(RVB Form August 1972) (Copy)

Cruise Report of Proceedings

Ship RRS 'Challenger' Cruise No 4B/75

Cruise Dates (Inclusive, port to port) 14th March (delayed to 18th) to 24th March

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It is requested that the following aspects of the cruise may be covered in this report of proceedings for dispatch or delivery to the Director, Research Vessel Base, immediately on return to port.

a) Main objectives of the cruise.
b) Geographical area. Reference stations or points in latitude and longitude.
c) Sea and weather conditions encountered.
d) Conduct of cruise, main problems encountered and success or otherwise of the programme
e) Equipment performance.
f) Ship performance.
g) Any recommendations.
h) Signature and date.

Brief comments are preferred but if necessary please continue on another sheet.

Objectives and Cruise Narrative

The objective of this biological sampling cruise was to obtain the first of a time series of biological samples of the deep-sea benthos, bathypelagic plankton and demersal fish from the deep water area lying to the west of Scotland and Northern Ireland. It was planned to work two main areas, the first at about 09°W in 56° 40'N on the upper part of the continental slope to the west of Barra, the other at about 12°W in 55°N in the lower Rockall Trough at a depth of approximately 2,900 metres. Benthic sampling was also planned in other positions having a high hydrographic or physiographic interest in the Rockall Trough in order to make best use of the time scheduled for this cruise.

However, because of delays in Challengers' sailing, these secondary objectives had to be eliminated from the programme with the cruise concentrating on the two main areas mentioned above. There appeared to be two main technical malfunctions which delayed sailing. The first concerned the voltage regulator which was inoperative when both of the ships generators were working. The second concerned the main engine controls on the bridge. Repairs and tests were necessary and sailing was progressively postponed after the scientific gear had been loaded and the scientific party had signed ship's articles.

Eventually Challenger sailed at 1830 hrs on Tuesday 18th March after four days of the cruise had been lost. Weather conditions, which had been good since the original sailing date continued fair and after a single, successful, trial of the large Spade Corer in about 40 metres of water in the Firth of Lorne just off Dunstaffnage, Challenger made a course to 09° 11'W in 55° 29'N in order to start trawling on the upper slope area at about 1000 metres depth. Challenger arrived on station at 0755 hrs the following day and after a PDR run between the fixes between which previous experimental deep-water trawling had proved successful, the otter trawl was shot and fished

for 1½ hrs on the bottom between these two positions. A successful haul was obtained with a varied catch dominated by Grenadiers and Scabbard fish. The otter trawl was again shot at 1600 hrs after a PDR run between two further positions, this time in about 700 metres depth. Another successful haul was recovered at 2030 hrs, completing the demersal fishing part of the programme.

Challenger then steamed to deeper water off N.W. Ireland arriving on station at lat. 55°03'N, 12°03'W at 0910 hrs on 20th March. Sea conditions had deteriorated somewhat since the previous day and a heavy and rather confused long swell and freshening wind made conditions difficult for launching heavy gear. Because of the prospect from weather forcasts of conditions worsening, it was decided to work the most potentially difficult piece of gear, the spade corer, first. However, because of generator and bowthruster malfunction the corer could not be put over until 1105 hrs. No sample was obtained on recovery at 1603 hrs because of failure of the spade corer release mechanism, although there had been some evidence from the pinger signal on the PDR and the wire-tension meter that the gear had been on the bottom at 2880 metres.

Because of worsening weather further attempts with the spade corer were abandoned and the Epibenthic Sledge was made ready and put over with a pinger at 1700 hrs. Although a satisfactory direct pinger signal could be received on the PDR, because, apparently, of severe acoustic noise from the ship, the pinger bottom echo could not be satisfactorily resolved, and thus it was not possible to monitor the epibenthic sledge. On recovery at 2020 hrs, although a sample was obtained indicating that the gear had been on the bottom, the mouth closing gate mechanism had failed to operate and the sample had not been protected from the severe winnowing effect caused by ship's surge on the wire during winching in.

Because of worsened weather and heavy swell work had to cease and the ship hoved to until 1330 hrs on 21st March when conditions were judged marginally safe enough to stream the 2-metre "stramin" net. Weights were secured to the ring and 3200 metres of wire payed out. A good haul was obtained on recovery of the net at 1958 hrs. Conditions had now eased to allow using the IOS pattern Rectangular Mid-water Trawl, and a series of oblique tows were made, first with 1000 meters of wire out, then with 2000 metres and finally with 3000 metres out, finishing at 0442 hrs on 22 March. Finally at 0506 hrs a deep RMT haul was attempted with 4000 metres out recovering at 1040 hrs. Good plankton samples were obtained in all cases, satisfactorily completing the mid-water trawling programme.

The epibenthic sledge was again put over at 1128 hrs in order to try and obtain a satisfactory benthic sample. Because of internal damage discovered in the gate release mechanism, the gate was restrained in the open position. On recovery there was no evidence to indicate the gear had reached bottom and so another attempt was made, with the gear put over at 1836 hrs. Because of damage to the main wire sustained during the previous cruise, wire pay out was limited to 4000 metres.

