0330	49 29.5	12 48.9	49 29.9	12 43.6
50520		08.06.79	1031-1125	49 33.6	12 08.1	49 36.5	12 06.4
50521		08.06.79	1555-1640	49 33.2	11 48.8	49 30.4	11 50.2
50522		08.06.79	2115-2215	49 24.0	11 45.4	49 26.1	11 45.1
50523		09.06.79	0207-0318	49 31.6	11 23.9	49 29.0	11 23.9
50524		09.06.79	0607-0738	49 33.9	11 36.1	49 37.9	11 35.6
50525		09.06.79	1224-1310	49 35.2	11 23.8	49 32.7	11 24.4
50526		09.06.79	1608-1658	49 28.5	11 35.4	49 25.8	11 34.5
50601	1	01.07.79	0426-0544	51 19.2	11 41.1	51 21.1	11 42.9
50602	2	01.07.79	1945-2030	51 01.0	13 05.9	51 01.1	13 08.4
50602	3	01.07.79	0117-0330	51 06.8	13 16.7	51 06.9	13 24.4
50603	1	02.07.79	2310-0017	49 46.2	14 01.5	49 44.4	14 00.5
50603	2	03.07.79	0746-0852	49 53.9	14 08.9	49 55.7	14 11.5
50604	1	04.07.79	1931-2028	50 06.1	13 53.0	50 06.4	13 49.9
50605	1	05.07.79	0217-0308	50 11.6	13 32.4	50 11.2	13 29.0

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
50505		GRANTON	1270-1300		65587	Representative catch retained. SMBA Ref. No. H41. Distance run 2.5nm.
50506		GRANTON	490		76223	Representative catch retained. SMBA Ref. No. H42. Distance run ?1.5nm.
50507		GRANTON	770-795		79028	Representative catch retained. SMBA Ref. No. H43. Distance run 3.4nm.
50508		SWT	980-985			Representative catch retained. Distance run 3.2nm.
50509		OTSB14	1490-1523		34684	
50510		OTSB14	1925-1960		53567	Distance run 3.5nm.
50511		OTSB14	2435-2405		60871	Distance run 3.7nm.
50512		OTSB14	3022-3110		65493	Distance run 4.1nm.
50513		OTSB14	3400-3600		66074	Distance run 4.2nm.
50514		OTSB14	4017-4095		83364	Distance run 5.1nm.
50515		OTSB14	4505-4515		60491	Distance run 4.3nm.
50516		OTSB14				Haul aborted because of faulty splice on main warp.
50517		OTSB14	1794-1785		47373	Distance run 2.7nm.
50518		OTSB14	2045-2110		73987	Distance run 4.1nm.
50519		OTSB14	1465-1431		55227	Distance run 3.1nm.
50520		GRANTON	1245-1230		72376	Representative catch only. SMBA Ref. No. H44. Distance run 3.1nm.
50521		GRANTON	965-970		68672	SMBA Ref. No. H45. Distance run 3.2nm.
50522		OTSB14	1000-965		33609	Distance run 2.4nm.
50523		OTSB14	455-490		41432	Distance run 2.1nm.
50524		OTSB14	736-790		63952	Distance run 3.8nm.
50525		GRANTON	490-515		59026	SMBA Ref. No. H46. Distance run 2.8nm.
50526		GRANTON	745		64451	SMBA Ref. No. H47. Distance run 2.7nm.
50601	1	OTSB14	770-927		35184	
50602	2	BN1.5/3M	1955-1980		6687	
					2046(e)	
		SBN 0.5			1460	
50602	3	OTSB14	1817-1930		77047	
50603	1	BN1.5/3M	4000-4000		8116	
					2483(e)	
		SBN 0.5			1772	
50603	2	RMT1	3720-3940		2796	
		RMT8			38650	
50604	1	BN1.5/3M	3490-3550		8533	
					2611(e)	
		SBN 0.5			1863	
50605	1	BN1.5/3M	2820-2930		9391	
					2874(e)	
		SBN 0.5			2050	

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
50605	2	05.07.79	0907-1030	50 06.5	13 12.0	50 05.9	13 07.2
50606	1	06.07.79	0122-0153	50 40.4	14 09.8	50 40.1	14 10.8
50606	2	06.07.79	0504-0611	50 40.8	14 04.1	50 42.1	14 01.3
50606	3	06.07.79	1026-1226	50 39.9	13 59.3	50 39.9	14 05.1
50606	5	06.07.79	1723-1750	50 43.1	13 56.1	50 42.7	13 57.0
50607	1	07.07.79	0339-0450	51 01.7	14 12.1	51 01.4	14 07.3
50607	2	07.07.79	0656-0723	51 01.4	14 06.4	51 01.4	14 07.5
50607	3	07.07.79	1005-1205	51 03.2	14 14.2	51 04.9	14 19.9
50607	4	07.07.79	1301-1349	51 04.6	14 21.7	51 05.2	14 29.3
50608	1	07.07.79	1748-1818	51 19.5	14 20.7	51 19.5	14 20.3
50608	2	07.07.79	1921-2004	51 19.3	14 22.3	51 19.3	14 24.3
50609	1	08.07.79	0009-0025	51 39.7	14 16.5	51 39.5	14 16.5
50609	2	08.07.79	0231-0301	51 38.7	14 20.6	51 38.0	14 22.4
50609	3	08.07.79	0453-0553	51 36.7	14 20.7	51 36.8	14 15.1
50610	1	08.07.79	1143-1202	51 26.5	13 24.1	51 26.1	13 24.7
50611	1	08.07.79	1540-1710	51 19.5	13 15.3	51 15.6	13 20.0
50612	1	08.07.79	2207-2307	51 14.5	13 14.7	51 13.1	13 17.9
50613	1	09.07.79	0819-0853	50 29.5	13 02.3	50 29.7	13 03.4
10106	1	04.09.79	0831-0917	50 41.7	12 50.7	50 41.0	12 48.4
10107	1	05.09.79	1639-1819	49 03.3	12 54.0		
10108	1	05.09.79	2233-2310	49 20.6	12 49.2	49 19.6	12 48.7
10108	2	05.09.79	0015-0145	50 35.5	13 13.8		
10108	6	06.09.79	1147-1247	49 27.8	12 47.8	49 25.4	12 49.1

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
50605	2	RMT1	2640-2750		3560	
		RMT8			48504	
50606	1	BN1.5/3M	1110-1120	1374	2975	
				420(e)	910(e)	
		SBN 0.5		300	650	
50606	2	OTSB14	1080-1120		35046	
50606	3	RMT1	1090-1160		5664	
		RMT8			65602	
50606	5	BN1.5/3M	1120-1140		2952	
					903(e)	
		SBN 0.5			645	
50607	1	OTSB14	700-712		48348	
50607	2	BN1.5/3M	700-700		2936	
					898(e)	
		SBN 0.5			641	
50607	3	RMT1	655-680		5779	
		RMT8			61567	
50607	4	RMT1	0-650		2101	
		RMT8			27896	
50608	1	RMT1	460-495		1234	
		RMT8			17602	
50608	2	BN1.5/3M	510-510	2130	5304	
				652(e)	1623(e)	
		SBN 0.5		465	1158	
50609	1	BN1.5/3M	400-400		850	
					260(e)	
		SBN 0.5			186	
50609	2	RMT1	380-395		1352	
		RMT8			17195	
50609	3	OTSB14	405-410		55439	
50610	1	BN1.5/3M	980-980		2324	
					711(e)	
		SBN 0.5			508	
50611	1	OTSB14	1365-1410		77822	
50612	1	RMT1	1440-1475		2687	
		RMT8			34521	
50613	1	BN1.5/3M	2440-2440		3089	
					945(e)	
		SBN 0.5			675	
10106	1	BN1.5/3M	2300-2315		6860	
					2097(e)	
		SBN 0.5			1498	
10107	1	CTD	0-2079			WB at 2079, 1000, 600 and 10m.
		MS				
10108	1	BN1.5/3M	1385-1390		4463	
					1364(e)	
		SBN 0.5			974	SBN 0.5 everted. No catch.
10108	2	CTD	0-1326			WB at 1326 and 10m.
		MS				
10108	6	RMT1M-1	1210-1350		2645	Estimated to within 90m off bottom.
		RMT8M-1			30559	

Station	Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
10108 7	06.09.79	1247-1347	49 25.4	12 49.1	49 23.6	12 49.6
10108 8	06.09.79	1347-1420	49 23.6	12 49.6	49 22.6	12 49.9
10109 1	06.09.79	1814-1914	49 19.9	12 24.7	49 18.6	12 27.5
10109 2	06.09.79	1914-2014	49 18.6	12 27.4	49 17.4	12 30.4
10109 3	06.09.79	2014-2114	49 17.4	12 30.3	49 16.1	12 33.2
10109 7	07.09.79	0602-0705	49 16.9	12 20.9		
10109 8	07.09.79	1005-1100	49 11.7	12 19.4	49 10.0	12 18.5
10110 1	07.09.79	1602-1645	49 18.8	11 42.8	49 18.3	11 44.0
10110 2	07.09.79	1754-1847	49 18.2	11 44.3		
10110 3	07.09.79	2029-2124	49 16.8	11 45.4	49 16.5	11 48.3
10110 4	07.09.79	2124-2224	49 16.5	11 48.2	49 17.0	11 50.9
10110 5	07.09.79	2224-2324	49 17.0	11 50.8	49 17.4	11 53.2
10111 1	08.09.79	0634-0809	49 36.8	13 03.1	49 37.8	13 09.0
10111 2	08.09.79	0809-0910	49 37.8	13 09.0	49 38.2	13 12.6
10111 3	08.09.79	0910-0943	49 38.2	13 12.5	49 38.2	13 14.4
10111 4	08.09.79	1405-1505	49 34.5	13 07.9	49 34.7	13 12.5
10111 5	08.09.79	1505-1605	49 34.7	13 12.5	49 34.9	13 16.7
10111 6	08.09.79	1605-1705	49 34.9	13 16.7	49 35.2	13 21.0
10111 8	09.09.79	0203-0252	49 32.6	13 07.1	49 33.5	13 05.9
10112 1	09.09.79	1233-1322	50 25.0	13 19.1	50 26.4	13 17.6
10112 2	09.09.79	2055-2119	50 25.2	13 20.3	50 25.7	13 20.4
10112 3	10.09.79	0301-0337	50 19.1	13 25.8	50 19.9	13 26.9
10113 1	10.09.79	1132-1155	50 16.1	13 31.6	50 16.3	13 32.3

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
10108	7	RMT1M-2	1350-1410		2549	Estimated 90-30m off bottom
		RMT8M-2			31367	
10108	8	RMT1M-3	1410-1425		1265	Estimated 30-15m off bottom
		RMT8M-3			12970	
10109	1	RMT1M-1	1000-1100		2581	Estimated to within 60m off
		RMT8M-1			28944	bottom.
10109	2	RMT1M-2	1110-1155		2363	Estimated 25-60m off bottom
		RMT8M-2			28430	
10109	3	RMT1M-3	1140-1155		2681	Estimated 25-15m off bottom
		RMT8M-3			28697	
10109	7	CTD	0-1139			WB at 1139 and 10m.
		MS				
10109	8	BN1.5/3M	1120-1130		7633	
					2333(e)	
		SBN 0.5			1667	
10110	1	BN1.5/3M	920-930		3940	
					1204(e)	
		SBN 0.5			860	
10110	2	CTD	0-896			WB at 896 and 10m.
		MS				
10110	3	RMT1M-1	10-810		2233	Estimated to within 120m off
		RMT8M-1			23870	bottom.
10110	4	RMT1M-2	800-950		2205	Estimated 120-35m off
		RMT8M-2			26119	bottom.
10110	5	RMT1M-3	935-1000		2215	Estimated 40-15m off bottom.
		RMT8M-3			22586	
10111	1	RMT1M-1	10-1500		3699	
		RMT8M-1			38577	
10111	2	RMT1M-2	1500-1610		2575	Estimated 200-500m off
		RMT8M-2			31623	bottom.
10111	3	RMT1M-3	1610-1670		1494	Estimated 100-40m off
		RMT8M-3			15851	bottom.
10111	4	RMT1M-1	1480-1570		2729	Estimated 40-90m off bottom.
		RMT8M-1			33481	
10111	5	RMT1M-2	1555-1570		2704	Estimated 25-30m off bottom.
		RMT8M-2			34224	
10111	6	RMT1M-3	1580-1650		2779	Estimated 10-25m off bottom.
		RMT8M-3			29753	
10111	8	BN1.5/3M	1630-1640	1523	5050	
				466(e)	1544(e)	
		SBN 0.5		333	1103	
10112	1	BN1.5/3M	2640-2660		7193	
					2199(e)	
		SBN 0.5			1570	
10112	2	BN1.5/3M	2640-2650	710	2139	
				217(e)	654(e)	
		SBN 0.5		155	467	
10112	3	BN1.5/3M	2740-2755	1305	4517	
				399(e)	1381(e)	
		SBN 0.5		285	986	
10113	1	BN1.5/3M	2755-2760	1260	2080	
				385(e)	636(e)	
		SBN 0.5		275	454	

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
10114	1	10.09.79	2129-2147	49 45.6	14 08.2	49 45.0	14 08.0
10115	1	11.09.79	0521-0609	49 46.3	13 56.0	49 45.6	13 56.6
10119	1	13.09.79	1658-1734	49 15.5	11 14.3		
10120	1	13.09.79	2017-2033	49 27.5	11 21.7	49 27.9	11 21.2
10121	1	13.09.79	2222-2255	49 23.2	11 13.3		
50701		11.10.79		53 34	11 54(f)		
50702		13.10.79	0121-0206	51 17	11.38(f)		
50703		13.10.79	1748-1857	49 33	12 34(f)		
50704		13.10.79	2342-0054	49 40	12 07(f)		
50705		14.10.79	0649-0738	49 24	11 32(f)		
50706		15.10.79	1350-1437	49 31	11 27(f)		
50707		15.10.79	1902-1945	49 54	11 16(f)		
50708		16.10.79	0615-0700	49 23.2	12 01(f)		
50709		16.10.79	1410-1500	49 23.5	12 21.5(f)		
50710		17.10.79	0451-0512	49 33.5	13 28(f)		
50711		18.10.79	2215-0045	49 53	15 36(f)		
50712		19.10.79	1840-1950	50 10.5	13 21(f)		
50713		20.10.79	1025-1112	51 22	13 18(f)		
50714		20.10.79	1850-1925	51 44.5	13 14.8(f)		
50715		21.10.79	0140-0240	51 19.5	12 57(f)		
50716		21.10.79	1210-1255	51 52.5	13 26(f)		
50717		21.10.79	1735-1840	52 00.0	13 33(f)		
50801		30.07.80	0554-0715	49 35.0	12 11.4		
50802		30.07.80	1940-2050	49 39.5	12 36.9		
50803		31.07.80	0930-1032	49 26.4	11 27.5	49 23.5	11 28.5
50804		31.07.80	1402-1502	49 24.8	11 32.8	49 28.5	11 34.7

