

DEPARTMENT OF AGRICULTURE (NI)
AQUATIC SCIENCES RESEARCH DIVISION

CRUISE REPORT - LF/04/92

IRISH SEA BENTHIC SURVEY 24 February 1992

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OBJECTIVES

1. To take Day-grab samples from positions marked for faunal analysis.
2. To sample sediments from each station for particle size analysis to ascertain animal/substrate relationships.
3. To take sediment samples for pesticide residue and heavy metal analyses.

NARRATIVE

23/2/92: Scientific personnel boarded *Lough Foyle* late Sunday evening

24/2/92: Vessel departed Belfast at 0600 hours, arriving at station 1 at approximately 0745. Weather conditions were relatively good with a southerly 5/6 wind decreasing 3/4. Given the conditions and greater deck space, the grab was deployed using the gantry rather than the hydrographic wire. The Day-grab was successfully deployed at Stations 1 and 2 and all requisite samples taken.

Progress between stations 2 and 3 was interrupted by problems with the vessel's clutch. After a 2 hour stationary period it became clear that the fault could not be rectified at sea and the vessel headed home, arriving at approximately 1900 hours.

25/2/92: Given the loss of time incurred the sampling programme was amended, dropping the most southerly stations (see Fig) and restarting the cruise on the eastern side of the area (station 58). On the advice of the ship's Master the course between stations was modified to optimise the remaining time available to us. The vessel departed Belfast at 0000 hours with a recurrence of the clutch problem at approximately 0700 hours. After a 4 hour period to allow the clutch to cool the fault was corrected. The vessel arrived at station

58 at 0830. Weather remained fair with an east/southeasterly force 5/6 wind.

26/2/92: Overnight stations 42-32 were worked in difficult weather conditions (southerly wind gusting force 8). The hard sea-bed in this area resulted in poor grab samples. Additional weight on the grab may have rectified the sampling problem but would have made deploying the gear dangerous.

Winds moderated 3-4 during the day and good progress was made to station 13. With southerly gale force 9 predicted for the evening the vessel sheltered in Dundalk Bay overnight.

27/2/92: Ship made way at 0745, arriving at station 12 at 1000. Although the wind had dropped to 4, the swell was increasing. Sampling went well with the final station (60) worked at 0400 Friday morning. Lough Foyle returned to Belfast, docking at 0800 Friday 28th February.

METHODS

The only sampling gear used was the Day-grab, a standard sea-bed sampler, noted for reliable performance in poorer weather conditions. Where possible (sea-bed type and weather permitting) three grab samples were taken from each station. Two of these are to be used solely for faunal analyses. The third (also kept as a "backup" faunal sample) was sub-sampled for particulate size assessment and chemical analyses. Depth, and a description of the sediment was taken at all locations. In addition, the volume of each sample taken to indicate the performance of the gear on each substrate type.

RESULTS

Faunal identification and counts will be made in the laboratory over the next two years. On the basis of casual observation of the material recovered on deck, it is anticipated that sorting of the samples will reveal a diverse mixture of sea-bed "communities" from the areas sampled.