Ship's speed was held as low as possible with the bowthrusters in order to ensure the gear reached bottom. A sample was eventually recovered indicating that although the sledge had reached bottom at 2868 metres depth, washing effects caused by ship's surge transmitted to the wire had reduced the sample to little more than a few heavy pieces of clinker.

Because of lack of time, a course was set to Dunstaffnage with one further epibenthic sledge haul at a station on the continental shelf at approx. 210 metres depth between Barra and Tiree, arriving at 2230 hrs on 23rd March. A satisfactory sample was obtained from this shallow water, although sea conditions with a heavy north westerly swell made handling gear on deck difficult. Challenger then resumed passage to Dunstaffnage via the Sound of Mull, arriving at approximately 0800 hrs on 24th March.

Ship's Performance and Material Defects

Although the conduct and efficiency regarding the scientific programme of the ship's officers and the deck crew was excellent, one must place on record that the technical shortcomings of the ship materially reduced the potential effectiveness of the cruise. The delay in sailing and subsequent short generator breakdowns on cruise were caused by malfunctions which one can only conclude should have been corrected before the ship had been re-commissioned for scientific work after her superstructure modifications. It is regrettable that the ship was allowed to proceed for scientific cruises from Dunstaffnage in such a state.

The damage to the main wire, which by preventing payout of more than 4000 metres of wire, somewhat compromised the benthic work; although there probably would have been enough if satisfactory gear monitoring by pinger could have been achieved. Despite being specifically requested in the letter of 19th February accompanying Notification for this cruise (and likewise for two previous Challenger cruises cancelled on account of her delayed re-commissioning) no PDR fish was on board for use with the pingers. Previous experience has shown that because of the intense noise associated with the ships hull, satisfactory reception of the pinger signal from gear in deep water is difficult in calm conditions and virtually impossible when, as is most likely, the sea is rough and the ship is heaving about. Although I understand from Captain Cole that a PDR fish, which would considerably improve the pinger signal reception, has been expected for Challenger for some considerable time, there has apparently been no news of this or of possible procurement of a spare for temporary use on the ship. It is therefore difficult to comment other than that serious attention be paid to this. One would at least have expected some prior notification of its non-availability after it had been specifically requested.

May I suggest that in order to avoid any confusion regarding precisely what gear one may assume is on board, that an inventory is made available to the chief scientist at the time of his cruise notification. False assumptions of what is on board with possible serious consequences for success of the scientific programme of the cruise might thus be avoided.

It must also be mentioned that the scientific workshop was dirty and neglected with most of the hand tools missing. Essential seagoing repairs and adjustments to gear were thus hampered and suitable tools borrowed from elsewhere on the ship. It is essential that the workshop be restored to its state after the original commissioning of the ship.

John P. Gage

28th March 1975

RVB Sailing Instructions Reference: P4/3/4

RRS CHALLENGER - Cruise 4/75 : 14-24 March 1975

To the Master

1. Ship's Programme

a) RRS CHALLENGER is to sail from Dunstaffnage on Friday 14 March with members of the Scottish Marine Biological Association for a biological sampling cruise West of Scotland.

b)

Friday	14 March	Sail Dunstaffnage
Monday	24 March	Arrive Dunstaffnage

2. Scientific Equipment

a) The requirement is for a study of deep water macrobenthic, demersal fish and bathypelagic populations from samples obtained by dredging, coring and midwater bottom trawling.

b) No IOS Barry equipment is required except that already on board.

3. Scientific Party

a) From Scottish Marine Biological Association:

J.D.Gage Senior Scientist
J.D.Gordon with Mr Dunlop. Midships or with Graham.
H.Grigg (Miss)
K.Macleod (Mrs.)
M.Pearson (Mrs.) Students
A.N.Other Janet Duncan (Mrs).

From Newcastle University:

G.Oliver

b) SMBA personnel will join in Dunstaffnage Friday 14 March and disembark Monday 24 March in Dunstaffnage.