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
10114	1	BN1.5/3M	4040-4060	1111	2604	
				340(e)	796(e)	
		SBN 0.5		243	569	
10115	1	BN1.5/3M	3900-3950	1363	3395	
				417(e)	1038(e)	
		SBN 0.5		298	741	
10119	1	CTD	0-150			
10120	1	BN1.5/3M	400-400	1008	2187	
				308(e)	668(e)	
		SBN 0.5		220	477	
10121	1	CTD	0-170			
50701		OTSB14	2870-2890		66934(g)	Time on bottom 120 mins.
50702		OTSB14	755-815		27099(g)	Coral discarded.
50703		OTSB14	1575-1625		36653(g)	Representative invertebrates retained.
50704		OTSB14	1260-1265		39844(g)	Representative invertebrates retained.
50705		OTSB14	740-745		35062(g)	
50706		GRANTON	510-550		103760(g)	SMBA Ref. No. H48.
50707		GRANTON	770-790			Representative invertebrates retained. SMBA Ref. No. H49. Time on bottom 45mins.
50708		GRANTON	1050-1065			Representative invertebrates retained. SMBA Ref. No. H50. Time on bottom 45mins.
50709		GRANTON	1260		111180(g)	Representative invertebrates retained. SMBA Ref. No. H51.
50710		OTSB14	1800-2000		52589(g)	Representative invertebrates retained.
50711		OTSB14	4595-4580		95615(g)	
50712		OTSB14	2775-2700		47807(g)	
50713		GRANTON	1245-1275		159360(g)	Selected invertebrates retained. SMBA Ref. No. H52.
50714		GRANTON	925-960		114880(g)	Selected invertebrates retained. SMBA Ref. No. H53.
50715		OTSB14	1635-1720		39844(g)	
50716		GRANTON	745-750		111180(g)	Selected invertebrates retained. SMBA Ref. No. H54.
50717		GRANTON	510-500			Selected invertebrates retained. SMBA Ref. No. H55.
50801		OTSB14	1285-1245		47807(g)	Selected invertebrates retained. Distance run 3.0nm.
50802		OTSB14	1857-1910		38244(g)	Selected invertebrates retained. Distance run 2.4nm.
50803		GRANTON	460-495		69336	SMBA Ref. No. H56. Fish and Stichopus tremulus retained. Distance run 4.1nm.
50804		GRANTON	685-720		91002	SMBA Ref. No. H57. Only Crustacea retained. Distance run 4.3nm.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
50805		31.07.80	1855-1955	49 36	11 51.2	49 40.0	11 50.5
50806		01.08.80	0233-0352	49 26.6	11 26.8		
50807		01.08.80	0810-0928	49 24.2	11 36.6		
50808		01.08.80	1320-1422	49 34.9	11 48.9		
50809		01.08.80	1952-2052	49 31.9	12 09.7	49 35.4	12 08.4
50810		02.08.80	0404-0533	49 34.1	12 41.9		
50811		02.08.80	2025-2300	49 38.6	14 34.2		
50812	1	03.08.80		49 45.4	14 10.3		
50812	2	03.08.80	1620-1850	49 52.7	14 17.3		
50813		04.08.80	0230-0400	50 13.6	14 07.9		
50814		04.08.80	1358-1758	50 19.7	13 32.1		
50815		05.08.80	1251-1456	51 36.1	13 04.2		
50816		05.08.80	1942-2042	51 46.1	13 04.7	51 48.6	13 00.7
50817		06.08.80	0120-0220	51 55.2	13 15.3	51 52.7	13 19.9
50818		06.08.80	0602-0702	52 00.0	13 31	52 03.2	13 28.7
50819		06.08.80	1010-1126	52 04.5	13 29.2		
50820		06.08.80	1518-1627	51 55.4	13 18.7		
50821		06.08.80	2010-2124	51 48.2	13 04.9		
50822		07.08.80	1010-1240	50 56.7	13 11.6		
50823		08.08.80		50 11.7	13 31.7		
50824	1	08.08.80	1836-1848	49 20.1	11 35.5		
50824	3	09.08.80		49 26.0	11 36.3		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
50805		GRANTON	1010-1040		93915	SMBA Ref. No. H58. Catch discarded. Distance run 4.3nm.
50806		OTSB14	510-515		44617(g)	Distance run 2.8nm.
50807		OTSB14	790-795		41435(g)	Some Echinoidea discarded. Distance run 2.6nm.
50808		OTSB14	955-964		31872(g)	Selected invertebrates retained. Distance run 2.0nm.
50809		GRANTON	1250-1260		83989	SMBA Ref. No. H59. Selected invertebrates retained. Distance run 3.9nm.
50810		OTSB14	1605-1694		44617(g)	Selected invertebrates retained. Distance run 2.8 nm.
50811		OTSB14	4400-4350		79679(g)	Distance run 5.0 nm.
50812	1	BN1.5/3M	4080-4100	1786		
		SBN 0.5		390		
50812	2	OTSB14	4035-4140		103587(g)	Distance run c6.5 nm.
50813		OTSB14	3640-3715		89242(g)	
50814		OTSB14	3000-2715			
50815		OTSB14	1280-1344			Selected invertebrates retained.
50816		GRANTON	1010-1025		82057	SMBA Ref. No. H60. Only Laetmogone violacea retained. Distance run 3.9nm.
50817		GRANTON	750-765		88241	SMBA Ref. No. H61. Only Rochinia carpentaria retained.
50818		GRANTON	515-520		81628	SMBA Ref. No. H62. Only Stichopus tremulus and Geryon trispinosus retained. Distance run 3.3nm.
50819		OTSB14	500-512		31872(g)	Selected invertebrates retained. Distance run 2.0nm.
50820		OTSB14	714-725		54180(g)	Distance run 3.4nm.
50821		OTSB14	982-990		52589(g)	Most Paguridea and Zoanthidea discarded. Distance run 3.3nm.
50822		OTSB14	2095-2150		106769(g)	Some Asteroidea and Ophiuroidea discarded. Distance run 6.7nm.
50823		BN1.5/3M	2830	2082		
		SBN 0.5		455		
50824	1	OTSB14	730-740		6373(g)	Paromola cuvieri and Cephalopoda retained. Distance run 0.4nm.
50824	3	BN1.5/C	845-870	4010		
		SBN 0.5		876		Catch discarded.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
50824	4	09.08.80	0720-0733	49 28.3	11 34.6		
50824	5	09.08.80	0908-0924	49 25.8	11 31.0		
50824	6	09.08.80	1052-1106	49 27.2	11 30.9		
50824	7	09.08.80	1353-1407	49 24.6	11 28.9		
50901		06.11.80	1020-1120	50 28.6	12 15.4	50 29.22	12 18.4
50902		07.11.80	1310-1440	51 17.4	12 45.2	51 15.74	12 49.19
50903		07.11.80	2222-2330	51 16.6	13 23.3	51 15.12	13 25.12
50904		08.11.80	0434-0536	51 21.8	13 27.4	51 19.3	13 30.12
50905		08.11.80	1415-1520	51 41.78	13 26.54	51 43.14	13 21.17
50906		09.11.80	1143-1328	50 26.2	13 20.8	50 24.10	13 34.91
50907		10.11.80	0200-0335	49 53.7	13 30.4	49 53.19	13 33.55
50908		10.11.80	1228	49 51.77	14 02.52		
50909		10.11.80	1607	49 53.83	14 00.36		
50910		10.11.80	2210-0026	49 49.6	14 40.5	49 50.56	14 49.63
50911		11.11.80	2229	50 11.34	13 32.22		
50912		11.11.80		50 06.43	13 31.45		
50913		12.11.80	1520-1555	50 11.9	13 39.8	50 11.3	13 41.3
50914		12.11.80	2256-0008	50 17.2	13 29.4	50 15.68	13 31.23
50915		13.11.80	0740-0816	50 28.9	13 10.5	50 28.70	13 11.68
51001		30.04.81		54 44.7	12 23.5		
51002		01.05.81	0105-0138	52 19.9	13 18.5		
51003		01.05.81	0539-0611	52 00.8	13 01.8		
51004		01.05.81	1051-1220	52 10.4	13 25.7	52 16.1	13 18.6
51005		01.05.81	1645-1815	52 03.2	13 00.1	51 58.0	13 07.0
51006		01.05.81	2215-2345	51 45.0	13 04.5	51 39.9	13 10.8
51007		02.05.81	0449-0554	51 45.6	13 05.9		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
50824	4	OTSB14	720-730		12745(g)	Only Fish retained. Distance run 0.8nm.
50824	5	OTSB14	632-660		6373(g)	Only Fish retained. Distance run 0.4nm.
50824	6	OTSB14	565-590		7964(g)	Only Fish retained. Distance run 0.5nm.
50824	7	OTSB14	725-730		7964(g)	No invertebrates retained.
50901		OTSB14	2205-2270		31983	Net failed to reach bottom. Distance run 3.0nm.
50902		OTSB14	1825-1866		47764	Distance run 3.1nm.
50903		OTSB14	1265-1250		29756	50% Echinoidea and 80% Laetmogone violacea discarded. Distance run 2.9nm.
50904		OTSB14	1035-1020		48169	Some Echinoidea and Holothurioidea discarded. Distance run 3.2nm.
50905		OTSB14	755-820		57285	Distance run 3.2nm.
50906		OTSB14	2585-2705		147129	Distance run 5.2nm.
50907		OTSB14	2850-3100		33342	Distance run 5.4nm.
50908		BSNAP	3958			Released 1341 11.11.80
50909		TAMPH	3918			Released 1113 11.11.80
50910		OTSB14	4283-4341		95082	Distance run 5.8nm.
50911		TAMPH	2850			Released 0801 12.11.80 Rig parted at surface, trap lost.
50912		OTSB14	2925			Trawl lost.
50913		BN1.5/3M	3000-3040		4805 1469(e)	Distance run 1.5nm.
		SBN 0.5			1049	
50914		BN1.5/C	2790-2810	3744	8138	All material frozen for biomass determination.
		SBN 0.5		818	1777	Catch discarded.
50915		BN1.5/C	2540-2540	1647	3297	All material frozen for biomass determination.
		SBN 0.5		360	720	
51001		OTSB14	2885-2895		97206(g)	Duration on bottom 103 mins.
51002		OTSB14	490-490		31872(g)	Representative invertebrates retained. Distance run 2.0nm.
51003		OTSB14	780-790		28690(g)	Representative invertebrates retained. Distance run 1.8nm.
51004		GRANTON	510-520		167271	SMBA Ref. No. H63. Only Brachyura retained.
51005		GRANTON	770-785		156622	SMBA Ref. No. H64. Distance run 5.2nm.
51006		GRANTON	1030-1060		149837	SMBA Ref. No. H65. Distance run 6.6nm.
51007		OTSB14	1025-1020		44617(g)	Representative invertebrates retained. Distance run 2.8nm.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51008		02.05.81	0952-1057	51 35.8	13 01.6		
51009		02.05.81	1510-1535	51 34.2	12 54.2		
51010		02.05.81	2200-2310	51 19.1	12 29.5		
51011		03.05.81	0819-0955	50 44.6	12 14.8		
51012		05.05.81	0030-0300	49 51.0	13 57.8		
51013		05.05.81	1829-2125	49 33.0	14 05.9		
51014		06.05.81	0630-0740	49 36.2	13 29.2		
51015		06.05.81	1426-1600	49 54.8	12 56.5		
51016		07.05.81	0005-0134	50 00.4	12 37.8		
51017		07.05.81	1110-1240	49 28.6	12 11.8	49 31.1	12 05.5
51018		07.05.81	1630-1800	49 27.2	11 53.0	49 21.1	11 51.2
51019		08.05.81	0606-0735	49 30.7	11 36.0	49 25.3	11 34.5
51020		08.05.81	1038-1210	49 23.1	11 25.4	49 16.7	11 28.9
51021		09.05.81	0424-0528	49 38.6	12 40.9		
51022		09.05.81	1051-1200	49 33.0	12 38.8		
51023		09.05.81	1701-1806	49 30.1	12 10.8		
51024		09.05.81		49 24.0	11 45.8		
51025		10.05.81	1132-1232	49 26.5	11 25.1		
51026		10.05.81	1538-1635	49 24.5	11 34.4		
51027		10.05.81	1955-2055	49 32.4	11 50.5		
51101	1	20.05.81	1110	51 02.3	12 59.7		
51102	1	21.05.81	0255-0321	52 01.9	13 27.0	52 01.2	13 26.8
51102	2	21.05.81	0446-0447	51 59.7	13 24.9		
51103	1	21.05.81	0935-1527	51 45.2	13 07.9		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51008		OTSB14	1290-1335		41435(g)	Representative invertebrates retained. Distance run 2.6nm.
51009		OTSB14	1475-1485		43026(g)	Representative invertebrates retained. Distance run 2.7nm.
51010		OTSB14	1685-1700		50998(g)	Representative invertebrates retained. Distance run 3.2nm.
51011		OTSB14	2180-2165		71715(g)	Representative invertebrates retained. Distance run 4.5nm.
51012		OTSB14	3880-3920		94024(g)	Representative invertebrates retained. Distance run 5.9nm.
51013		OTSB14	4195-4290		121699(g)	Distance run 8.5nm.
51014		OTSB14	1920-1935		47807(g)	Only Cephalopods retained.
51015		OTSB14	2540-2520		58962(g)	Representative invertebrates retained. Distance run 3.7nm.
51016		OTSB14	2385-2410		52589(g)	Distance run 3.3nm.
51017		GRANTON	1265-1195		111864	SMBA Ref. No. H66. Distance run 4.7nm.
51018		GRANTON	1055-1050		144908	SMBA Ref. No. H67. Distance run 6.0nm.
51019		GRANTON	765-730		128014	SMBA Ref. No. H68. Distance run 5.3nm.
51020		GRANTON	480-585		158506	SMBA Ref. No. H69. Distance run 5.8nm.
51021		OTSB14	1860-1875		35062(g)	Representative invertebrates retained. Distance run 2.2nm.
51022		OTSB14	1575-1600		38244(g)	Representative invertebrates retained. Distance run 2.4nm.
51023		OTSB14	1275-1270		31872(g)	Distance run 2.0nm.
51024		OTSB14				Net failed to fish on bottom Small midwater catch only.
51025		OTSB14	480-460		35062(g)	Representative invertebrates retained. Estimated distance run 2.2nm.
51026		OTSB14	750-730		38244(g)	Representative invertebrates retained. Distance run 2.4nm.
51027		OTSB14	970-985		38244(g)	Representative invertebrates retained.
51101	1	BSNAP	2000			Released 0726 24.05.81.
51102	1	BN1.5/C	520-530	1390	3016	Catch frozen for biomass determination.
		SBN 0.5		304	658	
51102	2	MC	585			Sediment subsamples from 3 cores retained.
51103	1	TAMPH	1000			

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51103	2	21.05.81	1036-1037	51 47.0	13 08.6		
51103	3	21.05.81	1120-1120	51 46.8	13 08.3		
51103	4	21.05.81	1328-1352	51 47.9	13 09.5	51 48.3	13 10.0
51103	5	21.05.81	1857-1939	51 47.0	13 13.1	51 47.6	13 13.8
51104	1	22.05.81	0123-0149	51 24.9	13 03.4	51 24.3	13 04.1
51104	2	22.05.81	0412-0414	51 21.4	13 03.3		
51105	1	22.05.81	0942	51 01.9	13 04.6		
51105	2	22.05.81	1213-1217	51 01.9	13 01.5		
51105	3	22.05.81	1451-1518	51 04.4	12 53.7	51 04.3	12 54.9
51105	4	24.05.81	1118-1133	51 05.2	12 58.5	51 05.1	12 59.2
51106	1	24.05.81	1919-1945	50 28.9	13 05.8	50 29.0	13 06.6
51106	2	24.05.81	2218-2223	50 29.1	13 08.6		
51107	1	25.05.81	0305	50 25.4	13 20.4		
51108	1	26.05.81	1331-1332	50 07.4	13 57.1		
51109	1	26.05.81	2039-2120	49 50.7	14 02.1	49 51.6	14 02.7
51109	2	27.05.81	0338-0420	49 48.1	14 08.0	49 48.4	14 09.5
51109	3	27.05.81	0802-0803	49 49.1	14 17.1		
51110	1	27.05.81	1928-1929	50 16.8	13 32.1		
51110	2	27.05.81	2254	50 09.6	13 31.7		
51110	3	28.05.81	0214-0305	50 16.4	13 30.9	50 15.4	13 30.6
51110	4	28.05.81	0639-0721	50 14.2	13 27.0	50 13.7	13 25.4
51111	1	28.05.81	1721-1758	50 21.2	13 23.0	50 20.7	13 24.4
51111	2	28.05.81	2209-2246	50 23.4	13 20.1	50 23.0	13 20.4
51112	1	29.05.81	0944-1023	51 26.5	13 58.6	51 26.1	13 59.4
51112	2	29.05.81	1215	51 20.3	14 00.5		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51103	2	MC	960			
51103	3	GC	985			
51103	4	BN1.5/C	960-950	1454	2144	Catch frozen for biomass determination.
		SBN 0.5		318	468	
51103	5	BN1.5/3M	950-930	2475	3140	
				757(e)	960(e)	
		SBN 0.5		541	686	
51104	1	BN1.5/C	1370-1390	1418	3149	Catch frozen for biomass determination.
		SBN 0.5		310	688	
51104	2	MC	1492			
51105	1	TAMPH	2000			Released 0518 24.05.81.
51105	2	MC	2000			
51105	3	BN1.5/C	2030-2020	1401	3228	Catch frozen for biomass determination.
		SBN 0.5		306	705	
51105	4	BN1.5/3M	1993-1985		1913	
					585(e)	
		SBN 0.5			418	
51106	1	BN1.5/C	2510-2520	1429	2201	Catch frozen for biomass determination.
		SBN 0.5		312	481	
51106	2	MC	2510			
51107	1	BSNAP	2600			Released 1542 27.05.81.
51108	1	MC	3567			
51109	1	BN1.5/C	3960-3940	2194	4157	Some bivalves preserved separately, residue otherwise discarded. Catch frozen for biomass determination.
		SBN 0.5		479	908	
51109	2	BN1.5/3M	3980-3990	2217	4301	
				678(e)	1315(e)	
		SBN 0.5		484	939	
51109	3	MC	4167			
51110	1	MC	2785			
51110	2	TAMPH	2910			Released c1140 28.05.81.
51110	3	BN1.5/3M	2785-2800	2189	4321	
				669(e)	1321(e)	
		SBN 0.5		478	943	
51110	4	BN1.5/C	2755-2718	2205	4834	
		SBN 0.5		482	1055	
51111	1	BN1.5/3M	2660-2670	2098	4344	Most pteropod shells
				641(e)	1328(e)	discarded.
		SBN 0.5		458	949	
51111	2	BN1.5/3M	2620	2061	1881	Most pteropod shells
				630(e)	575(e)	discarded.
		SBN 0.5		450	411	
51112	1	BN1.5/3M	530-515	1997	2713	
				610(e)	829(e)	
		SBN 0.5		436	592	
51112	2	BSNAP	512			Released 1720 29.05.81.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51112	3	29.05.81	1240-1649	51 19.9	14 00.4		
51112	4	29.05.81	1523-1545	51 25.5	13 56.9	51 24.4	13 56.4
51112	5	29.05.81	1837-1838	51 19.2	14 00.0		
51113	1	29.05.81	2241-2242	51 16.5	13 10.4		
51113	2	30.05.81	0013-0052	51 15.2	13 12.3	51 14.6	13 13.7
51201	1	16.09.81	1210-1300	51 05.4	12 55.8	51 06.8	12 52.9
51202	1	16.09.81	1638	51 10.7	12 44.6		
51203	1	16.09.81	2218	51 01.1	13 01.7		
51204	1	17.09.81	1504	51 38.7	12 57.5		
51205	1	17.09.81	1721-1808	51 39.7	12 50.9	51 40.3	12 47.5
51206	1	18.09.81	1320-1333	51 40.3	13 00.8	51 40.3	12 59.9
51207	1	19.09.81	1059	52 00.0	13 26.0		
51208	1	19.09.81	2000-2031	51 41.3	12 59.7	51 42.2	13 01.1
51208	2	20.09.81	0213-0256	51 40.9	12 58.9	51 40.9	13 01.2
51208	3	20.09.81	0647-0707	51 41.0	13 01.1	51 41.0	13 02.0
51209	1	20.09.81	1616-1653	51 04.1	12 51.6	51 04.5	12 49.2
51209	2	21.09.81					
51210	1	21.09.81	1524	50 24.5	13 27.8		
51211	1	21.09.81	1555	50 25.9	13 27.9		
51212	1	22.09.81	0416	50 48.6	10 59.1		
51212	2	22.09.81	0431	50 48.7	10 58.8		
51213	1	26.09.81	0201-0234	50 45.2	11 55.7	50 43.8	11 56.0
51214	1	27.09.81	0139-0240	50 00.9	14 06.8	49 58.0	14 04.3
51215	1	27.09.81	1623	49 52.7	14 08.3		
51216	1	27.09.81	2055-2137	49 48.1	14 10.3	49 49.0	14 11.2

