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K. Heaney... ✓ 20/1/91

RV LOUGH FOYLE CRUISE REPORT

Cruise No. LF 1/901

Dates: 7-9 January 1991

Objectives:

- 1 To collect samples for determination of winter nutrient levels in the Northern Irish Sea, North Channel and along the N. Coast of N.Ireland, including transects to determine the nutrient/salinity ratio of Lough Foyle effluent water.

These samples and analyses to form the NI contribution to the NORSAP programme of winter 1990/91

- 2 To collect Day Grab samples at the 4 MPMMG coastal and offshore monitoring sites selected for N. Ireland
- 3 To repeat an earlier series of samples for analyses of differences between samples taken by overside sampling and from the inboard clean seawater supply

STAFF:

R. S. Rosell	HSO,	DANI ASRD Coleraine (SIC)
M. Service	SSO,	DANI ASRD Newforge
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Cruise Narrative.

RV lough Foyle sailed from Belfast at 0800 hrs on Monday 7 January and proceeded South to sites off Dundrum Bay. Due to rough weather the first site was not reached until 1600 hrs and only inboard water sampling from the clean seawater supply was possible. An attempt to deploy the Day grab at site 2 was aborted and the ship proceeded to site 3. Inboard water samples were taken here and at sites 4, 5 and 6. At Site 7, the second MPMMG site, a full set of grab samples and water samples for NORSAP and MPMMG projects were taken. Scientific Staff changed shifts at 3 a.m. before site 7.

Grab samples proved unobtainable due to unsuitable substrates at site 9, and after a change of position failed to produce good grab samples, grab sampling at this site was also aborted. The first shift returned at 0900 Hrs after site 9, and worked taking water samples to the next MPMMG site (14) 1430 hrs. At this site, grabs were taken at 4 positions near to, but not at the chosen site as the sediments proved difficult to sample.

The ship remained in the vicinity of the approach to Lough Foyle, intending to enter the Foyle and pick up B. Stewart from Moville by pilot boat on the morning of wednesday 9.1.91.

With southerly gales forecast on the morning of 9.1.91 ruling out the possibility of extensive overside work on the homeward leg of the cruise and workboat deployment in the Foyle Basin, the pick up of B.Stewart was cancelled. Samples 15 to 17, of low salinity water down to 25 were taken at the entrance to the Foyle on the morning of 9.1.91, and the ship returned to MPMMG grab sites of the previous day to collect one further sample to complete this series. Further difficulties were encountered in sampling this area due to hard ground and the attempt to sample was abandoned.

The ship returned to Belfast during wednesday 9/1/91 and docked at 1600 hrs. Samples and equipment remained on board to be collected on Thursday 10/1/91.

R.S.Rosell

Table 1 : Sample sites and times

Station No.	Date & Time	Position Start - Finish	Salinity PPT	T°C	Depth m	Wind° MPH
7/1/91						
1	1555 -1610	54.09.20N 5.42.38W 54.08.66N 5.42.58W	32.4	8.1	27m	220° 35
2	1728- 1740	54.04.33N 5.30.44W 54.04.49N 5.29.94W	32.3	9.7	73m	220° 33
3	1950- 2010	54.10.09N 4.55.01W 54.10.82N 4.54.22W	32.3	9.7	70m	SW 30
4	2145- 2201	54.27.42N 4.49.69W	32.5	9.4	61m	SW 30
5	2340- 2355	54.30.00N 5.14.21W	32.1	9.05	30m	SW 25
8/1/91						
6	0037- 0050	54.03.05N 5.24.02W 54.30.51N 5.24/75W	31.5	9.05	23m	SW 25
NB Salinities for samples 1-6 underreading by @2 ppt						
7	0310- 1330	54.42.33N 5.39.78W 54.42.57N 5.41.18W	33.0	9.05	10m	WSW 25
8	0621- 0634	55.07.79N 5.30.13W 55.08.37N 5.30.56W	33.4	9.4	105m	WSW 25
9	0728- 0740	55.05.11N 5.43.61W 55.05.46N 5.43.83W	33.6	9.6	133m	WSW 35

Table 1 :Sample sites and times ctd.

Station No.	Date & Time	Position Start - Finish	Salinity PPT	T°C	Depth m	Wind° MPH
10	0900-0912	55.02.90N 5.52.11W 55.03.34N 5.52.11W	33.4	9.3	109m	SW 25
11	1057-1108	55.13.98N 6.14.32W 55.14.42N 6.14.11W	33.0	9.14	92m	SW 25
12	1205-1218	55.21.18N 6.10.17W 55.21.76N 6.10.57W	32.9	9.26	201m	SW 10
13	1401-1410	55.13.89N 6.34.19W 55.13.73N 6.34.88W	33.6	8.6	31m	S 15
14	1435-1445	55.17.92N 6.36.58W 55.18.18N 6.36.79W	33.7	8.9	84m	S 10
9/1/91						
15	0753-0808	55.17.78N 6.51.38W 55.17.08N 6.51.39W	31.8	7.1	51m	SE 25
16	0819-0827	55.15.90N 6.52.42W 55.15.35N 6.52.70W	29.5	6.9	19m	SW 15
17	0902	55.12.63N 6.56.57W	@25	6.5	10m	SSE 10