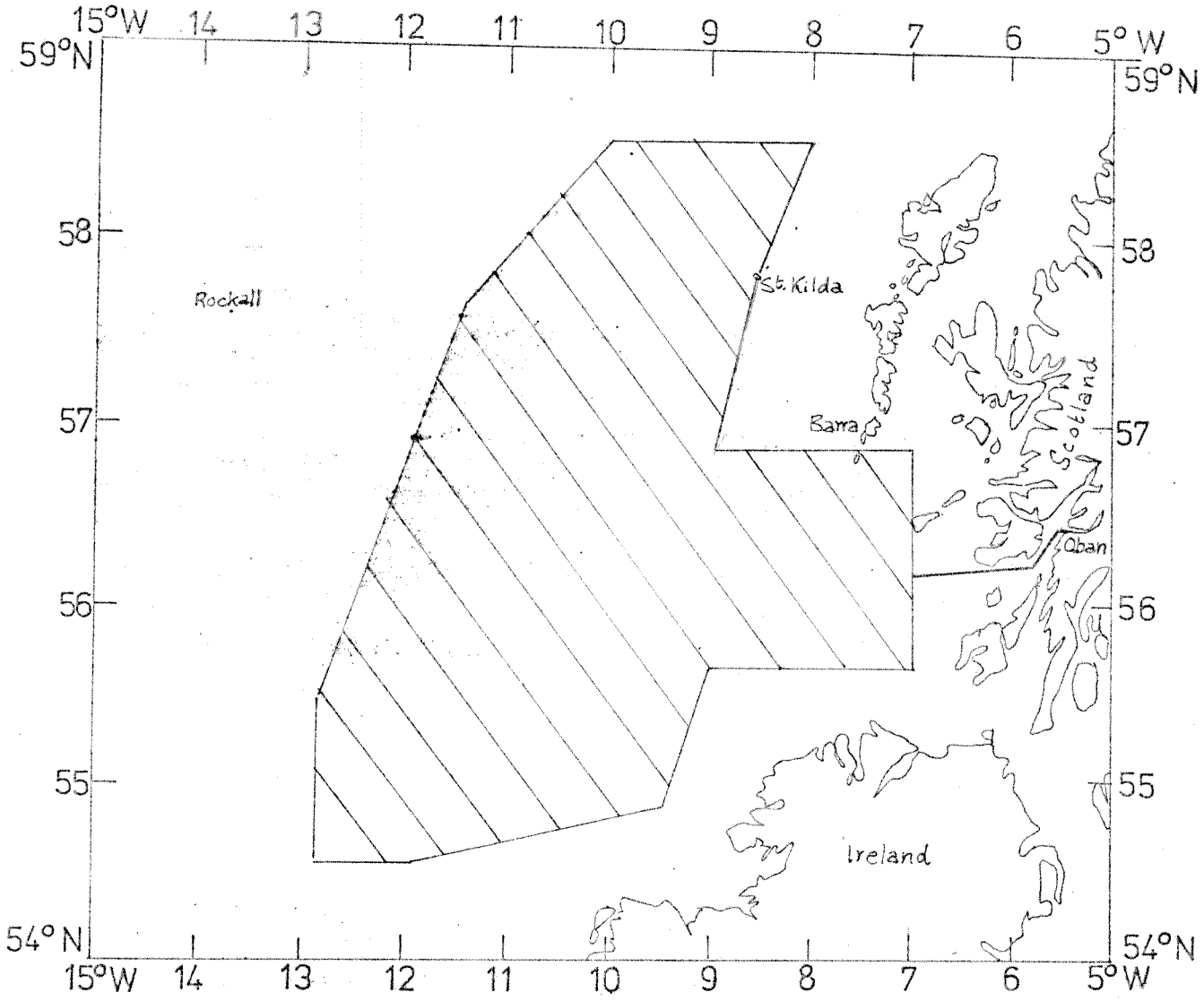
4. Agents

c/o Ship Manager,
Dunstaffnage Marine Laboratory,
P.O.Box 3,
OBAN,
Argyll, PA34 4AD