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51112	3	TAMPH	512			
51112	4	BN1.5/C	550-560	1418	4852	Catch frozen for biomass determination.
		SBN 0.5		310	1059	
51112	5	MC	510			
51113	1	MC	1500			
51113	2	BN1.5/C	1530-1540	2235	4507	Catch frozen for biomass determination.
		SBN 0.5		488	984	
51201	1	OTSB14	1970-1980		36378	Some Ophiuroidea and Holothurioidea discarded.
51202	1	MC	1940			10 cores.
51203	1	BSNAP	2023			Released 0543 21.09.81.
51204	1	MC	1306			10 cores.
51205	1	OTSB14	1373-1394		35432	Most invertebrates discarded.
51206	1	OTSB14	1200-1210		9804	Most invertebrates discarded from Porifera dominated catch.
51207	1	MC	588			Good cores.
51208	1	BN1.5/C	1200-1170	1282	5228	Weak link on lower bar parted. No camera. Catch frozen for biomass determination.
		SBN 0.5		280	1142	
51208	2	BN1.5/C	1220-1183	1429	6156	Net torn, no catch.
		SBN 0.5		312	1344	
51208	3	BN1.5/C	1185-1170	799	2414	"Benthos" camera forward-facing; 3 sec. intervals. Catch frozen for biomass determination.
		SBN 0.5		175	527	
51209	1	OTSB14	2015-2000		24940	Material discarded except for 1 amphipod.
51209	2	OTSB14				Haul aborted due to bottom topography.
51210	1	MC	2664			Good cores.
51211	1	BSNAP	2664			Released 1301 26.09.81.
51212	1	MC	187			3 short cores from hard sandy bottom.
51212	2	MC	187			Failed. No cores.
51213	1	OTSB14	1980-1895		23220	Depth inaccurate due to monitor fault. Probable depth, derived from PES 2026-2030m. Some invertebrates discarded.
51214	1	OTSB14	3820-3800		53836	
51215	1	BSNACK	4009			Released 0807 29.09.81.
51216	1	BN1.5/C	4070	2876	4674	Catch frozen for biomass determination.
		SBN 0.5		628	1021	

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51216	2	28.09.81	0541-0648	49 49.0	14 09.7	49 50.6	14 11.0
51216	3	28.09.81	1623-1702	49 50.1	14 07.1	49 49.0	14 07.2
51216	4	29.09.81	0150-0318	49 49.4	14 06.6	49 54.3	14 08.8
51216	5	29.09.81	1316-1404	49 48.7	14 04.7	49 47.3	14 05.4
51217	1	30.09.81	1317-1333	50 36.1	10 19.0	50 36.3	10 18.1
51217	2	30.09.81	1441-1608	50 37.7	10 13.4	50 39.3	10 04.5
51302		17.02.82	1449-1620	52 41.0	13 31.2		
51303		18.02.82	0700-0842	52 09.2	13 21.3		
51304		18.02.82	1542-1719	51 51.1	13 19.6		
51305		18.02.82	2155-2300	51 50.2	13 05.1		
51306		19.02.82	0624-0714	51 43.8	12 52.6		
51307		19.02.82	2119-2229	51 26.4	13 01.4		
51308		20.02.82	0340-0450	51 13.0	13 02.0		
51309		20.02.82	2229-0058	49 34.9	14 00.6		
51310		21.02.82	1128-1313	49 52.2	12 56.9		
51311		21.02.82	1821-1948	49 50.7	12 22.9		
51312		22.02.82	0809-0947	49 27.0	11 37.0	49 21.1	11 33.6

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51216	2	BN1.5/C	4060		7699	Fished upside down. No catch.
		SBN 0.5			1681	SBN with c150l of sediment.
51216	3	BN1.5/C	4050	2782	4605	Frozen for biomass determination.
		SBN 0.5		608	1006	
51216	4	OTSB14	4000-3970		82474	
51216	5	BN1.5/C	4030-4040	2730	6208	Catch frozen for biomass determination.
		SBN 0.5		596	1356	Net torn, small catch. Camera obscured latterly by suprabenthic net.
51217	1	BN1.5/3M	150	948 290(e)	2897 886(e)	Benthos camera backward facing; IOS shuttered camera
		SBN 0.5		207	633	forward facing.
51217	2	OTSB14	141-135		93138	Selected material retained.
51302		OTSB14	300-270		60553(g)	Depth probably wrong, chart suggests 350-320m, label gives 350-310m. Representative invertebrates retained.
51303		OTSB14	540-460		65334(g)	Distance run 4.1nm. Selected invertebrates retained.
51304		OTSB14	820-760		66934(g)	Distance run 4.2nm. Selected invertebrates retained.
51305		OTSB14	1005-965		44617(g)	Distance run 2.8nm. Selected invertebrates retained.
51306		OTSB14	1230-1205		30289(g)	Distance run 1.9nm. Selected invertebrates retained.
51307		OTSB14	1490-1415		46216(g)	Distance run 2.9nm. Selected invertebrates retained.
51308		OTSB14	1715-1770		46216(g)	Distance run 2.9nm. Selected invertebrates retained.
51309		OTSB14	4190-4255		98805(g)	Distance run 6.2nm. Selected invertebrates retained
51310		OTSB14	2500-2455		65334(g)	Distance run 4.1nm. Selected invertebrates retained.
51311		OTSB14	2010-1940		44617(g)	Distance run 2.8nm. Selected invertebrates retained.
51312		GRANTON	780-685		147003	Distance run 5.6nm. SMBA Ref. No. H70. Selected invertebrates retained.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51313		22.02.82	1632-1800	49 32.7	12 11.7	49 36.7	12 07.7
51314		22.02.82	2356-0056	49 31.8	12 29.1		
51315		23.02.82	1048-1218	49 32.8	11 52.1	49 27.3	11 55.3
51316		23.02.82	1841-2010	49 21.8	11 26.1	49 28.1	11 27.3
51317		23.02.82	2326-0050	49 29.5	11 17.3	49 24.3	11 17.2
51318		24.02.82	0912-1011	49 23.2	11 34.2		
51319		24.02.82	1304-1401	49 27.7	11 17.5		
51401	1	24.03.82	1749-1847	51 08.2	11 24.9	51 11.1	11 24.8
51402	1	25.03.82	0748	51 39.8	13 00.4	51 39.7	13 00.1
51403	1	25.03.82	1006-1044	51 37.7	12 59.8	51 36.6	13 00.0
51403	2	25.03.82	1454-1513	51 37.4	12 59.2	51 36.9	12 59.2
51403	3	25.03.82	2009-2027	51 36.8	12 59.1	51 36.4	12 59.3
51403	4	26.03.82	0037-0102	51 36.7	12 59.6	51 36.0	12 59.8
51403	5	26.03.82	0510-0528	51 37.8	12 58.9	51 37.3	12 59.0

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51313		GRANTON	1265-1225		111217	Distance run 4.5nm. SMBA Ref. No. H71. Selected invertebrates retained.
51314		OTSB14	1425-1455		38244(g)	Distance run 2.4nm. Selected invertebrates retained.
51315		GRANTON	980-1050		137165	Distance run 5.1nm. SMBA Ref. No. H72. Selected invertebrates retained.
51316		GRANTON	445-525		148099	Distance run 6.0nm. SMBA Ref. No. H73. Catch not retained.
51317		GRANTON	290-230		121322	Distance run 5.1nm. SMBA Ref. No. H74. Selected invertebrates retained.
51318		OTSB14	705-665		39844(g)	Distance run 2.5nm. Selected invertebrates retained.
51319		OTSB14	275-255		36653(g)	Distance run 2.3nm. Selected invertebrates retained.
51401	1	OTSB14	307-287		45408	
51402	1	BSNAP	1210			Released 1058 28.03.82.
51403	1	BN1.5/3M	1292-1314	1750	4484	"Benthos" camera facing
				535(e)	1371(e)	forward, IOS shuttered
		SBN 0.5		382	979	camera facing into nets. Coarse net catches frozen for biomass determination.
51403	2	BN1.5/3M	1317-1325	921	2356	IOS shuttered camera facing
				282(e)	720(e)	into nets. Coarse net catches frozen for biomass determination.
		SBN 0.5		201	514	No sample .
51403	3	BN1.5/3M	1319-1325	1049	1562	"Benthos" camera facing
				321(e)	477(e)	forward. Coarse net catches frozen for biomass determination.
		SBN 0.5		229	341	
51403	4	BN1.5/3M	1319-1333	957	3323	"Benthos" camera facing
				293(e)	1016(e)	forward. Coarse net catches frozen for biomass determination.
		SBN 0.5		209	726	
51403	5	BN1.5/3M	1289-1297	882	2034	"Benthos" camera facing
				270(e)	622(e)	forward. Coarse net catches frozen for biomass determination.
		SBN 0.5		193	444	

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51403	6	26.03.82	0945-1006	51 37	12 59		
51403	7	26.03.82	1442-1538	51 36.4	12 59.6	51 39.2	12 58.8
51404	1	26.03.82	2018-2119	51 53.3	13 19.2	51 55.8	13 17.7
51405	1	27.03.82	0056-0124	52 01.8	13 31.0	52 01.1	13 30.7
51406	1	27.03.82	0705-0728	51 23.3	13 22.4	51 22.9	13 21.7
51407	1	27.03.82	1447-1516	51 19.5	13 05.0	51 19.7	13 03.1
51408	1	27.03.82	2113-2145	51 03.6	12 55.8	51 03.8	12 53.8
51409	1	28.03.82	0552-0659	51 16.5	13 00.2	51 19.0	12 56.6
51410	1	28.03.82	2222	50 25.6	13 27.0		
51411	1	29.03.82	0358-0544	50 27.2	12 59.1	50 22.4	13 01.3
51411	2	29.03.82	1019-1039	50 22.3	13 01.2	50 22.9	13 00.8
51412	1	29.03.82	1956-2044	50 16.9	13 29.3	50 18.7	13 29.0
51413	1	30.03.82	0346-0536	50 13.8	13 32.3	50 08.3	13 34.2
51414	1	30.03.82	1418-1636	49 43.7	14 10.3	49 39.0	14 18.0
51414	2	31.03.82	0102-0151	49 47.2	14 10.2	49 47.9	14 08.5

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51403	6	BN1.5/3M	1278-1295	943 288(e)		"Benthos" camera facing forward.
		SBN 0.5		206		
51403	7	OTSB14	1330-1255		46010	
51404	1	OTSB14	760-740		42656	
51405	1	BN1.5/C	492-503	1269	3021	"Benthos" camera facing forward. Catch frozen for biomass determination.
		SBN 0.5		277	660	
51406	1	BN1.5/C	1072-1091	1479	2508	"Benthos" camera facing forward. Catch frozen for biomass determination except ?Phormosoma sacs.
		SBN 0.5		323	548	
51407	1	BN1.5/C	1489-1511	1438	5201	IOS shutterless camera facing forward. Catch frozen for biomass determination except cirrate octopod egg.
		SBN 0.5		314	1136	
51408	1	BN1.5/C	1994-2001	1825	4580	IOS shutterless camera facing forward. Net fished again after hauling commenced due to reduced ship's speed. Catch frozen for biomass determination.
		SBN 0.5		399	1000	
51409	1	OTSB14	1651-1717		53836	Monitor depths dubious; fishing depth calculated from Mufax record. Some Holothurioidea and Crustacea discarded.
51410	1	BSNAP	2665			Released 1430 31.03.82.
51411	1	OTSB14	2470-2500		79722	Some Holothurioidea discarded.
51411	2	BN1.5/C	2500-2490	1472	2652	IOS shutterless camera facing forward. Catch frozen for biomass determination.
		SBN 0.5		322	579	
51412	1	BN1.5/C	2760-2790	3453	7491	IOS shutterless camera facing forward. Catch frozen for biomass determination.
		SBN 0.5		754	1636	
51413	1	OTSB14	2770-2940		88494	Most material preserved.
51414	1	OTSB14	4097-4212		109478	Some Holothurioidea frozen.
51414	2	BN1.5/C	4090-4070	2986	5743	IOS shutterless camera facing forward. Catch frozen for biomass determination.
		SBN 0.5		652	1254	