R.T. Hensley
4/3/92

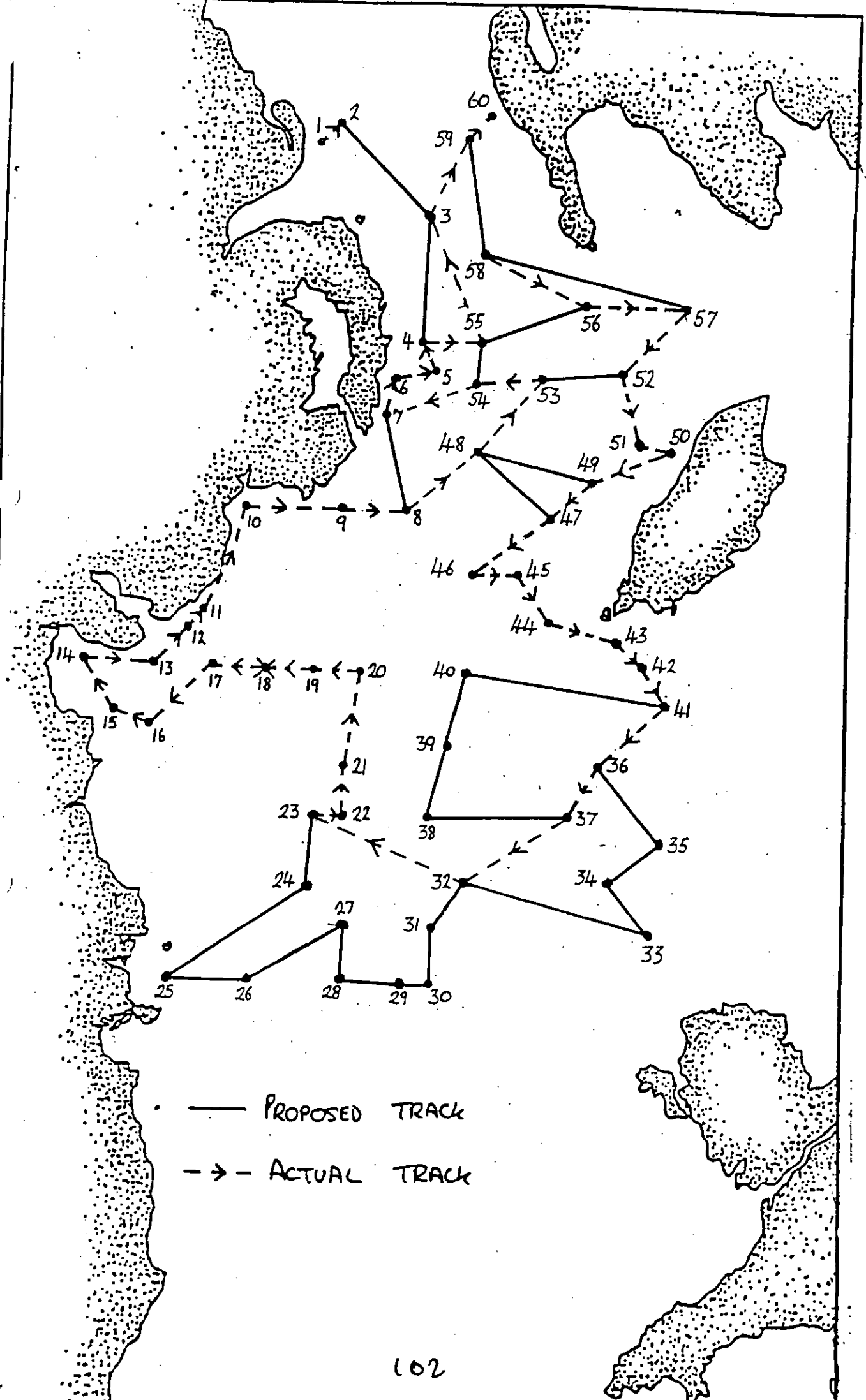


TABLE 1: Location of stations attempted

<u>Station</u>	<u>Position</u>
1	54 47.93N/5 36.98W
2	54 49.02N/5 32.02W
3	54 42.38N/5 17.31W
4	54 36.60N/5 17.34W
5	54 27.52N/5 12.41W
6	54 26.06N/5 22.50W
7	54 21.10N/5 07.52W
8	54 12.06N/5 17.36W
9	54 12.62N/5 32.64W
10	54 12.26N/5 49.83W
11	54 02.61N/5 56.03W
12	---no sample---
13	53 57.50N/6 02.50W
14	53 57.47N/6 12.56W
15	53 53.35N/6 07.60W
16	53 52.45N/6 02.53W
17	53 57.87N/5 52.29W
18	---no sample---
19	53 57.62N/5 42.39W
20	53 57.37N/5 22.48W
21	53 47.54N/5 27.46W
22	53 42 47N/5 27.46W
23	53 42.85N/5 37.80W
32	53 37.23N/5 08.06W
36	53 47.68N/4 47.23W
37	---no sample---
41	53 52.45N/4 37.91W
42	---no sample---
43	53 57.63N/4 48.43W
44	54 02.58N/4 57.36W
45	54 07.44N/5 07.14W
46	54 07.59N/5 07.69W
47	54 12.51N/5 57.60W
48	54 17.48N/5 02.55W
49	54 16.03N/4 52.73W
50	54 17.95N/4 37.57W
51	54 18.63N/4 42.55W
52	54 22.85N/4 46.82W
53	54 21.04N/4 57.56W
54	54 21.00N/5 07.52W
55	54 32.48N/5 02.47W
56	54 32.48N/4 52.66W
57	54 32.48N/4 37.30W
58	54 37.27N/5 02.33W
59	54 47.65N/5 11.85W
60	54 48.94N/5 07.22W