Telephone: OBAN 2244/6

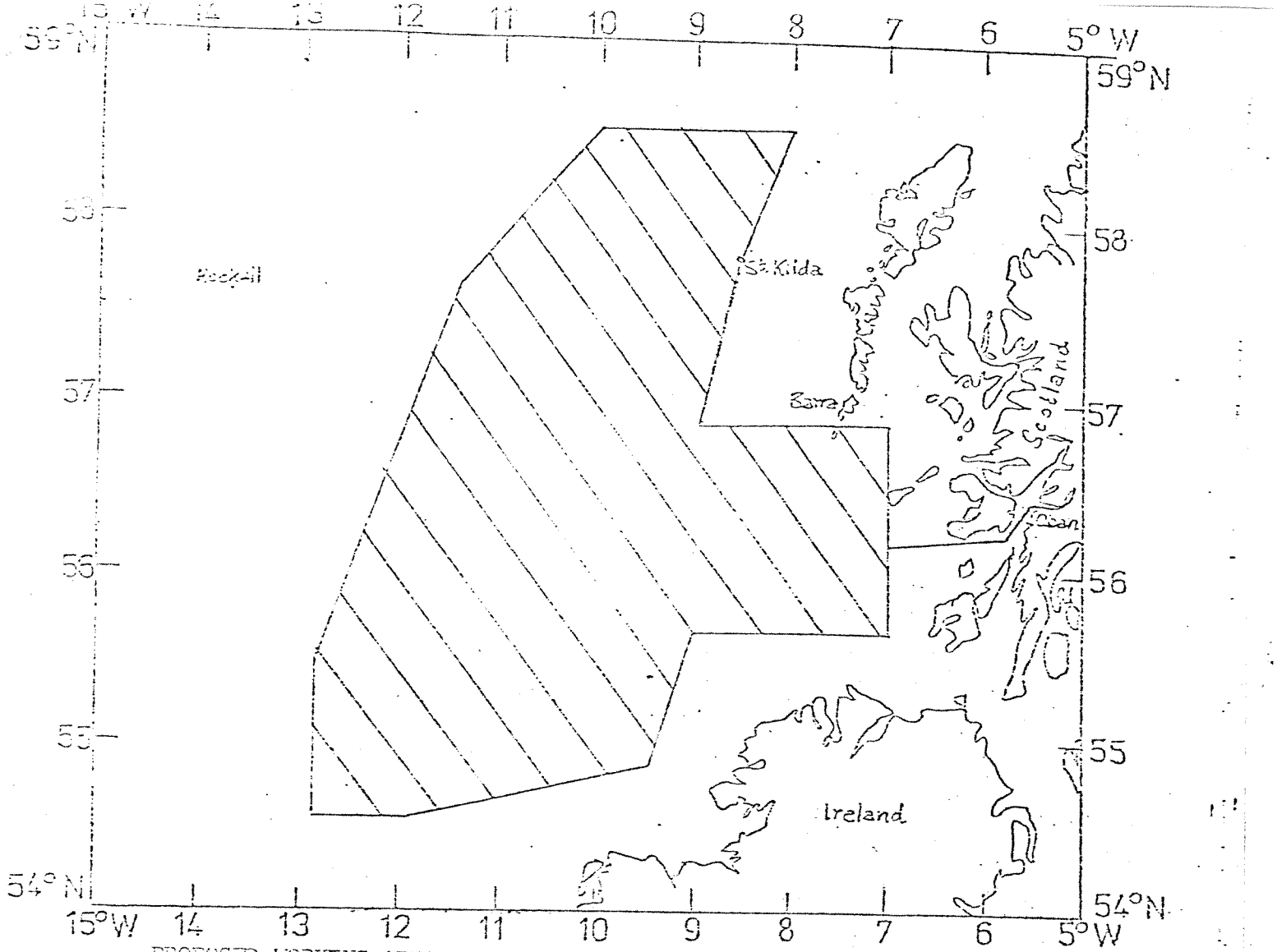
5 March 1975

(D.M.H.Stobie)
Director



Proposed working area Challenger cruise 4/75

March 20-29



PROPOSED WORKING AREA CHALLENGER CRUISE 4/75 - MARCH 20 - 29

PLANKTON SAMPLES CHALLENGER CRUISE 4/75

Depth of water required for all hauls: 2500m

BASIC HAULS

Oblique RMT's:	(1)	0 - 500m	5½ hours
	(2)	0 - 1000m	
	(3)	0 - 1500m	
(4) Deep RMT:			7½ hours
		Total Time:	13 hours

SUPPLEMENTARY HAULS

(5) 0 - 1000m oblique RMT, to give, with (2), a night and day haul:	3 hours
(6) Deep RMT:	7½ hours
TOTAL TIME FOR ALL HAULS:	23½ hours

SCOTTISH MARINE BIOLOGICAL ASSOCIATION

Deep Water Benthos Programme

Stn. 38 Date 28.3.75

SHELF ES

No. of Jars	Jar contents description	Preservation status	Sorting status	Disposal
6	Jar 1 Shelly sediment, some large gastropods	Propylene phenoxytol/ Glycol solution		
	Jar 2 Shelly sediment, Some large crustacea, not many small animals visible	"		
	Jar 3 As above, with some worms and worm tubes	"		
	Jar 4 Large asteroids, worm tubes, crustacea and molluscs.	"		
	Jar 5 Very rich in small animals, a few holothurians	"		
	Jar 6 Shelly sediment with some corals and worm tubes visible,	"		

SCOTTISH MARINE BIOLOGICAL ASSOCIATION

Deep Water Benthos Programme

Stn. 32 Date 22.3.75

ES

No. of Jars	Jar contents description	Preservation status	Sorting status	Disposal
1	large clinkers, some gastropods, actinaria, and worms, small sample.	Propylene phenoxytol/ Glycol solution		

Sea Programme - Stn. 33

BOOK No 211 23

STATION POSITION LOG

B.S.T.

No. 13 37/75 Date 23-3-75 Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
					6c					Sea = 7.5				
56°35·0	07°16·2	RADAR	320	25/30	98	320	5	12	1013·1	6·6	5·0	—	—	
— " —		✓	Barra Hd. Brg. 314°T x 16'.8.											V/L on station.
— " —		✓	—		"	—								Sledge streamed Co 315° Spd. 1kt.
— " —		✓	—		"	—								Pinger attached, paying out
56°35·2	07°16'.8	✓	Barra Hd. Brg 314°T x 16'.6											Sledge on bottom (354m)
— " —		✓	—		"	—								Comm. hearing in.
56°35·4	07°17·1	✓	Barra Hd Brg 314°T x 16·2											Pinger inboard
— " —		✓	—		"	—								Sledge inboard. Station completed.

BOOK № 211 23

STATION POSITION LOG

B.S.T.

No. 13 37/75 Date 23-3-75 Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
					6c					Sea = 7.5				
56°35·0	07°16·2	RADAR	320	25/30	98	320	5	12	1013·1	6·6	5·0	—	—	
— " —		✓	Barra Hd. Brg. 314°T × 16·8.											V/L on station.
— " —		✓	— —		"	— —								Sledge streamed Co. 315° Spd. 1kt.
— " —		✓	— —		"	— —								Pinger attached, paying out.
56°35·2	07°16·8	✓	Barra Hd. Brg		314°T × 16·6									Sledge on bottom (354m).
— " —		✓	— —		"	— —								Comm. hearing in.
56°35·4	07°17·1	✓	Barra Hd. Brg		314°T × 16·2									Pinger inboard.
— " —		✓	— —		"	— —								Sledge inboard. Station completed.