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51415	1	31.03.82	0853-0931	50 06.9	13 53.6	50 06.9	13 52.1
51416	1	31.03.82	2114-2132	50 16.8	13 31.4	50 16.9	13 30.7
51417	1	01.04.82	0413-0439	50 10.3	13 22.3	50 10.1	13 21.2
51418	1	01.04.82	1344	51 04.8	12 54.4		
51418	2	27.05.82	2100	51 04.8	12 54.4		
51419	1	01.04.82	1718-1819	51 19.0	13 05.4	51 16.8	13 07.4
51420	1	02.04.82	0033-0048	51 37.3	12 58.6	51 36.9	12 58.6
51420	2	02.04.82	0408-0423	51 37.2	12 59.1	51 36.9	12 59.1
51420	3	02.04.82	0803-0817	51 38.3	12 58.9	51 38.0	12 59.0
51420	4	02.04.82	1302-1319	51 37.9	12 59.5	51 37.5	12 59.6
51501	2	09.04.82		51 26.3	11 18.7		
51501	3	09.04.82		51 26.3	11 18.7		
51502	1	10.04.82		51 36.1	13 00.0		
51502	2	10.04.82		51 36.2	12 59.5		
51502	4	10.04.82		51 36.1	13 00.0		
51502	5	10.04.82		51 36.1	12 59.9		
51502	6	10.04.82		51 36.1	12 59.9		
51502	8	10.04.82		51 35.9	12 59.9		
51503	2	11.04.82		50 16.8	13 30.1		
51503	4	11.04.82		50 16.8	13 30.2		
51504	1	11.04.82		49 45.5	14 07.7		
51504	2	11.04.82		49 44.9	14 08.0		
51504	3	11.04.82		49 45.5	14 07.6		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51415	1	BN1.5/C	3510-3470	2901	4076	IOS shutterless camera facing forward. Catch frozen for biomass determination.
		SBN 0.5		634	890	
51416	1	BN1.5/3M	2780-2770	1399	2008	Camera failed.
				428(e)	614(e)	
		SBN 0.5		306	439	
51417	1	BN1.5/3M	2790-2770	1491	3128	
				456(e)	956(e)	
		SBN 0.5		326	683	
51418	1	BSNAP	2009			Recovered on Challenger Cruise 8/82, 0542 27.05.82.
51418	2	BSNAP	2009			Deployed on Challenger Cruise 8/82 and recovered on Cruise 516, 0754 17.07.82.
51419	1	OTSB14	1488-1529		40179	Some Asteroidea discarded.
51420	1	BN1.5/3M	1326-1328	932	1715	Benthos camera facing forward. Coarse net catches frozen for biomass determination.
				285(e)	524(e)	
		SBN 0.5		204	375	
51420	2	BN1.5/3M	1304-1309	889	1626	"Benthos" camera facing forward. Coarse net catches frozen for biomass determination.
				272(e)	497(e)	Centre net catch discarded.
		SBN 0.5		194	355	
51420	3	BN1.5/3M	1293-1298	905	1170	Camera failed. Coarse net catches frozen for biomass determination.
				277(e)	358(e)	
		SBN 0.5		198	256	
51420	4	BN1.5/3M	1279-1287	909	1626	IOS shutterless camera facing forward. Coarse net catches frozen for biomass determination.
				278(e)	497(e)	
		SBN 0.5		199	355	
51501	2	MC	217			2 cores in 8 tubes.
51501	3	MC	217			1 core in 8 tubes.
51502	1	MC	1330			6 cores in 8 tubes.
51502	2	MC	1330			8 cores in 8 tubes.
51502	4	MC	1330			7 cores in 8 tubes.
51502	5	MC	1330			8 cores in 8 tubes.
51502	6	MC	1330			8 cores in 8 tubes.
51502	8	MC	1330			8 cores in 8 tubes.
51503	2	MC	2800			12 cores in 12 tubes.
51503	4	MC	2800			12 cores in 12 tubes.
51504	1	MC	4100			9 cores in 10 tubes.
51504	2	MC	4100			10 cores in 10 tubes.
51504	3	MC	4100			9 cores for IOS from 10 tubes.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51504	4	11.04.82		49 45.0	14 08.3		
51504	5	11.04.82		49 45.5	14 07.3		
51504	6	11.04.82		49 45.5	14 07.4		
51505	1	12.04.82		49 52.5	15 07.5		
51507	1	16.04.82		52 20.3	13 15.8		
51508	2	17.04.82		53 21.0	13 35.9		
51508	3	17.04.82		53 21.1	13 35.8		
51601	1	17.07.82	1721	51 05.2	12 54.9		
51602	1	18.07.82	0640	50 20.0	13 24.3		
51603	1	18.07.82	0726	50 18.5	13 19.8		
51603	2	18.07.82	1056-1114	50 18.4	13 23.7	50 18.1	13 24.2
51604	1	19.07.82	0024-0048	50 15.0	13 38.0	50 14.9	13 36.9
51605	1	19.07.82	0456	50 05.4	13 51.6		
51606	1	19.07.82	1011	49 44.7	14 07.9		
51606	2	19.07.82	1158	49 44.8	14 07.2		
51607	1	19.07.82	1732	49 29.3	14 41.8		
51608	1	19.07.82	2308-0036	49 35.6	14 30.3	49 38.8	14 24.3
51609	1	20.07.82	1206	49 45.9	14 09.2		
51610	1	20.07.82	1759-2014	50 01.3	13 58.0	50 05.8	13 49.2
51611	1	21.07.82	0242-0438	50 17.2	13 24.8	50 21.4	13 17.2
51612	1	21.07.82	0927	50 21.2	13 23.1		
51613	1	21.07.82	2132-2305	50 45.9	12 58.4	50 49.7	12 52.7
51614	1	22.07.82	0800	51 32.7	13 54.9		
51615	1	22.07.82	1904	51 36.0	12 59.3		
51615	2	22.07.82	1959	51 36.0	12 58.9		
51615	3	22.07.82	2046	51 35.9	12 58.7		
51615	4	22.07.82	2204	51 35.3	12 59.8		
51615	5	22.07.82	2336	51 35.3	13 00.5		
51615	6	23.07.82	0039	51 35.1	13 00.8		
51616	1	23.07.82	0749-1055	51 33.6	13 02.4	51 39.0	12 57.7
51617	1	23.07.82	1812-2118	51 37.5	13 05.0	51 41.6	13 13.4
51618	1	24.07.82	0559	51 36.1	13 00.0		
51619	1	24.07.82	0728-0750	51 33.2	12 54.3	51 32.8	12 53.5
51620	1	24.07.82	1444	51 24.2	11 32.3		
51621	1	24.07.82	1620	51 16.0	11 18.8		
51621	2	24.07.82	1638	51 16.1	11 18.7		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51504	4	MC	4100			9 cores in 10 tubes.
51504	5	MC	4100			9 cores for IOS from 10 tubes.
51504	6	MC	4100			10 cores from 10 tubes.
51505	1	MC	4500			9 cores from 10 tubes.
51507	1	MC	500			8 cores from 8 tubes.
51508	2	MC	160			1 core from 4 tubes.
51508	3	MC	160			1 core from 4 tubes.
51601	1	MC	1998			With IOS shutterless camera.
51602	1	BSNAP	2734			Mark III.Recovered 1140 21.07.82.
51603	1	MC	2670			With IOS shutterless camera.
51603	2	BN1.5/3M	2730-2740	1372	1990	
				419(e)	608(e)	
		SBN 0.5		300	435	
51604	1	BN1.5/3M	2920-2890	1404	2924	
				429(e)	894(e)	
		SBN 0.5		307	639	
51605	1	MC	3420			With IOS shutterless camera.
51606	1	MC	4092			With IOS shutterless camera.
51606	2	MC	4088			With IOS shutterless camera.
51607	1	MC	4495			With IOS shutterless camera.
51608	1	OTSB14	4370-4270		79894	End position and time not certain due to poor monitor signal.
51609	1	BSNAP	4117			Mark IV recovered on Challenger Cruise 13/82, 0710 12.12.82.
51610	1	OTSB14	3660-3310		99244	A few Benthothuria retained.
51611	1	OTSB14	2700-2640		101824	57 Glyphocrangon frozen.
51612	1	MC	2692			With IOS shutterless camera.
51613	1	OTSB14	2240-2200		83678	A few Paelopatides retained.
51614	1	MC	456			With IOS shutterless camera.
51615	1	MC	1345			With IOS shutterless camera.
51615	2	MC	1357			With IOS shutterless camera.
51615	3	MC	1362			With IOS shutterless camera.
51615	4	MC	1361			With IOS shutterless camera.
51615	5	MC	1361			With IOS shutterless camera.
51615	6	MC	1356			With IOS shutterless camera.
51616	1	BN1.5/P	1365-1310			Distance run 4361m (odo), 11430m (calc).
51617	1	BN1.5/P	1260-1025			Odometer functioned intermittently only. Distance run 2028m (odo), 12286m (calc).
51618	1	BSNAP	1328			Mark III. Recovered on Cirolana Cruise 10/82, 0730 5.12.82.
51619	1	BN1.5/P	1505-1530			Distance run 497m (odo),
		SBN 0.5		249	622	1243m (calc).
51620	1	MC	398			With IOS shutterless camera.
51621	1	MC	220			With IOS shutterless camera.
51621	2	MC	217			With IOS shutterless camera.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51622	1	24.07.82	2248-2309	50 35.2	10 20.5	50 34.8	10 19.8
51701		09.04.83	0057	50 14.3	11 05.6		
51702	1	09.04.83	2037	49 49.1	14 07.4		
51702	2	10.04.83	0327	49 46.7	14 02.0		
51703	1	10.04.83	2228	51 00.5	13 05.2		
51704	1	11.04.83	1227	51 29.8	13 59.0		
51704	2	11.04.83	1253-1331	51 29.7	13 59.4		
51705	4	12.04.83		51 07.2	12 51.6		
51705	7	12.04.83		51 09.1	12 51.5		
51705	8	12.04.83	0823-0944	51 08.1	12 50.7		
51707	1	12.04.83	2024-2120	51 39.9	13 00.0	51 39.2	13 03.4
51708	2	13.04.83	0718-0757	51 31.3	12 58.4	51 31.0	13 00.3
51709	1	13.04.83	1134-1600	51 40.4	12 57.5	51 34.1	12 52.9
51711	3	14.04.83	1517	51 04.3	12 54.6		
51713	5	17.04.83	0945	51 03.0	12 57.7		
51713	6	17.04.83	1115	51 01.9	13 00.3		
51714	1	17.04.83	1948	51 30.1	14 00.1		
51714	2	17.04.83	2026-2045	51 30.2	14 00.5		
51715	2	18.04.83	0703-0748	51 29.4	12 58.8	51 30.5	13 00.5
51717	1	24.04.83	1307	51 03.5	12 57.2		
51717	2	24.04.83	1546-1616	51 04.7	12 55.9	51 05.2	12 55.5
51717	3	24.04.83	1832-1955	51 08.2	12 51.7		
51719	1	27.04.83	1250	51 04.5	12 55.3		
51719	2	27.04.83	1204-1440	51 04.5	12 55.2		
51719	4	27.04.83	1736-1853	51 03.9	12 54.5		
51719	12	28.04.83	0723	51 04.1	12 55.1		
51719	13	28.04.83	0936	51 03.5	12 54.7		
51719	25	29.04.83	1220-1442	51 06.4	12 54.9	51 01.4	12 53.1
51720	3	30.04.83	1810	49 47.0	14 03.9		
51720	5	30.04.83	2017	49 47.2	14 01.3		
51720	7	30.04.83	2356	49 46.2	14 01.9		
51724		02.05.83	0238-0511	51 40.9	12 58.3	51 45.0	13 01.9
51729	2	05.05.83	1223	51 03.7	12 56.3		
51730	1	05.05.83	1621	51 18.0	13 25.1		
51730	3	05.05.83	1907-2224	51 17.9	13 25.2	51 15.4	13 18.9
51730	4	05.05.83	2349-0032	51 14.3	13 16.0		
51731		06.05.83	0246-0311	51 22.4	13 36.5		
51732		06.05.83	0406-0427	51 24.5	13 41.1		
51733	1	06.05.83	0630-0705	51 30.0	14 00.6		
51733	2	06.05.83	0724	51 30.1	14 00.8		
51734	1	06.05.83	1238-1551	51 29.7	13 12.2	51 35.3	13 18.2
51735	1	06.05.83	2206	51 05.2	12 54.6		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51622	1	BN1.5/3M	158	1688	2659	IOS Mark 4A camera.
				516(e)	813(e)	
		SBN 0.5		369	581	
51701		MC	463			
51702	1	MC	4045			
51702	2	BSNAP	4055			Recovered 1422 30.04.83.
51703	1	MC	2075			
51704	1	MC	470			
51704	2	CTD	420			
51705	4	CTD				
51705	7	CTD				
51705	8	CTD	2000			
51707	1	BN1.5/C	1230-1205		9510	
51708	2	BN1.5/3M	1470-1430	2159	5134	Selected Holothurioidea
				660(e)	1569(e)	retained.
51709	1	BN1.5/P	1250-1490			Distance 5550m (odo), 12837m (calc).
51711	3	BSNAP	2020			Recovery failed.
51713	5	MC	2020			Warp jumped off main sheave.
51713	6	MC	2020			
51714	1	MC	462			
51714	2	CTD	417			
51715	2	BN1.5/3M	1535-1450		6639	
					2029(e)	
51717	1	MC	2012			
51717	2	BN1.5/C	1980-1970	1603	2279	Benthogone rosea frozen, all Paelopatides grisea discarded.
51717	3	CTD	1922			
51719	1	BSNAP	2010			Recovery failed.
51719	2	CTD	2027			10m from bottom.
51719	4	CTD	2010			20m from bottom.
51719	12	MC	2010			
51719	13	GC	2025			
51719	25	BN1.5/P	2030-1940			Calculated distance 9460m.
		SBN 0.5			4730	
51720	3	MC	4010			
51720	5	GC	4010			
51720	7	BSNAP	4025			Recovered 0653 26.09.83.
51724		BN1.5/P	1230-1065			Distance 5050m (odo)
		SBN 0.5		2525	4313	8626m (calc).
51729	2	MC	2010			
51730	1	MC	1130			
51730	3	BN1.5/P	1170-1430			Distance 4698m (odo),
		SBN 0.5		2349	4340	8680m (calc).
51730	4	CTD	1496			
51731		CTD	792			
51732		CTD	694			
51733	1	CTD	445			
51733	2	MC	460			
51734	1	BN1.5/P	1200-995			Distance 5750m (odo),
		SBN 0.5		2875	6270	12539m (calc).
51735	1	MC	2005			

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
51801		24.09.83	2358-0107	51 20.8	12 31.4		
51802		25.09.83		50 37	13 29		
51803		26.09.83	1318-1615	49 37.1	13 48.5		
51804		26.09.83	0034-0234	49 55.6	13 26.1		
51805		27.09.83	0909-1036	49 55.0	12 58.1		
51806		28.09.83	0745-0925	49 28	11 50	49 35.5	11 50.6
51807		28.09.83	1440-1546	49 34.1	12 04.9	49 38.5	12 03.5
51808		29.09.83	1133-1303	49 29.7	11 35.2	49 35.3	11 35.4
51809		29.09.83	1755-1925	49 25.8	11 27.1	49 30.7	11 27.8
51810		29.09.83	2343-0048	49 32.7	11 53.1		
51811		30.09.83	0926-1023	49 34.4	11 33.0		
51812		30.09.83	1233-1333	49 28.7	11 26.3		
51813		30.09.83	1556-1656	49 24.2	11 16.4		
51901	1	08.04.84	1430	51 02.3	13 01.6		
51901	2	08.04.84	1614	51 03.0	13 00.1		
51901	3	08.04.84	1815-0615	51 03.6	12 59.4		
51901	4	09.04.84	2224	51 02.9	13 00.4		
51901	5	09.04.84	2350-1754	51 03.1	13 00.7		
51901	6	10.04.84	2245	51 03.3	12 57.8		
51901	8	11.04.84	1558	51 02.3	12 56.3		
51902	1	12.04.84	1144	49 07.2	14 08.7		
52001	1	12.08.84	1754	50 34.87	11 01.02		
52002	1	13.08.84	0550	51 02.76	12 57.70		
52003	1	13.08.84	1929	51 15.44	13 00.90		
52004	1	15.08.84	0252	51 04.01	12 55.40		
52004	2	15.08.84	0607	51 03.04	12 56.22		
52005	1	16.08.84	0850	50 19.62	13 22.64		
52006	1	16.08.84	1939	50 20.37	12 42.33		
52007	1	16.08.84	2236	50 22.67	12 41.69		
52007	2	17.08.84	0037-1241	50 22.71	12 40.72		
52007	3	17.08.84	0218-0306	50 22.89	12 39.07	50 22.94	12 38.31

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
51801		OTSB14	1700-1740		44617(g)	Distance run 2.8nm.
51802		OTSB14				Approximate position, Station abandoned.
51803		OTSB14	3990-3920		122705(g)	Distance run 7.7nm.
51804		OTSB14	3180-3015		74897(g)	Distance run 4.7nm.
51805		OTSB14	2430-2545		55780(g)	Distance run 3.5nm.
51806		GRANTON	1015-990		175205	SMBA Ref. No. H77. Distance run 5.7nm.
51807		GRANTON	1190-1200		104808	SMBA Ref. No. H78. Distance run 4.0nm.
51808		GRANTON	745-817		130679	SMBA Ref. No. H79. Distance run 5.6nm.
51809		GRANTON	430-550		114805	SMBA Ref. No. H80.
51810		OTSB14	1021-1011		39835(g)	Distance run 2.5nm.
51811		OTSB14	707-685		43027(g)	Distance run 2.7nm.
51812		OTSB14	505-550		44617(g)	Distance run 2.8nm.
51813		OTSB14	255-240		43027(g)	Distance run 2.7nm.
51901	1	MC	1998			11 cores obtained.
51901	2	MC	2000			11 cores obtained.
51901	3	MCR	2000			9 cores obtained. Suspended 12 hours for respirometry.
51901	4	MC	1996			12 cores obtained.
51901	5	MCR	1996			9 cores obtained. Suspended 18 hours for respirometry. 1 core tube lost and 1 damaged due to accidental drop during soak.
51901	6	SEDTR	2005			3 traps at 100m, 200m, 700m above sea bed.Attempted recovery on Discovery Cruise 147 failed.
51901	8	BSNAP	2025			Released on Cruise 520, 0834 13.08.84.
51902	1	BSNAP	4525			Attempted recovery on Challenger Cruise 6/84 14.09.84 failed.
52001	1	MC	380			10 cores in 11 tubes.
52002	1	MC	2008			9 cores in 11 tubes.
52003	1	MC	1659			11 cores in 11 tubes.
52004	1	MC	1988			11 cores in 11 tubes.
52004	2	MCR	1995			Respirometry hang. Haul at 0200 16.08.84 10 cores in 11 tubes.
52005	1	MC	2724			10 cores in 10 tubes.
52006	1	MC	2659			9 cores in 11 tubes.
52007	1	MC	2447			11 cores in 11 tubes.
52007	2	TAMPH	2443			Descent rate 1.17m/s, ascent rate 1.04m/s, recovery delayed due to failure of ship's engines.
52007	3	POGOSNAP	2434-2453			Flash leaked. No photographs.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
52007	4	17.08.84	0844-0932	50 22.48	12 37.92	50 22.65	12 37.26
52008	1	18.08.84	0747	51 02.55	12 55.59		
52008	2	18.08.84	1139	51 02.45	12 56.31		
52009	1	19.08.84	1310-1333	51 41.13	12 59.08	51 40.79	12 58.03
52010	1	19.08.84	2117-2137	51 54.18	13 34.63	51 54.16	13 33.85
52011	1	20.08.84	0124-0640	51 56.23	13 14.63	51 48.80	13 09.23
52012	1	20.08.84	1032-1046	51 47.95	13 07.26	51 48.09	13 06.84
52013	1	20.08.84	1528-1541	52 04.92	13 28.74	52 05.08	13 28.34
52014	1	20.08.84	2158	51 45.72	13 07.83		
52015	1	21.08.84	0014-0530	51 48.50	13 09.90	51 41.46	13 07.19
52016	1	21.08.84	0905	51 36.85	12 57.30		
52016	2	21.08.84	1136	51 37.75	12 55.37		
52017	1	21.08.84	1456-1515	51 31.74	12 58.39	51 31.95	12 57.69
52018	1	21.08.84	1930-0616	51 42.36	13 05.76	51 31.39	12 46.97
52019	1	22.08.84	1024-1056	51 24.81	12 46.17	51 25.14	12 45.55
52020	1	22.08.84	1942	51 36.94	13 51.94		
52021	1	22.08.84	2247	51 26.97	13 36.08		
52022	1	23.08.84	0045-0649	51 23.79	13 29.50	51 20.71	13 17.93
52023	1	23.08.84	1255	50 47.76	12 56.67		
52024	1	23.08.84	1805-0607	50 22.84	12 43.16		
52024	2	23.08.84	1829-0450	50 22.65	12 43.12		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
52007	4	POGOSNAP	2409-2403			Calculated drift 843m. 67 frames exposed.
52008	1	MC	2024			8 cores in 10 tubes.
52008	2	MCR	2023			Respirometry hang. Haul at 0543 19.08.84, 2 cores remaining after accidental fall of coring head on recovery.
52009	1	BN1.5/3M	1206-1236	1562	3114	Nets damaged at recovery
				477(e)	952(e)	due to very large catches.
		SBN 0.5		341	680	
52010	1	BN1.5/P	545-545			Test run for Mark 4A camera.
		SBN 0.5		322	456	
						Odometer distance 643m, calculated distance 911m.
52011	1	BN1.5/P	762-925			Mark 4A camera, 569 usable
		SBN 0.5		5098	7545	frames. Odometer distance 10195m, calculated distance 15090m.
52012	1	BN1.5/3M	984-984	758	1195	
				232(e)	365(e)	
		SBN 0.5		166	261	
52013	1	BN1.5/3M	515-525	676	1227	
				207(e)	375(e)	
		SBN 0.5		148	268	
52014	1	MC	1006			11 cores in 11 tubes.
52015	1	BN1.5/P	920-1028			Mark 4A camera, 521 usable
		SBN 0.5		4650	6710	frames. Odometer distance 9300m, calculated distance 13420m.
52016	1	MC	1369			11 cores in 12 tubes.
52016	2	MC	1373			11 cores in 12 tubes.
52017	1	BN1.5/3M	1457-1472	705	2034	
				216(e)	622(e)	
		SBN 0.5		154	444	
52018	1	BN1.5/P	1082-1600			Mark 4A camera, 1285 usable frames. Odometer distance 15274m, calculated distance 29700m.
		SBN 0.5		7637	14850	
52019	1	BN1.5/3M	1736-1725	1992	2116	Monitor depths suspect due
				609(e)	647(e)	to falling battery voltage:
		SBN 0.5		435	462	echo sounder depths used here.
52020	1	MC	493			10 cores in 10 tubes.
52021	1	MC	743			9 cores in 10 tubes.
52022	1	BN1.5/P	925-1265			Mark 4A camera, 688 usable
		SBN 0.5		5805	7285	frames. Odometer distance 11610m, calculated distance 14570m.
52023	1	MC	2220			10 cores in 11 tubes.
52024	1	BSNACK	2454			Standard camera, 180 frames.
52024	2	TAMPH	2454			