Sample Details - NORSAP and Nutrients

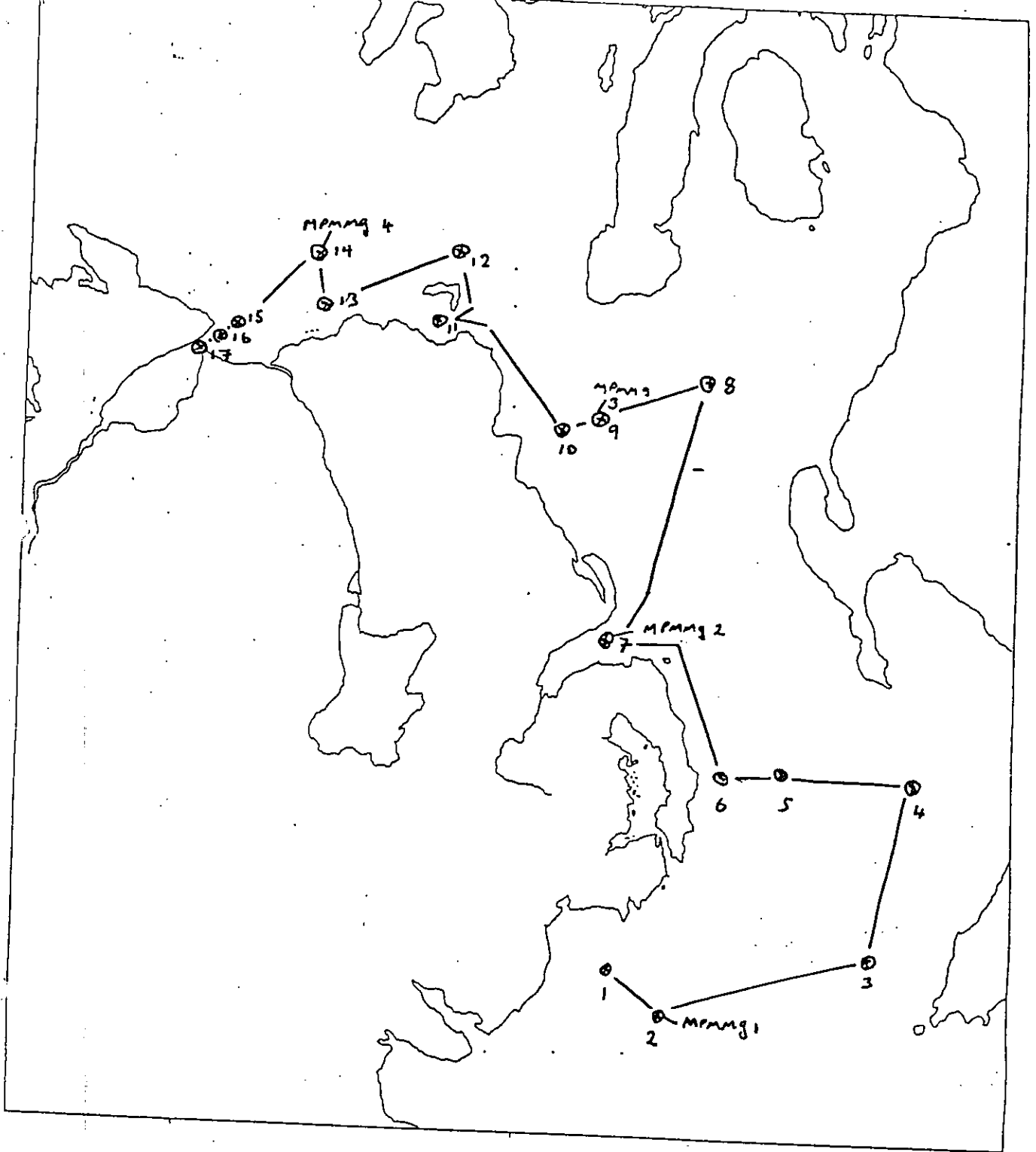
Site	Nutrients Bottles		Vials		Salinity		Susp. Sol.
	ISC	FRL	FRL	FBIU	ISC	MAFF	
1	1,2	1a-c	1a-b	-	20,21	2091	1
2	3,4	2a-c	2a-b	-	22,23	2092	2
3	5,6	3a-c	3a-b	-	24,25	2093	3
4	7,8	4a-c	4a-b	-	26,27	2094	4
5	9,10	5a-c	5a-b	-	39,40	2095	5
6	11,12	6a-c	6a-b	-	41,42	2096	6
7	13,14	7a-c	7a-b	x4	43,44	2097	7
8	15,16	8a-c	8a-b	-	45,46	2098	8
9	17,18	9a-c	9a-b	x4	47,48	2099	9
10	19,20	10a-c	10a-b	-	49,50	2100	10
11	21,22	11a-c	11a-b	-	51,52	2101	11
12	23,24	12a-c	12a-b	-	53,54	2102	12
13	25,26	13a-c	13a-b	-	55,56	2102	13
14	27,28	14a-c	14a-b	x4	57,58	2104	14
15	29,30	15a-c	15a-b	-	59,60	2105	15
16	31,32	16a-c	16a-b	-	61,62	2106	16
17	33,34	17a-c	17a-b	-	63,64	2107	17

Sample Details - MPMMG SITES

Station	MPMMG No.	Samples				NUT.	SED.	GRABS
		DO	METALS	ORGANICS				
2 (DUNDRUM)	1	1	1	1	As NORSAP		Failed- weather	
7 (BEL. LOUGH)	2	2	2	2	As NORSAP		X5	
9 (Antrim Cst)	3	3	3	3	AS NORSAP		Failed- ground	
14 (N Coast)	4	4	4	4	AS NORSAP		x4*	
(8.1.91)								
(9.1.91)							x1	

* No grab at NORSAP/MPMMG Planned site. Grabs at:

55.17.55N, 6.36.44W (8.1.91)
 55.17.55N, 6.36.09W (8.1.91)
 55.16.69N, 6.39.20W (8.1.91)
 55.15.55N, 6.46.91W (8.1.91)



Cruise Track LF 7/90 & SITES.