Deep Sea
Programme - Station 31

BOOK No 211 18

STATION POSITION LOG

No. (5) ~~29/75~~ Date 20-3-75 (BST) Deuachain 7D. Time from 1200 to

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
					bc					Sea	9·3	CM3	3/8	
		Decca	150	30	98	150	6	10	1022·6	7·6	6·2	CL1	2/8	
										RED		GREEN.		
55 03·5	12 01·	✓								E 14·2		B 34·3		Sledge over - paying out
55 03·0	12 · 01·0	✓								14·4		33·9		
55 02·2	12 · 01	✓								14·6		33·2		Comm. recovering.
55 01·5	11 · 59·6	✓								14·3		32·6		
														Pinger 1/B
										14·25		32·5		Sledge 1/B
55 01·2	11 59·5	✓								14·2		32·4		All gear 1/B and clear.
														Compl. work for night,
														finish with all winches.

SCOTTISH MARINE BIOLOGICAL ASSOCIATION

Deep Water Benthos Programme

tn. 31 Date 20.3.75

ES

o. of Jars	Jar contents description	Preservation status	Sorting status	Disposal
1	Many small bivalves, some siphunculids, gastropods and worms	Propylene phenoxytol/ Glycol solution		

NOON POSITION VOUCHER

R.R.S. CHALLENGER From OUNSTAFFNAGE To E. ATLANTIC Date 20.3.75

Zone Time at Noon	NOON POSITION		
	Latitude	Longitude	Method
BST	55° 03'N	12° 03W	DECCA

	Course	Distance	Steaming Time	Average Speed	Station Time	Set and Drift
Past 24 Hrs.	VAR	126	12·7	9·9	2·8	-
Voyage Total	-	256	247	103	6·8	-

Last Station ~~Worked~~/Working	28/75	Sunrise -	Sunset -
Clocks to be Advanced/Retarded	NIL mins at	Age of Moon -	-

GENERAL REMARKS

Copies to:- ~~Master~~/~~Chief Engineer~~/Senior Scientist

Second Officer.

NOON POSITION VOUCHER

R.R.S. CHALLENGER From OUNSTAFFNAGE To E. ATLANTIC Date 21·3·75.

Zone Time at Noon	NOON POSITION		
	Latitude	Longitude	Method
B.S.T.	55° 12'N	12° 01'W	DECCA

	Course	Distance	Steaming Time	Average Speed	Station Time	Set and Drift
Past 24 Hrs.	VAR	N.L	15H HOVE TO	N.L	9	-
Voyage Total	-	256	24·7	10·3	15·8	-

Last Station Worked/~~Working~~	29/75	Sunrise	Sunset
Clocks to be Advanced/Retarded	N.L mins at	Age of Moon	

GENERAL REMARKS

Copies to:- ~~Master/Chief Engineer~~/Senior Scientist

Second Officer.

NOON POSITION VOUCHER

R.R.S. CHALLENGER From OWNSTAFFNAGE To E ATLANTIC Date 22.3.75

Zone Time at Noon	NOON POSITION		
	Latitude	Longitude	Method
	55° 08'N	12° 39'W	DECCA

	Course	Distance	Steaming Time	Average Speed	Station Time	Set and Drift
Past 24 Hrs.	√AR	-	-	-	24	-
Voyage Total	-	256	10.3	24.7	39.8	-

Last Station ~~Worked~~/Working	35/75	Sunrise -	Sunset -
Clocks to be Advanced/Retarded	NIL mins at	Age of Moon	-

GENERAL REMARKS

Copies to:- ~~Master~~/~~Chief Engineer~~/Senior Scientist Second Officer.

NOON POSITION VOUCHER

R.R.S. CHALLENGER From E. ATLANTIC To DUNSTAFFNAGE Date 23.3.75

Zone Time at Noon	NOON POSITION		
	Latitude	Longitude	Method
	55° 41·5	10° 02·6	Decca

	Course	Distance	Steaming Time	Average Speed	Station Time	Set and Drift
Past 24 Hrs.	VAR	109	10·5	10·4	13·5	-
Voyage Total	-	365	35·1	310·4	53·3	-

Last Station Worked/~~Working~~	36/75	Sunrise /	Sunset /
Clocks to be Advanced/Retarded	NIL mins at	Age of Moon	

GENERAL REMARKS

TO GO 117' TO 56° 45'N 7° 07'W

Copies to:- ~~Master/Chief Engineer~~/Senior Scientist

Second Officer.

NOON POSITION VOUCHER

R.R.S. [illegible] From [illegible] To [illegible] Date [illegible]

Zone Time at Noon	NOON POSITION		
	Latitude	Longitude	Method
	56° 37N	39° 05W	[illegible]

	Course	Distance	Steaming Time	Average Speed	Station Time	Set and Drift
Past 24 Hrs.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-
Voyage Total						-

Last Station Worked/Working	26/35	Sunrise	Sunset
Clocks to be Advanced/Retarded [illegible] mins	at	Age of Moon	

GENERAL REMARKS

[illegible]

Copies to:- Master/Chief Engineer/Senior Scientist Second Officer.