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
52024	3	23.08.84	1957	50 22.02	12 43.12		
52024	4	23.08.84	2312-2347	50 21.37	12 44.01	50 21.38	12 44.22
52024	7	24.08.84	0924-1059	50 20.68	12 43.07	50 20.17	12 42.80
52024	9	24.08.84	1526-1650	50 21.27	12 45.28	50 20.51	12 45.15
52025	1	25.08.84	0210-1344	50 44.87	11 19.99		
52025	2	25.08.84	0241-1238	50 44.95	11 19.92		
52025	3	25.08.84	0458	50 46.00	11 19.75		
52025	4	25.08.84	0756	50 45.34	11 18.56		
52025	5	25.08.84	0947-1100	50 43.45	11 17.66	50 41.43	11 18.52
52026	1	25.08.84	1628-1711	50 48.08	11 05.07	50 47.13	11 03.72
52105		07.11.84	1045-1142	51 41.5	13 56.4		
52106		07.11.84	1753-1922	51 36.4	12 45.0		
52107		08.11.84	0800-0855	51 55.0	12 53.8		
52108		09.11.84	1016-1219	52 49.6	13 6.2		
52201	1	14.06.85	2259	51 00.22	12 59.26		
52201	2	15.06.85	0123	50 59.59	12 59.31		
52201	3	15.06.85	0318	50 59.56	12 59.73		
52201	4	15.06.85	0513	50 59.41	13 00.06		
52202	1	16.06.85	0343	51 27.18	13 05.48		
52203	1	16.06.85	0610-0629	51 25.91	13 00.60	51 25.48	13 00.38
52204	1	16.06.85	1112-1127	51 37.07	12 59.96	51 37.29	13 00.01
52205	1	16.06.85	1259	51 36.20	12 57.36		
52205	2	16.06.85	1437	51 36.15	12 56.35		
52205	3	16.06.85	1606	51 37.41	12 55.74		
52206	1	16.06.85	1855	51 40.09	13 14.77		
52206	2	16.06.85	2019	51 40.78	13 13.90		
52207	1	17.06.85	0829	51 32.35	13 53.40		
52207	2	17.06.85	0914	51 32.30	13 54.01		
52207	3	17.06.85	0958	51 32.30	13 54.39		
52208	1	17.06.85	1617-2000	51 20.37	13 00.81	51 23.61	13 08.50
52209	1	17.06.85	2248-0507	51 21.61	13 06.01	51 24.87	13 22.78
52210	1	18.06.85	0735-1213	51 26.13	13 20.44	51 31.52	13 26.73

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
52024	3	MC	2468			10 cores in 10 tubes.
52024	4	POGOSNAP	2428-2430			Calculated drift 249m. 28 frames exposed.
52024	7	POGOSNAP	2539-2709			Calculated drift 998m. 60 frames exposed.
52024	9	POGOSNAP	2488-2545			Calculated drift 1417m. 60 frames exposed.
52025	1	BSNACK	944			174 frames exposed.
52025	2	TAMPH	942			
52025	3	MC	799			6 cores in 10 tubes.
52025	4	MC	796			3 cores in 10 tubes.
52025	5	RMT1	315-610			
52026	1	BN1.5/3M	218-208	1963	5418	120 frames exposed.
				600(e)	1656(e)	
		SBN 0.5		429	1183	
52105		OTSB14	1230-1250		49398(g)	Fished on paired warps. Distance run 3.1 nm.
52106		OTSB14	1500-1520		38244(g)	Fished on paired warps. Trawl off bottom during tow. Distance run 2.4 nm.
52107		OTSB14	950-955		46216(g)	Fished on paired warps. Net torn, part of catch lost. Distance run 2.9 nm.
52108		RMT8	350-400			NBES 11-43m off bottom.
52201	1	SBC	2038			
52201	2	MC	2052			
52201	3	MC	2049			
52201	4	MCR	2052			Respirometer hang. Hauled at 2313.
52202	1	SBC	1360			
52203	1	BN1.5/3M	1521-1531	1477	1896	Net turned inside out,
				452(e)	580(e)	catch discarded.
		SBN 0.5		323	414	
52204	1	BN1.5/3M	1295-1310	710	921	
				217(e)	281(e)	
		SBN 0.5		155	201	
52205	1	MC	1388			
52205	2	MC	1420			
52205	3	MC	1374			
52206	1	SBC	988			Sample partially washed out, so discarded.
52206	2	SBC	999			
52207	1	MC	498			
52207	2	MC	491			
52207	3	SBC	485			
52208	1	BN1.5/P	1585-1349			Odometer distance 5646m,
		SBN 0.5		2823	5360	calculated distance 10720m.
52209	1	BN1.5/P	1433-1033			Odometer distance 11410m,
		SBN 0.5		5705	10156	calculated distance 20311m.
52210	1	BN1.5/P	1058-861			Odometer distance 7398m,
		SBN 0.5		3699	6190	calculated distance 12380m.

TABLE 4 (contd)

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
50712	19.10.79	2737	51216 4	29.09.81	3985
51413 1	30.03.82	2855	9756 5	12.04.78	4016
50814	04.08.80	2857	50514	05.06.79	4056
50701	11.10.79	2880	9638 2	09.11.77	4073
51001	30.04.81	2890	50812 2	03.08.80	4087
50907	10.11.80	2975	9756 3	11.04.78	4118
50512	04.06.79	3066	51414 1	30.03.82	4154
51804	26.09.83	3097	51309	20.02.82	4222
51610 1	20.07.82	3485	51013	05.05.81	4242
50513	05.06.79	3500	50910	10.11.80	4312
50813	04.08.80	3677	51608 1	19.07.82	4320
9640 1	13.11.77	3753	50811	02.08.80	4375
51214 1	27.09.81	3810	50515	06.06.79	4510
51012	05.05.81	3900	50711	18.10.79	4587
51803	26.09.83	3955			

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
52211	1	BN1.5/3M	1693-1738	1413	3243	
				432(e)	991(e)	
		SBN 0.5		309	708	SBN hung up on frame. Camera obscured for part of haul.
52212	1	MC	2041			Deployed in marginal conditions. No samples.
52212	2	MC	2043			
52212	3	MC	2049			
52212	4	MC	2057			Core retaining arm broken.
52212	5	MC	2053			
52212	6	MCR	2043			Respirometry hang. Hauled at 0500 20.06.85 in deteriorating weather.
52212	7	MC	2046			
52213	1	BN1.5/3M	2405-2420	1358	3201	
				415	979	
		SBN 0.5		297	699	Part of catch hung up in net and discarded with catch from 52214#1.
52214	1	BN1.5/3M	4075-4050	4534	14001	Terminated early due to bad weather. Both net bar weak links broken.
				1386	4280	
		SBN 0.5		990	3057	Catch, contaminated with that from 52214#1, was discarded.
52215	1	BN1.5/3M	4561-4565	3499	6508	
				1070	1989	
		SBN 0.5		764	1421	
52217	1	BSNAP	1476			Recovery attempt on Cruise 158 on 19.04.86 failed.
52217	2	MARTRAP	1476			Descent rate 0.77m/sec, ascent rate 0.68m/sec. Trial deployment.
52218	1	BN1.5/3M	1433-1447	2322	4316	
				710(e)	1319(e)	
		SBN 0.5		507	942	
52218	2	MC	1432			
52218	3	MC	1427			
11263	6	MC	1320			12 cores.
11263	7	MC	1370			4 cores.
11265	1	MC	1440			
11265	3	BN1.5/3M	1450-1470		4163	
					1273(e)	
		SBN 0.5			909	Fish only retained.
11267	1	MC	1420			
11267	2	BN1.5/3M	1270-1240		5036	Both weak links parted.
					1539(e)	
		SBN 0.5			1099	
11268	2	BN1.5/P	670-670			Haul aborted,batteries flat. Calculated distance 1009m.
11270		CTD	0-990			Depth approximate.
11272	1	CR				Test deployment; gear lost.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
11273	1	24.04.86	0537-0646	51 55.4	13 14.5	51 56.9	13 17.5
11273	2	24.04.86	0812-0821	51 56.7	13 16.9		
11275	2	24.04.86	1559-1601	51 35.8	13 00.5		
11277	1	26.04.86	2156-2158	51 34.7	12 59.8		
11277	2	26.04.86	2329-2333	51 34.1	13 00.5		
11277	3	27.04.86	0121-0124	51 34.1	13 01.6		
11283		04.05.86	0212	49 27.7	12 57.5		
11285		05.05.86	0030-0456	51 26.1	13 25.7	51 33.7	13 37.8
11286	7	06.05.86	0348-0433	51 00.5	13 00.1		
11286	10	06.05.86	1150	51 00.9	12 58.0	51 16.2	12 48.5
11289		07.05.86	0708-0732	51 41.6	14 00.0		
11290		07.05.86	0850-0918	51 35.8	13 51.9		
11291	1	07.05.86	1048-1130	51 30.7	13 44.8		
11292		07.05.86	1310-1344	51 28.2	13 39.0		
11293		07.05.86	1504-1549	51 22.7	13 31.1		
11294		07.05.86	1735-1817	51 25.1	13 35.3		
11295		07.05.86	1940-2115	51 21.8	13 30.1		
11296		07.05.86	2132-2204	51 28.3	13 26.8		
11297		07.05.86	2311-2346	51 28.2	13 35.8		
11299	1	08.05.86	0930-0940	51 42.3	14 04.8	51 42.0	14 04.2
11299	2	08.05.86	1046-1337	51 40.5	13 59.7	51 38.6	13 49.8
11300	2	08.05.86	1547-1615	51 35.2	13 40.7		
11300	3	08.05.86	1710-1714	51 36.1	13 39.2		
52332		17.07.86		51 25.0	15 11.0		
52333		18.07.86		51 16.0	15 08.0		
52334		20.07.86		51 20.0	15 15.0		
52337		28.07.86		49 30.0	13 30.0		
52338		28.07.86		49 35.0	13 06.0		
52338		29.07.86		49 35.0	13 06.0		
52339		31.07.86		49 29.0	13 29.0		
52342		04.08.86		51 32.0	12 55.0		
52401		28.11.86	0914-0915	49 35.1	12 02.7		
52402	1	28.11.86	1530-1532	49 28.1	12 55.9		
52402	2	28.11.86	2013	49 30.2	12 58.8		
52402	3	28.11.86	2040-2041	49 30.4	12 59.2		

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
11273	1	BN1.5/P	750-710			Haul aborted at 0624 when photographic system stopped. Calculated distance 4413m.
11273	2	7L WB	700			Depth approximate.
11275	2	MC	1323			
11277	1	MC	1369			No cores.
11277	2	MC	1365			Good cores.
11277	3	MC	1352			No cores; did not release.
11283		BSNAP				Wrecked during launch.
11285		BN1.5/P	925-665			Camera stopped 0406 GMT, at
		SBN 0.5			9907	51 33.3N 13 34.7W. Total calculated distance 19828m, camera distance 16905m.
11286	7	7L WB				
11286	10	TSST				Traps set at 22, 1140 and 1884m above sea floor. Mooring dragged prior to recovery at 1616 09.05.86.
11289		CTD	410			To 10m off bottom.
11290		CTD	500			To 10m off bottom.
11291	1	CTD	600			To 10m off bottom.
11292		CTD	690			To 25m off bottom.
11293		CTD	916			To 10m off bottom.
11294		CTD	780			To 10m off bottom.
11295		CTD	950			To c.5m off bottom.
11296		CTD	915			
11297		CTD	745			
11299	1	BN1.5/P	375-380			Camera system failed,
		SBN 0.5			443	haul aborted. Calculated distance 885m.
11299	2	BN1.5/P	400-490			Calculated distance 11912m.
		SBN 0.5			5958	
11300	2	CTD	644			
11300	3	MC	662			No cores; column bent.
52332		CYANA	2710-1970			Time on bottom 4hrs 34mins.
52333		CYANA	2820-1726			Time on bottom 4hrs 45mins.
52334		CYANA	3000-2166			Time on bottom 4hrs 23mins.
52337		CYANA	2980-2637			Time on bottom 2hrs 11mins.
52338		MARTRAP	1679			Pump started 0100 29.07.86. Cyana unable to operate trap Recovered 1300h.
52338		CYANA	1680-1675			Time on bottom 2hrs 51mins.
52339		CYANA	3000-2119			Time on bottom 5hrs 25mins.
52342		MARTRAP				Pump started 0100 05.08.86. Cyana dive precluded by bad weather. Trap lost during attempted recovery.
52401		MC	1167			Corer failed.
52402	1	MC	1480			
52402	2	BSNAP	1526			No current meter. Recovery 19.09.87.
52402	3	SBC	1534			No sample.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
52404	1	14.12.86	0008-0108	52 07.7	13 30.1	52 05.9	13 32.3
52404	2	14.12.86	0108-0208	52 05.9	13 23.3	52 04.4	13 34.8
52404	3	14.12.86	0208-0308	52 04.4	13 34.8	52 03.1	13 37.2
52404	4	14.12.86	0636-0700	51 59.5	13 42.7	51 58.8	13 43.6
52405	1	14.12.86	1025-1026	51 56.4	13 08.8		
52405	2	14.12.86	1126-1130	51 56.6	13 08.8		
11656	1	18.08.87	1359-1427	51 50.6	14 11.9	51 50.5	14 11.2
11656	2	18.08.87	1530-1631	51 49.8	14 08.8	51 49.3	14 06.3
11656	3	18.08.87	1746-1837	51 48.8	14 05.7	51 48.2	14 02.8
11657		18.08.87	2314-0014	51 35.8	14 21.4	51 33.9	14 20.2
11658		19.08.87	0224-0351	51 27.9	14 24.3	51 25.3	14 24.1
11659		19.08.87	0717-0820	51 39.2	14 17.3	51 38.2	14 15.4
11660		19.08.87	1250-1418	51 18.6	14 24.1	51 15.6	14 15.2
11675		22.08.87	1325-1430	50 32.7	14 45.3	50 34.5	14 45.7
11686		24.08.87	2118-0152	50 14.7	14 52.7	50 20.2	14 46.3
11700		28.08.87	0037-0650	50 19.3	14 46.4	50 29.5	14 36.3
11705		29.08.87	1531-1828	51 10.9	14 16.6	51 06.3	14 10.7

Station		Gear	Depth (m)	Area/Vol. Odo(c) (m^2/m^3)	Fished(b) Calc(d) (m^2/m^3)	Remarks
52404	1	RMT1M-1 RMT8M-1	470-470			Release strop broken, ? fishing time. NBES 11-30m off bottom.
52404	2	RMT1M-2 RMT8M-2	468-463			NBES 25-42m off bottom.
52404	3	RMT1M-3 RMT8M-3	465-456			NBES 39-62 off bottom.
52404	4	BN1.5/3M	450-450	1019 311(e)	3536 1081(e)	
		SBN 0.5		223	772	
52405	1	SBC	806			No sample.
52405	2	SBC	801			No sample.
11656	1	BN1.5/P	355			Aborted; camera malfunction. Calculated distance 823m. No usable photographs.
11656	2	BN1.5/P	365-368			Camera running continuously; 15 second intervals. Calculated distance 3009m, c250 usable photographs.
11656	3	BN1.5/P	370-373			Camera interval 15 sec, stopped at 1805; low batteries. Calculated distance 3504m, c60 usable photographs.
11657		BN1.5/P	411-421			Camera interval 15 sec. Calculated distance 3782m. c170 usable photographs.
11658		BN1.5/P	461-469			Camera interval 15 sec. Calculated distance 4823m. c230 usable photographs.
11659		BN1.5/P	391-401			Mk 4A camera, 15 sec interval. Calculated distance 2865m. c180 usable photographs.
11660		BN1.5/P	523-551			Mk 4A camera, 15 sec interval. Calculated distance 11717m. c300 usable photographs.
11675		BN1.5/P	3567-3511			Calculated distance 3368m. c163 usable photographs.
11686		BN1.5/P	4043-3858			Mk 4A camera, 30 sec interval. Calculated distance 12699m. c540 usable photographs.
11700		BN1.5/P	3910-3578			Mk 4A camera, 30 sec interval. Calculated distance 22350m. c140 usable photographs.
11705		BN1.5/P	570-630			Mk 4A camera, 30 sec interval. Calculated distance 10941m. c350 usable photographs.

Station		Date	Time (GMT)	Position - Start(a) °N	°W	Position - End °N	°W
11717		20.09.87		51 04.3	12 33.9		
11718		21.09.87	1148	51 06.7	12 37.9		
52601	1	29.04.88	0053-0126	49 22.83	12 48.65	49 23.09	12 49.44
11906	1	20.08.89	1201-1211	49 35.7	11 56.5	49 35.7	11 56.9
11907	1	20.08.89	1855-1954	49 40.3	12 08.2	49 37.8	12 08.8
11907	2	21.08.89	0025	49 36.8	12 13.0		
11907	3	21.08.89	0218	49 37.6	12 13.0		

Station		Gear	Depth (m)	Area/Vol. Fished(b) Odo(c) (m^2/m^3)	Calc(d) (m^2/m^3)	Remarks
11717		SEDTR	1960			Recovered on Discovery Cruise 175 at 1700 19.06.88.
11718		BSNAP	1970			Recovered on Discovery Cruise 175 at 1738 19.06.88.
52601	1	BN1.5/C	1380-1410		3366	Haul curtailed due to bad weather. Weak links broken .
		SBN 0.5			735	Net inverted: no catch.
11906	1	BN1.5/3F	1085-1090	401	989	
11907	1	OTSB14	1315-1295		40248	
11907	2	SBC	1328			No sample.
11907	3	SBC	1334			No sample.

TABLE 3.
Granton trawl stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51317	23.02.82	260	50507	02.06.79	782
50803	31.07.80	477	50714	20.10.79	942
51316	23.02.82	485	50521	08.06.79	967
50506	02.06.79	490	50504	01.06.79	972
51809	29.09.83	490	51806	28.09.83	1002
50525	09.06.79	502	51315	23.02.82	1015
50717	21.10.79	505	50816	05.08.80	1017
51004	01.05.81	515	50805	31.07.80	1025
50818	06.08.80	517	51006	01.05.81	1045
50706	15.10.79	530	51018	07.05.81	1052
51020	08.05.81	532	50708	16.10.79	1057
50804	31.07.80	702	51807	28.09.83	1195
51312	22.02.82	732	51017	07.05.81	1230
50526	09.06.79	745	50520	08.06.79	1237
50716	21.10.79	747	51313	22.02.82	1245
51019	08.05.81	747	50809	01.08.80	1255
50817	06.08.80	757	50709	16.10.79	1260
51005	01.05.81	777	50713	20.10.79	1260
50707	15.10.79	780	50505	01.06.79	1285
51808	29.09.83	781			

TABLE 4.
Otter trawl (OTSB14) stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51217	30.09.81	138	50704	13.10.79	1262
9777	23.04.78	242	50801	30.07.80	1265
51813	30.09.83	247	51023	09.05.81	1272
51319	24.02.82	265	51403 7	26.03.82	1292
51302	17.02.82	285	11907 1	20.08.89	1305
51401	24.03.82	297	50815	05.08.80	1312
50609	08.07.79	412	51008	02.05.81	1312
51025	10.05.81	470	51205 1	17.09.81	1383
50523	09.06.79	472	50611 1	08.07.79	1387
51002	01.05.81	490	51314	22.02.82	1440
50502	01.06.79	500	50519	08.06.79	1448
51303	18.02.82	500	51307	19.02.82	1452
50819	06.08.80	506	51009	02.05.81	1480
50806	01.08.80	512	50509	03.06.79	1506
51812	30.09.83	527	51419 1	01.04.82	1508
50824 6	09.08.80	577	52106	07.11.84	1510
50824 5	09.08.80	646	9774 1	21.04.78	1533
51318	24.02.82	685	51022	09.05.81	1587
51811	30.09.83	696	50703	13.10.79	1600
50607 1	07.07.79	706	50810	02.08.80	1649
50820	06.08.80	719	50715	21.10.79	1677
50824 4	09.08.80	725	51409 1	28.03.82	1684
50824 7	09.08.80	727	51010	02.05.81	1692
50824 1	08.08.80	735	51801	24.09.83	1720
51026	10.05.81	740	51308	20.02.82	1742
50705	14.10.79	742	50517	07.06.79	1789
51404 1	26.03.82	750	50902	07.11.80	1845
50524	09.06.79	763	51021	09.05.81	1867
50702	13.10.79	785	50602 3	01.07.79	1873
51003	01.05.81	785	50802	30.07.80	1883
50905	08.11.80	787	50710	17.10.79	1900
51304	18.02.82	790	51014	06.05.81	1927
50807	01.08.80	792	51213 1	26.09.81	1937
9776 1	23.04.78	804	9753 8	08.04.78	1942
50601 1	01.07.79	848	50510	03.06.79	1942
52107	08.11.84	952	9753 4	07.04.78	1944
50808	01.08.80	959	51201 1	16.09.81	1975
51027	10.05.81	977	51311	21.02.82	1975
50522	08.06.79	982	51209 1	20.09.81	2008
51305	18.02.82	985	50518	07.06.79	2077
50821	06.08.80	986	50822	07.08.80	2122
51810	29.09.83	1016	51011	03.05.81	2172
50503	01.06.79	1017	51613 1	21.07.82	2220
51007	02.05.81	1022	50901	06.11.80	2237
9752 1	07.04.78	1024	51016	07.05.81	2397
50904	08.11.80	1027	50511	04.06.79	2420
9778 1	24.04.78	1035	51310	21.02.82	2477
50606 2	06.07.79	1100	51411 1	29.03.82	2485
51206 1	18.09.81	1205	51805	27.09.83	2487
51306	19.02.82	1217	51015	06.05.81	2530
52105	07.11.84	1240	50906	09.11.80	2645
50903	07.11.80	1257	51611 1	21.07.82	2670

TABLE 4 (contd)

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
50712	19.10.79	2737	51216 4	29.09.81	3985
51413 1	30.03.82	2855	9756 5	12.04.78	4016
50814	04.08.80	2857	50514	05.06.79	4056
50701	11.10.79	2880	9638 2	09.11.77	4073
51001	30.04.81	2890	50812 2	03.08.80	4087
50907	10.11.80	2975	9756 3	11.04.78	4118
50512	04.06.79	3066	51414 1	30.03.82	4154
51804	26.09.83	3097	51309	20.02.82	4222
51610 1	20.07.82	3485	51013	05.05.81	4242
50513	05.06.79	3500	50910	10.11.80	4312
50813	04.08.80	3677	51608 1	19.07.82	4320
9640 1	13.11.77	3753	50811	02.08.80	4375
51214 1	27.09.81	3810	50515	06.06.79	4510
51012	05.05.81	3900	50711	18.10.79	4587
51803	26.09.83	3955			

TABLE 5.
Coarse-mesh epibenthic sledge (BN1.5/C) stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51405 1	27.03.82	497	51408 1	27.03.82	1997
51102 1	21.05.81	525	51105 3	22.05.81	2025
51112 4	29.05.81	555	51411 2	29.03.82	2495
50824 3	09.08.80	858	51106 1	24.05.81	2515
51103 4	21.05.81	955	50915	13.11.80	2540
51406 1	27.03.82	1081	51110 4	28.05.81	2736
51208 3	20.09.81	1177	51412 1	29.03.82	2775
51208 1	19.09.81	1185	50914	12.11.80	2800
51208 2	20.09.81	1201	51415 1	31.03.82	3490
51707 1	12.04.83	1217	51109 1	26.05.81	3950
51104 1	22.05.81	1380	51216 5	29.09.81	4035
52601 1	29.04.88	1395	51216 3	28.09.81	4050
51407 1	27.03.82	1500	51216 2	28.09.81	4060
51113 2	30.05.81	1535	51216 1	27.09.81	4070
51717 2	24.04.83	1975	51414 2	31.03.82	4080

TABLE 6.
Triple net epibenthic sledge (BN1.5/F, BN1.5/3M) stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51217 1	30.09.81	150	9754 3	09.04.78	1484
51622 1	24.07.82	158	51715 2	18.04.83	1492
52026 1	25.08.84	213	52203 1	16.06.85	1526
10120 1	13.09.79	400	10111 8	09.09.79	1635
50609 1	08.07.79	400	52211 1	18.06.85	1715
52404 4	14.12.86	450	52019 1	22.08.84	1730
50608 2	07.07.79	510	9753 7	08.04.78	1942
52013 1	20.08.84	520	50602 2	01.07.79	1967
51112 1	29.05.81	522	51105 4	24.05.81	1989
50607 2	07.07.79	700	9775 3	22.04.78	2015
9776 2	23.04.78	777	10106 1	04.09.79	2307
10110 1	07.09.79	925	52213 1	20.06.85	2412
51103 5	21.05.81	940	50613 1	09.07.79	2440
50610 1	08.07.79	980	51111 2	28.05.81	2620
52012 1	20.08.84	984	10112 2	09.09.79	2645
11906 1	20.08.89	1087*	10112 1	09.09.79	2650
50606 1	06.07.79	1115	51111 1	28.05.81	2665
10109 8	07.09.79	1125	51603 2	18.07.82	2735
50606 5	06.07.79	1130	10112 3	10.09.79	2747
52009 1	19.08.84	1221	10113 1	10.09.79	2757
11267 2	22.04.86	1255	51416 1	31.03.82	2775
51420 4	02.04.82	1283	51417 1	01.04.82	2780
51403 6	26.03.82	1286	51110 3	28.05.81	2792
51403 5	26.03.82	1293	50823	08.08.80	2830
51420 3	02.04.82	1295	50605 1	05.07.79	2875
52204 1	16.06.85	1302	51604 1	19.07.82	2905
51403 1	25.03.82	1303	50913	12.11.80	3020
51420 2	02.04.82	1306	50604 1	04.07.79	3520
51403 2	25.03.82	1321	9756 14	15.04.78	3688
51403 3	25.03.82	1322	10115 1	11.09.79	3925
51403 4	26.03.82	1326	51109 2	27.05.81	3985
51420 1	02.04.82	1327	50603 1	02.07.79	4000
10108 1	05.09.79	1387	10114 1	10.09.79	4050
9779 1	24.04.78	1401	9756 9	13.04.78	4054
52218 1	26.06.85	1440	52214 1	21.06.85	4062
51708 2	13.04.83	1450	50812 1	03.08.80	4090
11265 3	19.04.86	1460	52215 1	22.06.85	4563
52017 1	21.08.84	1464			

*BN1.5/F

TABLE 7.
Suprabenthic net (SBN 0.5) stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51217 1	30.09.81	150	51403 3	25.03.82	1322
51622 1	24.07.82	158	51403 4	26.03.82	1326
52026 1	25.08.84	213	51420 1	02.04.82	1327
11299 1	08.05.86	377	52018 1	21.08.84	1341
10120 1	13.09.79	400	51104 1	22.05.81	1380
50609 1	08.07.79	400	10108 1	05.09.79	1387
11299 2	08.05.86	445	52601 1	29.04.88	1395
52404 4	14.12.86	450	52218 1	26.06.85	1440
51405 1	27.03.82	497	11265 3	19.04.86	1460
50608 2	07.07.79	510	52017 1	21.08.84	1464
52013 1	20.08.84	520	52208 1	17.06.85	1467
51112 1	29.05.81	522	51407 1	27.03.82	1500
51102 1	21.05.81	525	51619 1	24.07.82	1517
52010 1	19.08.84	545	52203 1	16.06.85	1526
51112 4	29.05.81	555	51113 2	30.05.81	1535
50607 2	07.07.79	700	10111 8	09.09.79	1635
11285	05.05.86	795	52211 1	18.06.85	1715
52011 1	20.08.84	843	52019 1	22.08.84	1730
50824 3	09.08.80	857	50602 2	01.07.79	1967
10110 1	07.09.79	925	51719 25	29.04.83	1985
51103 5	21.05.81	940	51105 4	24.05.81	1989
51103 4	21.05.81	955	51408 1	27.03.82	1997
52210 1	18.06.85	959	51105 3	22.05.81	2025
52015 1	21.08.84	974	10106 1	04.09.79	2307
50610 1	08.07.79	980	52213 1	20.06.85	2412
52012 1	20.08.84	984	50613 1	09.07.79	2440
51406 1	27.03.82	1081	51411 2	29.03.82	2495
52022 1	23.08.84	1095	51106 1	24.05.81	2515
51734 1	06.05.83	1097	50915	13.11.80	2540
50606 1	06.07.79	1115	51111 2	28.05.81	2620
10109 8	07.09.79	1125	10112 2	09.09.79	2645
50606 5	06.07.79	1130	10112 1	09.09.79	2650
51724	02.05.83	1147	51111 1	28.05.81	2665
51208 3	20.09.81	1177	51603 2	18.07.82	2735
51208 1	19.09.81	1185	51110 4	28.05.81	2736
51208 2	20.09.81	1201	10112 3	10.09.79	2747
52009 1	19.08.84	1221	10113 1	10.09.79	2757
52209 1	17.06.85	1233	51412 1	29.03.82	2775
11267 2	22.04.86	1255	51416 1	31.03.82	2775
51420 4	02.04.82	1283	51417 1	01.04.82	2780
51403 6	26.03.82	1286	51110 3	28.05.81	2792
51403 5	26.03.82	1293	50914	12.11.80	2800
51420 3	02.04.82	1295	50823	08.08.80	2830
51730 3	05.05.83	1300	50605 1	05.07.79	2875
52204 1	16.06.85	1302	51604 1	19.07.82	2905
51403 1	25.03.82	1303	50913	12.11.80	3020
51420 2	02.04.82	1306	51415 1	31.03.82	3490
51403 2	25.03.82	1321	50604 1	04.07.79	3520

TABLE 7. (contd)

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
10115 1	11.09.79	3925	51216 2	28.09.81	4060
51109 1	26.05.81	3950	52214 1	21.06.85	4062
51109 2	27.05.81	3985	51216 1	27.09.81	4070
50603 1	02.07.79	4000	51414 2	31.03.82	4080
51216 5	29.09.81	4035	50812 1	03.08.80	4090
10114 1	10.09.79	4050	52215 1	22.06.85	4563
51216 3	28.09.81	4050			

TABLE 8.
Spade box corer (SBC) stations ordered by depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
52207 3	17.06.85	485	11907 2	21.08.89	1328
52405 2	14.12.86	801	11907 3	21.08.89	1334
52405 1	14.12.86	806	52202 1	16.06.85	1360
52206 1	16.06.85	988	52402 3	28.11.86	1534
52206 2	16.06.85	999	52201 1	14.06.85	2038