Notes A decca plotter was used to maintain course.

After the initial delays the shooting operation was quicker than on previous occasions and the net took the bottom rather earlier than expected. The mean depth overall was 736 m which gave a warp to depth ratio of 2.95:1.

Challenger then proceeded to the next station and the second P.D.R. run began at 15.27.

15.27	Start P.D.R. run 56°38.2'N 9°12.5'W Red 6.0 (J) Purpl		
15.28		990 m	
15.35		960 m	
15.40		976 m	
15.45		940 m	
15.50	915 m 56°41.5'N 9°7.5'W Red 3.0 (J) Purple 68.7 (J		
16.05	Cod end O/B	848 m	
16.36	Boards O/B	890 m	3 knots
16.39	Start paying out	904 m	5 knots
17.16	Stop paying out - 2800 m	975 m	2 knots for
	56°39.5'N 09°11'W Red 4.9 (J) Purple 65.7 (J)		
17.25		972 m	4 knots
17.30		1010 m	
17.40		1032 m	
17.50		1056 m	
18.00		1033 m	
18.10		1023 m	
18.20		1030 m	
18.40		1052 m	
18.52	Start hauling	1084 m	3 knots
	56°35'N 9°19.5'W Red J 9.0 Purple 59.4 (J)		
20.00	Doors up		2 knots

[illegible] inboard

Another good sample of fish was obtained. On this occasion we partially overshot the chosen ground which resulted in a trawl being in slightly deeper water than anticipated. There was no damage to the net The warp to depth ratio was 2.75:1.

Summary			
	Shooting the net	30 mins	
	Paying out	37 mins	(75 m/min)
	On bottom	96 mins	
	Hauling	2 hours	(23 m/min)

General Comments

(1) The fishing skipper (Mr Dunning) will be making a detailed report on the technical side of the cruise.

(2) The success of the bottom trawling was attributable to the fishing skipper, the bosun and his team and to the fact tha the warps were marked. It is my opinion that a fishing ski is essential for deep-water trawling, but I would question requirement for a fishing hand, especially since the amount trawling on a shared biological cruise is limited and a spa net is carried.

(3) The marked warps were used to advantage and on both occasi the warps were squared to the marks despite the readings o Elliot metering gear. It is to be hoped that the trawl wa will not be misused in the future and that time can be fou maintain the marks in good condition.

(4) The Decca plotter was useful and it is hoped that it will available for future cruises.

(5) The Atlas depth recorder is a useful back up to the Kelvin Hughes P.D.R. and it is to be hoped that this can be speedily repaired.

(6) The Elliot metering gear, although not sufficiently accurate for bottom trawling, is a useful guide to the progress of paying out and hauling in the warps. In addition it gives information on the rate of payout and probably more important gives a guide to tensions on the warps, which might indicate whether the net has come fast on the bottom. It is essential that this gear is properly maintained. On the present cruise both units were functional for the bottom trawling, but later in the cruise parts of the port gear were removed to effect a repair to the meter on the main wire. It is to be hoped that this will be rectified before the May cruise and that in future adequate spares will be carried.

John D.M. Gordon

26/3/75

	56°40'N 09°06'W Red 3.5 (J) Purple 71.2 (J)	
11.40	Increase speed to 4 knots	795 m
11.45		805 m
11.50		770 m
12.15		744 m
12.25		710 m
12.35		665 m
12.45		660 m
12.55		665 m
13.05		650 m
13.13	Commence hauling	668 m
	56°33.5'N 09°11.6'W Red 7.9 (J) Purple 59.4 (	
14.15	Boards inboard	
14.20	Reduce speed to 1 knot	
14.34	Cod end inboard	

A good sample of mixed species was obtained. There was no d
to the net.

Summary	Preparation and shooting	4 hours	(2 hours on
	Paying out	43 mins	(58 m/min)
	on bottom	1½ hours	
	Hauling	1 hour	(41 m/min)

Cruise 4B/75

Report on deep-sea bottom trawling. RRS Challenger 19/3/7

Narrative

07.55 Start P.D.R. run at 07.55 - 760 m

56°29'N 09°11'W Purple J54.5 Red J10.0

08.00	10 knots	710 m	
08.05		650 m	
08.10		620 m	gradual slop
08.15		600 m	
08.20		590 m	
08.25		590 m	
08.30		580 m	
08.35		640 m	
08.40		640 m	
08.45		640 m	variable
08.50		710 m	max. depth 7
08.55		720 m	min. depth 6
09.00		750 m	

56°40'N 09°06'W Purple 67.5 (J) Red 3.5 (J)

The vessel then proceeded to Red 1.7 (J) Purple 70.7 (J) and hove to.

Preparations to shoot the trawl began at 09.00 and the cod end was o
at 10.15 (2 knots). The doors were outboard at 10.51 and the speed
increased to 5 knots. Paying out began at 10.55 and the ship's spee
increased to 7 knots.

~~Programme Stn. 32~~

STATION POSITION LOG

DECCA 7/D
B.S.T.

BOOK No 211 21

No. (11) 35/75 Date 22-3-75. Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat.	Long.	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
					Vis.					Sea – 9.6		CL	4	
N.	W.	Decca	310	20	98	270	4	8						
						300	3	10	1016.1	7.5	6.6	CM	2	Stn. 35/75 Epibenthic Sledge.
		RED. (F)	GREEN (A)											
55 07·0	12 36·7	04·2	47·2											Sledge launched Co 305°T. Spd. 1½-2kl
														Attaching chain wts @ 50m.
														Attaching pinger @ 115m.
		RED	GREEN											
		F 5·0	B. 30·3											SLEDGE on BOTTOM 3816m.
														Paying out.
		F 5·1	B 30·8											4075m WIRE DAMAGE. HEART BROKEN.
		~~F 5·1~~	~~B 31·3~~											Have in to 4000m
		F 5·1	B 31·3											END OF TOW. hauling in
55 16·0	12 5·8	F 5·3	B. 33·6											Pinger on stern at 84m.
		✓	✓											Sledge inboard.

STATION POSITION LOG

Z+1

No. (4) 28/75 Date 20th March 1975 (B.S.T.) Decca chain 7D Time from 0910 to 1603

Position Lat. N	Long. W	Method of Determination	WIND Dir. from	WIND Speed Kts.	Weath. and Vis.	WAVES Dir. from	WAVES Period secs.	WAVES Height ft.	Corrected Barometric Press. mbs.	TEMPERATURE Dry Bulb	TEMPERATURE Wet Bulb	CLOUD Type	CLOUD Amt.	REMARKS AND GEAR USED
55°03'	12°03'	DECCA	160	25	bc 98	150	4	10	1026.1	6.0 (Sea 9.0)	3.9	CL 2+4	3+2	Hove to on station
			DECCA		Red		Grn.	Purple						0935 Test bowthruster - OK
					E 15.0		E 33.5	—						Cannot use b/thr. and M.G
														till c. 1045.
—	" —				E 14.92		E 33.56							Spade cover 0/8 (1105)
					14.70		33.60							Winch gauges inoperative
					14.50		33.66							Pinger attached to wire
														Pinger up commence recovery
														pinger up
														pinger inboard
														Spade on board
														Spade launched
					RED E 14.3		GREEN B 34.2							Spade on bottom
														pinger inboard
					E 14.2		B 34.2							Spade Cover 1/8

BOOK № 211 15

STATION POSITION LOG

Z+1 (35Fm)

No. 1 26/75. Date 19th March 1975. Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
		P.J 54·5 R.J 100			C					Sea 8·7				
56°29'	09°11'	Decca	120	10	98	120	3	4.	1028·9	7·5	5·1	C_L	6.	Commence P.D.R. run.
56°40'	09°06'	Decca			Red 3·5(J)	Purple 67·5(J)								Completed P.D.R. run.
					Red 1·7(J)	Purple 70·7(J)								Hove to for shooting.
														Shackle stuck by winch
					RJ 1·3	P.J 71·2								Co. 184°T @ 2kts Codend O/B
					Red.	Purple								Net streamed increase to 5kts
56°40'	09°06'				J. 3·5	J 67·5								Steaming for trawl start posn.
														1120 In position for trawl
														Reduce to 2knots. On bottom
														Increase to 4knots.
					P	C	P							
					J 7·9	38·7	J 55·4							Commence Hauling
														Backed up 2kts
														1 Knot
					1·1	39·5	55·1							Cod end inboard
														Co 000° 10kts.
					P	C	P							
					56·0	38·0	368·9							Comm POR run.
					C		P							
					53·0	(37·)	368·7							Complete run.

BOOK № 211 16

STATION POSITION LOG

B.S.T

No. (3) 27/75. Date 19.3.75. Time from 1600 to 2030

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat.	Long.	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
			RED	GREEN	PURPLE									
			32.1	33.9	70.1									* Turned around - 2 kts.
														SHOOTING. Dir 215°
			5 2.5	5 37.1	5 69.5									Commence paying out.
			2.6	37.1	69.3									~~On bottom~~ - Inc. spd. to 5 kts
			4.9	37.8	65.7									Reduce to 2 kts
			4.9	37.8	65.7					sea 9.2				Inc. to 4 kts - On bottom.
			9.0	38.9	59.4	110	3	3	1030.3	6.0	3.8	cu	3/8	Comm. to recover - spd 3 k.
			11.0	39.5	56.1									Reduce spd to 2 k.
			11.5	39.7	55.4									All gear inboard -
														end of station

DECCA T/O.

BOOK No 211 19

STATION POSITION LOG

B.S.T.