TABLE 9.
Multiple corer (MC, MCR) stations ordered by depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51508 2	17.04.82	160	52016 2	21.08.84	1373
51508 3	17.04.82	160	52205 3	16.06.85	1374
51212 1	22.09.81	187	52205 1	16.06.85	1388
51212 2	22.09.81	187	11267 1	22.04.86	1420
51501 2	09.04.82	217	52205 2	16.06.85	1420
51501 3	09.04.82	217	52218 3	26.06.85	1427
51621 2	24.07.82	217	52218 2	26.06.85	1432
51621 1	24.07.82	220	11265 1	19.04.86	1440
52001 1	12.08.84	380	52402 1	28.11.86	1480
51620 1	24.07.82	398	51104 2	22.05.81	1492
51614 1	22.07.82	456	51113 1	29.05.81	1500
51733 2	06.05.83	460	52003 1	13.08.84	1659
51714 1	17.04.83	462	51202 1	16.09.81	1940
51701	09.04.83	463	52004 1	15.08.84	1988
51704 1	11.04.83	470	52004 2	15.08.84	1995
52207 2	17.06.85	491	51901 5	09.04.84	1996
52020 1	22.08.84	493	51901 4	09.04.84	1996
52207 1	17.06.85	498	51601 1	17.07.82	1998
51507 1	16.04.82	500	51901 1	08.04.84	1998
51112 5	29.05.81	510	51105 2	22.05.81	2000
51102 2	21.05.81	585	51901 3	08.04.84	2000
51207 1	19.09.81	588	51901 2	08.04.84	2000
11300 3	08.05.86	662	51735 1	06.05.83	2005
52021 1	22.08.84	743	52002 1	13.08.84	2008
52025 4	25.08.84	796	51719 12	28.04.83	2010
52025 3	25.08.84	799	51729 2	05.05.83	2010
51103 2	21.05.81	960	51717 1	24.04.83	2012
52014 1	20.08.84	1006	51713 5	17.04.83	2020
51730 1	05.05.83	1130	51713 6	17.04.83	2020
52401	28.11.86	1167	52008 2	18.08.84	2023
51204 1	17.09.81	1306	52008 1	18.08.84	2024
11263 6	17.04.86	1320	52212 1	18.06.85	2041
11275 2	24.04.86	1323	52212 6	19.06.85	2043
51502 4	10.04.82	1330	52212 2	18.06.85	2043
51502 2	10.04.82	1330	52212 7	20.06.85	2046
51502 6	10.04.82	1330	52201 3	15.06.85	2049
51502 1	10.04.82	1330	52212 3	19.06.85	2049
51502 8	10.04.82	1330	52201 4	15.06.85	2052
51502 5	10.04.82	1330	52201 2	15.06.85	2052
51615 1	22.07.82	1345	52212 5	19.06.85	2053
11277 3	27.04.86	1352	52212 4	19.06.85	2057
51615 6	23.07.82	1356	51703 1	10.04.83	2075
51615 2	22.07.82	1357	52023 1	23.08.84	2220
51615 4	22.07.82	1361	52007 1	16.08.84	2447
51615 5	22.07.82	1361	52024 3	23.08.84	2468
51615 3	22.07.82	1362	51106 2	24.05.81	2510
11277 2	26.04.86	1365	52006 1	16.08.84	2659
11277 1	26.04.86	1369	51210 1	21.09.81	2664
52016 1	21.08.84	1369	51603 1	18.07.82	2670
11263 7	17.04.86	1370	51612 1	21.07.82	2692

TABLE 9. (contd)

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
52005 1	16.08.84	2724	51504 4	11.04.82	4100
51110 1	27.05.81	2785	51504 6	11.04.82	4100
51503 2	11.04.82	2800	51504 1	11.04.82	4100
51503 4	11.04.82	2800	51504 3	11.04.82	4100
51605 1	19.07.82	3420	51504 5	11.04.82	4100
51108 1	26.05.81	3567	51504 2	11.04.82	4100
51720 3	30.04.83	4010	51109 3	27.05.81	4167
51702 1	09.04.83	4045	51607 1	19.07.82	4495
51606 2	19.07.82	4088	51505 1	12.04.82	4500
51606 1	19.07.82	4092			

TABLE 10.
Photosledge (BN1.5/P) stations ordered by mean depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
11656 2	18.08.87	365-368	52022 1	23.08.84	925-1265
11656 3	18.08.87	370-373	51734 1	06.05.83	995-1200
11299 1	08.05.86	375-380	51617 1	23.07.82	1025-1260
11659	19.08.87	391-401	51724	02.05.83	1065-1230
11657	18.08.87	411-421	52209 1	17.06.85	1033-1433
11299 2	08.05.86	400-490	11267 2	22.04.86	1240-1270
11658	19.08.87	461-469	51730 3	05.05.83	1170-1430
11660	19.08.87	523-551	51616 1	23.07.82	1310-1365
52010 1	19.08.84	545-545	52018 1	21.08.84	1082-1600
11705	29.08.87	570-630	51709 1	13.04.83	1250-1490
11268 2	23.04.86	670-670	52208 1	17.06.85	1349-1585
11273 1	24.04.86	710-750	51619 1	24.07.82	1505-1530
11285	05.05.86	665-925	51719 25	29.04.83	1940-2030
52011 1	20.08.84	762-925	11675	22.08.87	3511-3567
52210 1	18.06.85	861-1058	11700	28.08.87	3578-3910
52015 1	21.08.84	920-1028	11686	24.08.87	3858-4043

TABLE 11.
Bathysnap (BSNAP) stations ordered by depth

STATION	DATE	DEPTH (m)	STATION	DATE	DEPTH (m)
51112 2	29.05.81	512	51203 1	16.09.81	2023
51402 1	25.03.82	1210	51901 8	11.04.84	2025
51618 1	24.07.82	1328	51107 1	25.05.81	2600
52217 1	26.06.85	1476	51211 1	21.09.81	2664
52402 2	28.11.86	1526	51410 1	28.03.82	2665
11718	21.09.87	1970	51602 1	18.07.82	2734
51101 1	20.05.81	2000	50908	10.11.80	3958
51418 1	01.04.82	2009	51720 7	30.04.83	4025
51418 2	27.05.82	2009	51702 2	10.04.83	4055
51719 1	27.04.83	2010	51609 1	20.07.82	4117
51711 3	14.04.83	2020	51902 1	11.04.84	4525

TABLE 12.
Bathysnack (BSNACK) stations ordered by depth

STATION	DATE	DEPTH (m)
52025 1	25.08.84	944
52024 1	23.08.84	2454
51215 1	27.09.81	4009

TABLE 13.
Near-bottom rectangular midwater trawl (RMT1+8, RMT1+8M) stations ordered by maximum depth

STATION		DATE	GEAR	DEPTH (m)
50609	2	08.07.79	RMT1	380-395
50609	2	08.07.79	RMT8	380-395
52108		09.11.84	RMT8	350-400
52404	3	14.12.86	RMT1M-3	456-465
52404	3	14.12.86	RMT8M-3	456-465
52404	2	14.12.86	RMT1M-2	463-468
52404	2	14.12.86	RMT8M-2	463-468
52404	1	14.12.86	RMT1M-1	470-470
52404	1	14.12.86	RMT8M-1	470-470
50608	1	07.07.79	RMT1	460-495
50608	1	07.07.79	RMT8	460-495
11274		24.04.86	RMT8	400-550
52025	5	25.08.84	RMT1	315-610
50607	4	07.07.79	RMT1	0-650
50607	4	07.07.79	RMT8	0-650
50607	3	07.07.79	RMT1	655-680
50607	3	07.07.79	RMT8	655-680
10110	3	07.09.79	RMT1M-1	10-810
10110	3	07.09.79	RMT8M-1	10-810
10110	4	07.09.79	RMT1M-2	800-950
10110	4	07.09.79	RMT8M-2	800-950
10110	5	07.09.79	RMT1M-3	935-1000
10110	5	07.09.79	RMT8M-3	935-1000
11267	5	22.04.86	RMT8	860-1050
10109	1	06.09.79	RMT1M-1	1000-1100
10109	1	06.09.79	RMT8M-1	1000-1100
10109	2	06.09.79	RMT1M-2	1110-1155
10109	2	06.09.79	RMT8M-2	1110-1155
10109	3	06.09.79	RMT1M-3	1140-1155
10109	3	06.09.79	RMT8M-3	1140-1155
50606	3	06.07.79	RMT1	1090-1160
50606	3	06.07.79	RMT8	1090-1160
10108	6	06.09.79	RMT1M-1	1210-1350
10108	6	06.09.79	RMT8M-1	1210-1350
10108	7	06.09.79	RMT1M-2	1350-1410
10108	7	06.09.79	RMT8M-2	1350-1410
10108	8	06.09.79	RMT1M-3	1410-1425
10108	8	06.09.79	RMT8M-3	1410-1425
50612	1	08.07.79	RMT1	1440-1475
50612	1	08.07.79	RMT8	1440-1475
10111	1	08.09.79	RMT1M-1	10-1500
10111	1	08.09.79	RMT8M-1	10-1500
10111	4	08.09.79	RMT1M-1	1480-1570
10111	4	08.09.79	RMT8M-1	1480-1570
10111	5	08.09.79	RMT1M-2	1555-1570
10111	5	08.09.79	RMT8M-2	1555-1570
10111	2	08.09.79	RMT1M-2	1500-1610
10111	2	08.09.79	RMT8M-2	1500-1610
10111	6	08.09.79	RMT1M-3	1580-1650
10111	6	08.09.79	RMT8M-3	1580-1650
10111	3	08.09.79	RMT1M-3	1610-1670

TABLE 13. (contd)

STATION		DATE	GEAR	DEPTH (m)
10111	3	08.09.79	RMT8M-3	1610-1670
9775	2	21.04.78	RMT1	1500-1900
9775	2	21.04.78	RMT8	1500-1900
50605	2	05.07.79	RMT1	2640-2750
50605	2	05.07.79	RMT8	2640-2750
50603	2	03.07.79	RMT1	3720-3940
50603	2	03.07.79	RMT8	3720-3940
9756	11	14.04.78	RMT1	4100-4200
9756	11	14.04.78	RMT8	4100-4200

TABLE 14.
Depth and seasonal distribution of Granton (a) and Semiballoon otter trawls

Month	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov
Depth (m)										
0-500	51302 51319 51316(a) 51317(a)	51401#1	9777#2	51002 51025	50502 50523 50506(a)	50609#3 50803(a)		51217#2 51813 51809(a)		
501-1000	51303 51304 51305 51318 51312(a) 51315(a)	51404#1	9776#1	51003 51026 51027 51004(a) 51005(a) 51019(a) 51020(a)	50503 50522 50524 50504(a) 50507(a) 50521(a) 50525(a) 50526(a)	50601#1 50607#1 50804(a)	50806 50807 50808 50819 50820 50821 50824#1 50824#4 50824#5 50824#6 50824#7 50817(a) 50818(a)	51811 51812 51808(a)	50702 50705 50706(a) 50707(a) 50714(a) 50716(a) 50717(a)	50905 52107
1001-1500	51306 51307 51314 51313(a)	51403#7 51419#1	9752#1 9778#1	51007 51008 51009 51023 51006(a) 51017(a) 51018(a)	50519 50505(a) 50520(a)	50606#2 50611#1 50801 50805(a)	50815 11907#1 50809(a) 50816	51205#1 51206#1 51810 51806(a) 51807(a)	50704 50708(a) 50709(a) 50713(a)	50903 50904 52105

1501- 2000	51308 51311	51409#1	9753#4 9753#8 9774#1	51010 51014 51021 51022	50509 50510 50517	50602#3 50802	50810	51201#1 51213#1 51801	50703 50710 50715	50902 52106
2001- 2500	51310	51411#1		51011 51016	50511 50518	51613#1	50822	51209#1 51805		50901
2501 3000	51301	51413#1	51001	51015		51611#1	50814		50701 50712	50906 50907 50912
3001- 3500					50512			51804		
3501- 4000				51012	50513	51610#1	50813	51214#1 51216#4 51803		9640#1
4001- 4500	51309	51414#1	9756#3 9756#5	51013	50514	51608#1	50811 50812#2			9638#2 50910
4501- 5000					50515 50516				50711	

TABLE 15.
Depth and seasonal distribution of coarse mesh (a) and triple net epibenthic sledge hauls

Month	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Depth (m)										
0-500	51405#1a				50609#1 51622#1	52026#1	10120#1 51217#1			52404#4
501-1000		9776#2	51103#5 51112#1 51102#1a 51103#4a 51112#4a		50607#2 50608#2 50610#1	50824#3 52012#1 52013#1	10110#1			
1001-1500	51403#1 51403#2 51403#3 51403#4 51403#5 51403#6 51406#1a	9754#3 9779#1 51420#1 51420#2 51420#3 51420#4 51708#2 11265#3 51707#1a 51717#2a 52601#1a	51104#1	52204#1 52218#1	50606#1 50606#5	52009#1 52017#1 11906#1	10108#1 10109#8 51208#1a 51208#2a 51208#3a			
1501-2000	51407#1a 51408#1a	9753#7 51715#2	51105#4 51113#2a	52203#1 52211#1	50602#2	52019#1	10111#8			

2001- 2500	51411#2a	9775#3	51105#3a 51106#1a	52213#1	50613#1		10106#1	
2501- 3000	51416#1 51412#1a	51417#1	51110#3 51111#1 51111#2 51110#4a		50605#1 51603#1 51604#1	50823	10112#1 10112#2 10112#3 10113#1	50914a 50915a
3001- 3500	51415#1a				50604#1			50913
3501- 4000		9756#14	51109#2 51109#1a		50603#1		10115#1	
4001- 4500	51414#2a	9756#9		52214#1		50812#1	10114#1 51216#1a 51216#2a 51216#3a 51216#5a	
4501- 5000				52215#1				

TABLE 16.
Depth and seasonal distribution of spade box corer (a), multiple corer and multiple corer respirometry (R) hauls

Month	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Depth (m)									
0-500	51501#2 51501#3 51507#1 51508#2 51701 51704#1 51714#1	51733#2	52207#1 52207#2 52207#3a	51614#1 51620#1 51621#1 51621#2	52001#1 52020#1	51212#1 51212#2			
501-1000		51102#2 51103#2 51112#5 11300#3	52206#1a 52206#2a		52021#1 52025#3 52025#4	51207#1			52405#1a 52405#2a
1001-1500	51502#1 51502#2 51502#4 51502#5 51502#6 51502#8 11263#6 11263#7 11265#1 11267#1 11275#2 11277#1 11277#2 11277#3	51104#2 51113#1 51730#1	52205#1 52205#3 52205#2 52218#2 52218#3 52202#1a	51615#1 51615#2 51615#3 51615#4 51615#5 51615#6	52014#1 52016#1 52016#2 11907#2a 11907#3a	51204#1		52401 52402#1	

1501- 2000	51901#1 51901#2 51901#4 51901#3R 51901#5R	51105#2		51601#1	52003#1 52004#1 52004#2	51202#1	52402#3a
2001- 2500	51703#1 51713#5 51713#6 51717#1 51719#12	51729#2 51735#1	52201#2 52201#3 52201#4 52212#1 52212#2 52212#3 52212#4 52212#5 52212#6 52212#7 52201#1a		52002#1 52007#1 52008#1 52008#2 52023#1 52024#3		
2501- 3000	51503#2 51503#4	51106#2 51110#1		51603#1 51612#1	52005#1 52006#1	51210#1	
3001- 3500				51605#1			
3501- 4000		51108#1					
4001- 4500	51504#1 51504#2 51504#3 51504#4 51504#5 51504#6 51505#1 51720#3	51109#3		51606#1 51606#2 51607#1			

TABLE 17.
Depth and seasonal distribution of photosledge hauls (a), Bathysnap, Bathysnack (b) and Pogosnap (c) deployments

Month	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov
Depth (m)									
0-500			11299#1a 11299#2a			11656#1a 11656#2a 11656#3a 11657a 11658a 11659a			
501-1000		11268#2a 1273#1a	51112#2 11285a	52210#1a		52010#1a 52011#1a 52015#1a 52025#1b 11660a 11705a			
1001-1500	51402#1	51709#1a 11267#2a	51724a 51730#3a 51734#1a	52217#1 52208#1a 52209#1a	51618#1 51516#1a 51617#1a	52018#1a 52022#1a			
1501-2000		51719#25a	51101#1		51619#1a		11718		52402#2
2001-2500		51418#1 51711#3 51719#1 51901#8	51418#2			52024#1b 52007#3c 52007#4c 52024#4c	51203#1		

2501- 3000	51410#1		51107#1	51602#1	52024#7c 52024#9c	51211#1	
3001- 3500							
3501- 4000					11675a 11700a		50908
4001- 4500		51702#2 51720#7		51609#1	11686a	51215#1b	
4501- 5000		51902#1					

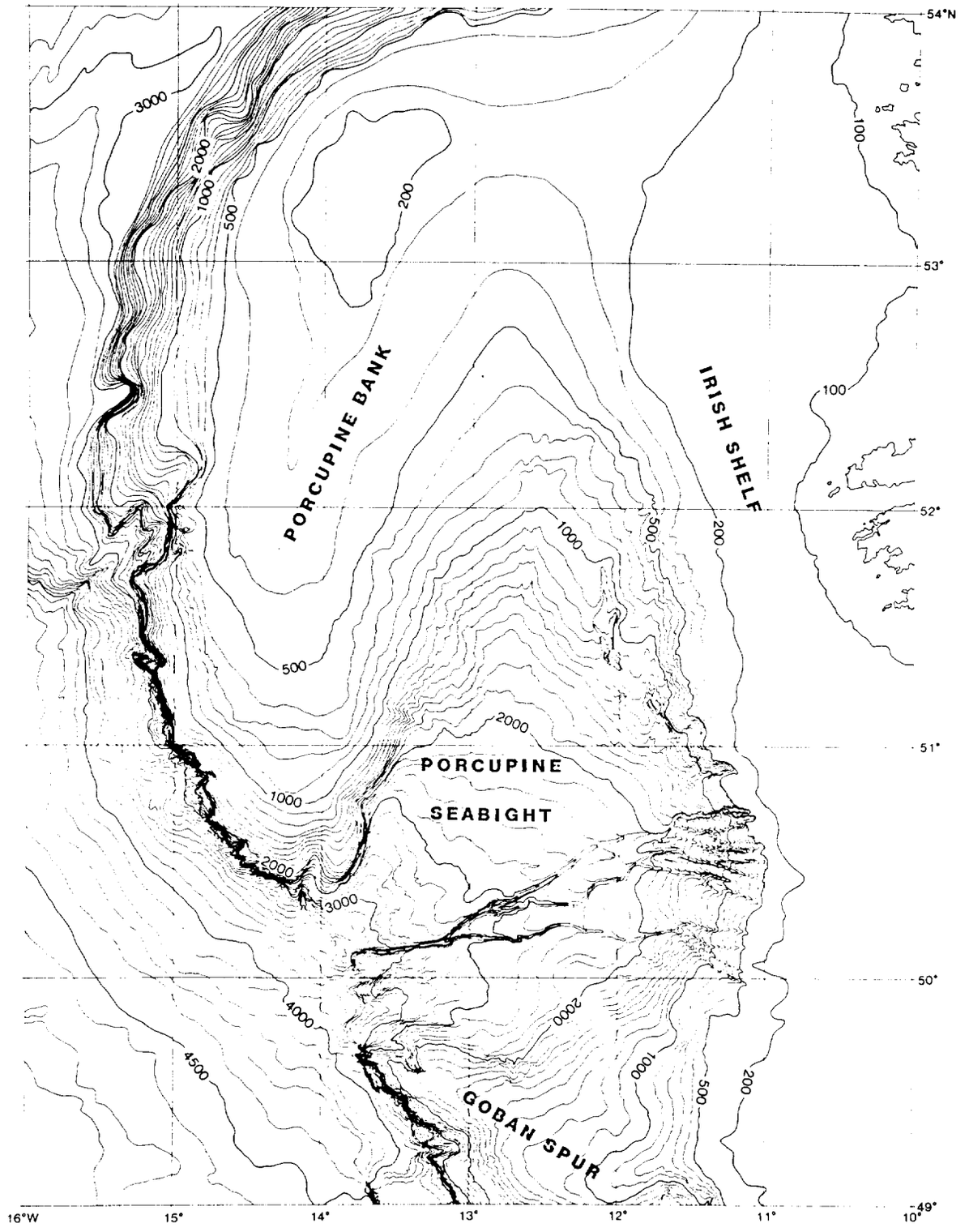

Figure 1. Bathymetry of the Porcupine Seabight, North-east Atlantic. Contours in metres.

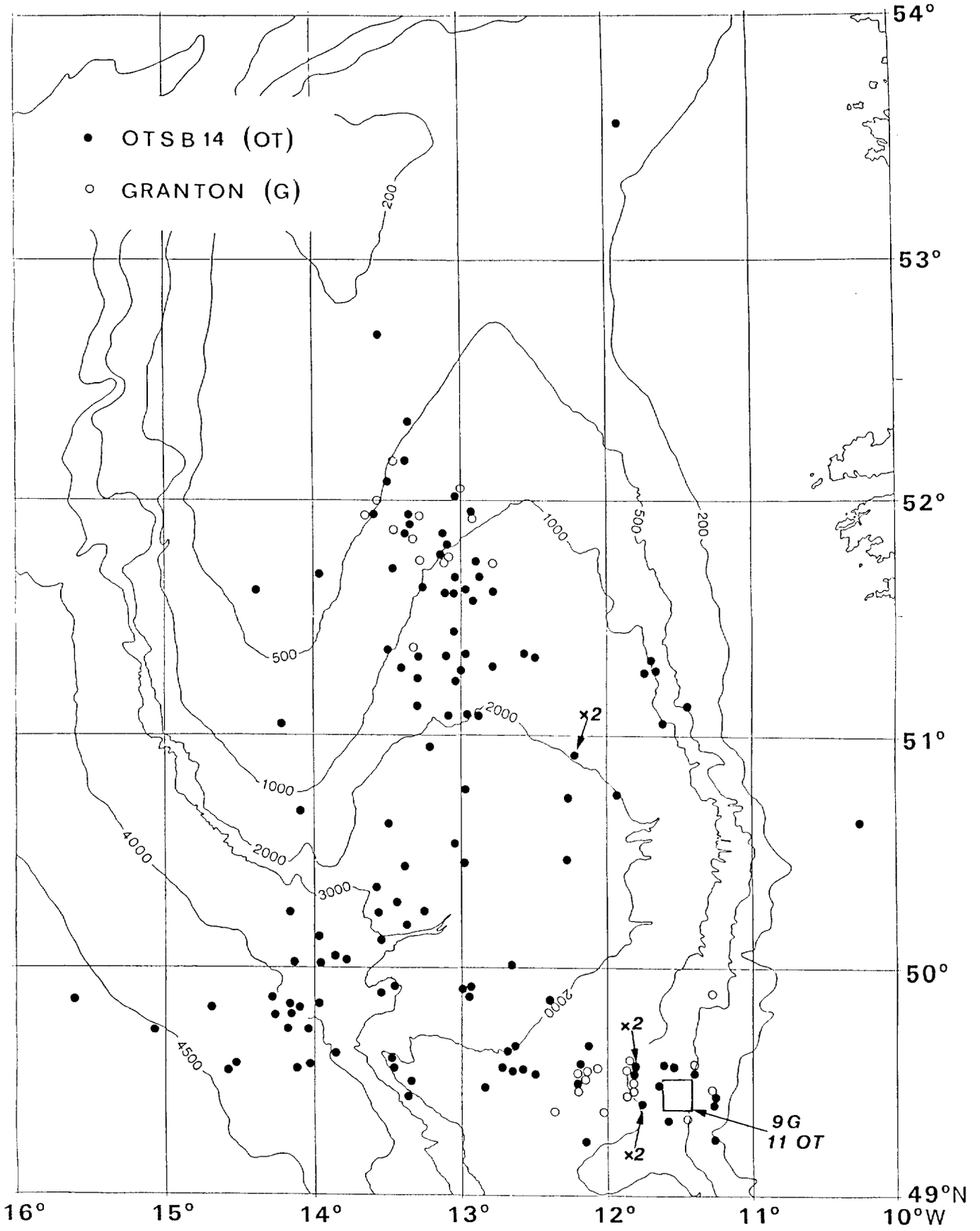

Figure 2. Distribution of Granton and semi-balloon otter trawl hauls.

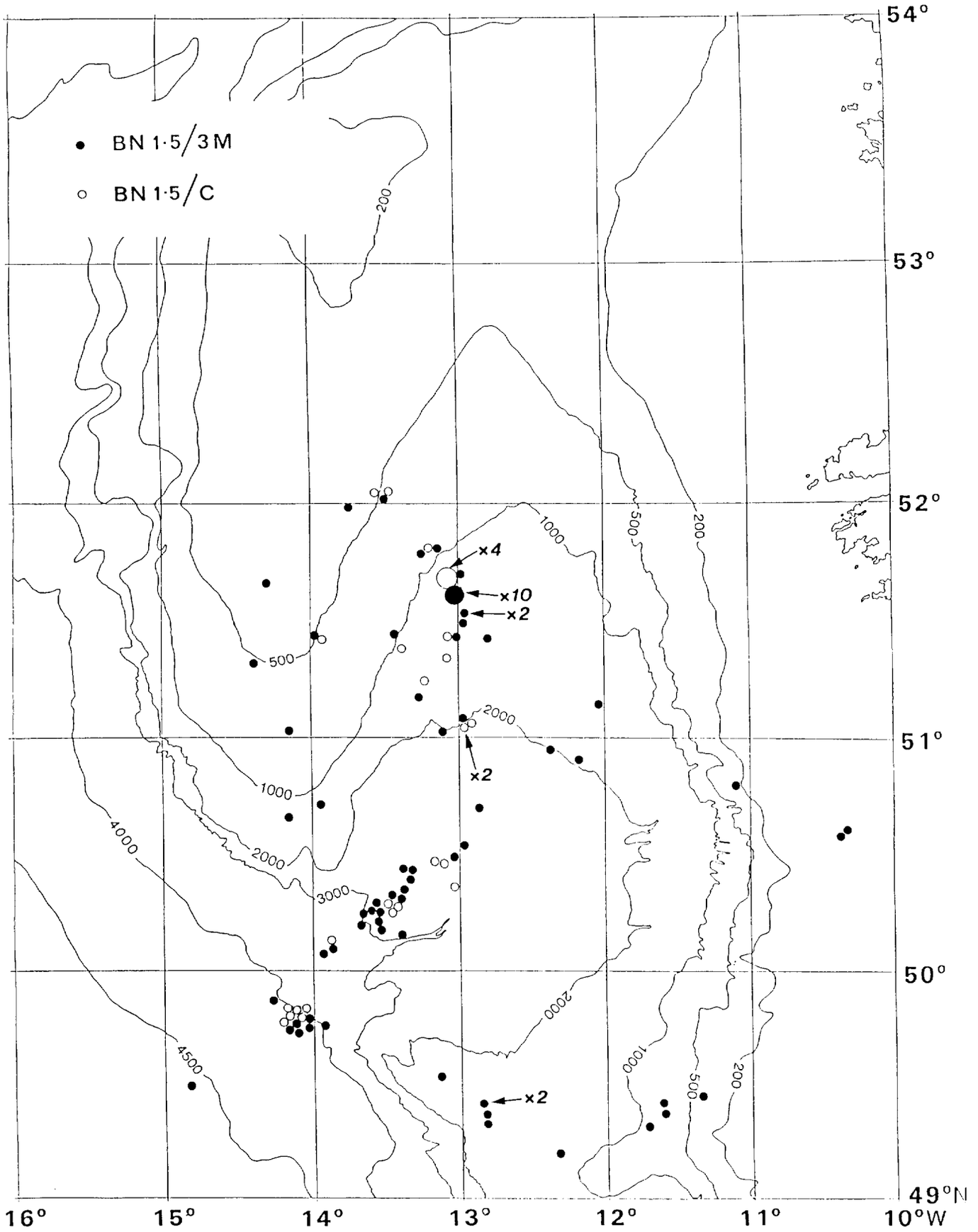

Figure 3. Distribution of coarse-mesh and triple-net epibenthic sledge hauls.

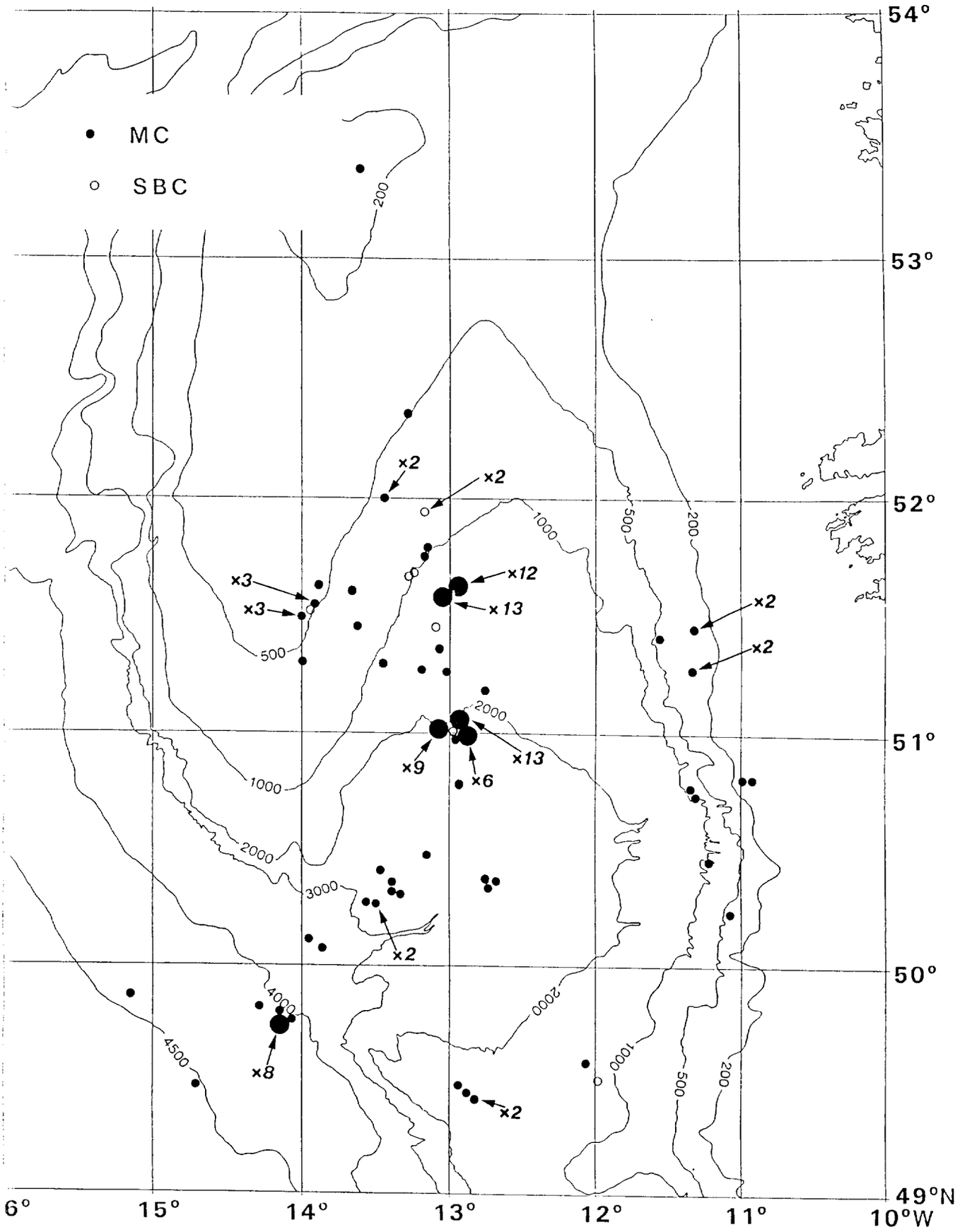

Figure 4. Distribution of spade box corer and multiple-corer hauls.

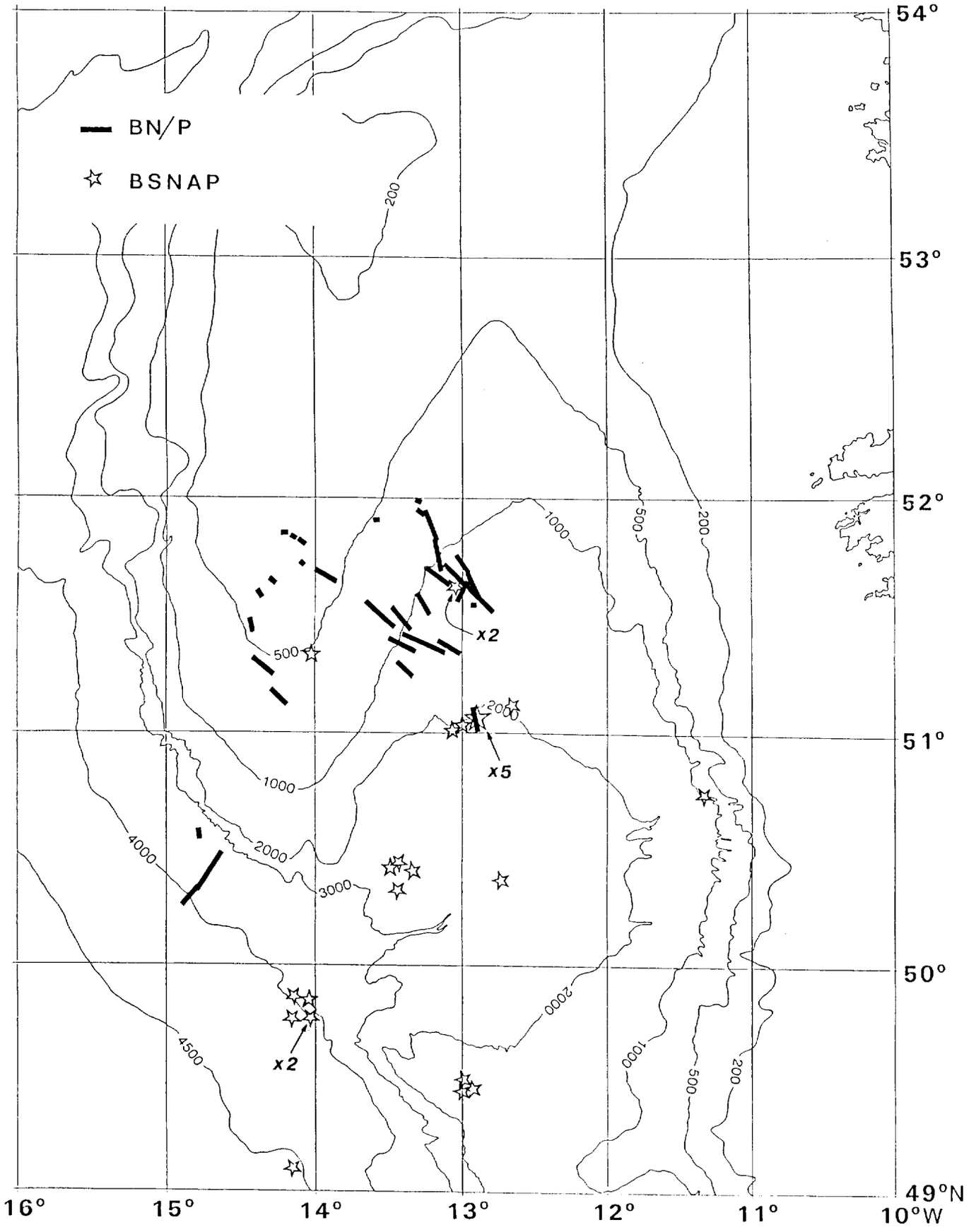

Figure 5. Distribution of photosledge and Pogosnap hauls and Bathysnap and Bathysnack deployments.