No. (6) 30/75. Date 21.3.75. Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
55°00'N RED	12°00'W GREEN.	Decca.												4 PILOT WHALES HEADING SOUTH
E16.5	B 46.3		330	30	98	330	03	3	1015.1	7.5	6.1	Sc	8	preparing to launch STEAMN Net
E16.4	B 46.4	54° 57'.60 LAT	11	59.55										STEAMN NET LAUNCHED: 2KTS. Co 330°
E16.0	B 30.5	55 09.0	LONG 12-00.7											3200 m ~~EST~~ STOP paying out
E16.0	B 31.9	01.5		02.2	DISTANCE	1.9' at 3200M.								Hauling to 3000 m. 1½ KTS
E15.9	B 32.2	02.0		02.9										3000 M. 2KTS.
E 16.5	B 33.0	03.5		06.1	DISTANCE	2.5'	AT	3000M.						COMM. hauling in to 2000M.
E 17.3	B 33.2	04.6		09.2	DISTANCE	1.8'								Hauled to 2000M/spd 2kts
E 18.4	B 32.8	04.8		12.0	DISTANCE	1.4'								Hauling in to 1500M/spd 1¾
E 19.8	B 32.3	05.4		15.7	DISTANCE	2.2'								Hauled in to 1000M/spd. 2¼.
E 20.9	B 32.0	05.5		18.1	DISTANCE	1.35'								COMM. recovery. spd. 1.5K
E 21.4	B 31.5	05.4		19.5	DISTANCE	0.5'								Net on Surface.

DECCA 7/D

B.S.T.

BOOK No 211 20

STATION POSITION LOG

No. (7) 30/75, 32/75 (33/75) Date 21·3·75

Time from ..... to .....

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
					0					Sea 9·3				
		Decca	280	20	97	280	5	15	1015·7	7·0	6·0	Sc	8	Preparing to launch
		RED(E)	GREEN(B)											Depth 2880m
		20·8	31·6											
55°05'·2	12°18'·4	21·1	31·6											R.M.T. 7+1 0/B Co. 270°T Spd 2kts
55°05'·2	12°20'·4	21·9	31·2	Distance	A→B =			1'·0						1000m wire out. Hauling in Spd 1½kts
55°05'·5	12°23'·2	22·9	30·9	Distance	B→C =			1'·7						Trawl inboard Net damaged – repairs to be made (c. 45 mins. reqd) Co. 270° Sp. 1kt
55°06'·1	12°26'·7	F00·0	B 30·7					(8)	32/75					Net launched (2000m trawl) Co 270° Sp. 2kt
55°05'·5	12 28'·7	F01·3	A 47·7	Distance	D→E =			1'·5						2000m wire out Hauling in Sp 1½kt
55°06·5	12°35·3	F04·2	A 46·9											Net on board.
~~55°06·4~~	~~12°35·4~~	~~F04·3~~	~~B 46·7~~											~~Shooting Rmt 7+1 Co 285 2kn~~
55°06·4	12°35·4	F04·3	A 46·7					(9)	33/75					Shooting Rmt 7+1 Co 285 2kn
55°06·8	12°42·0	F06·1	A 46·0	Distance	3·0'									3000 m. Stop shoot. 285° 1½k. Hauling in
55 09·4	12 51·0	F08·5	A 46·1	— " —	5·4'									Net on Surface
55 09·5	12 51·5	F08·3	A 46·4					(10)	34/75					Shooting Net Co 108° Spd 2k.
55 08·4	12 46·3	07·0	46·7	Distance	2·9'									4000m out.
55 07·1	12 41·2	05·8	46·4	— " —	3·0'									Comm. recovery – Spd 1·5k.
55 05·5	12 33·5	03·5	46·5	Distance	4'·4									Net on Surface

2

BOOK No 211 22

STATION POSITION LOG

No. (12) 36/75 Date 22-3-75 B.S.T. Decca chain 7D. Time from 1836 to

Position			WIND		Weath. and Vis.	WAVES			Corrected Barometric Press. mbs.	TEMPERATURE		CLOUD		REMARKS AND GEAR USED
Lat. N	Long. W	Method of Determination	Dir. from	Speed Kts.		Dir. from	Period secs.	Height ft.		Dry Bulb	Wet Bulb	Type	Amt.	
			F	5-6	B 33.8									Preparing sledge
55° 15·6	12° 54·3	Decca	F	5-8	B 34.0									Sledge o/b
				✓	✓									Fixing chains
			F	5·9	B 33·8									
			290	- 24	BC/97	280	9	18		Sea	9·5	CH 1	1/8	Resume paying out.
55 15·9	12 53·6	✓	F	6·0	B 33·5	290	4	6	1016·3	8·3	6·9	CM 4 CL 7	1/8 4/8	—
			F	6·8	B 33·2									2094m out - spooling gear 4/s
			F	7·1	B 33·2									Spooling gear OK. Resume
			F	7·6	B 33·1									Stop paying out @ 3900 to look at damaged wire
55° 15·9	12° 58·0	✓	F	7·7	B 32·7									Wire damage found @ 4054m. Stop paying out.
55° 15·4	13° 00·5	✓	F	8·8	B 31·8									Comm. recovery ✓.
														Pinger up
														cable fouled around pinger
														RECOMMENCE RECOVERY
														Sledge inboard
55° 4·5	13° 05·W	Decca	F	11·1	B 30·2									Scientific programme completed