CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE SCIENCE - LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK

1998 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 9c/98

STAFF:　　C G Brown
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DURATION:　30 September - 6 October.
　　　　　　　All times GMT

LOCALITY:　Irish Sea (Eastern Nephrops grounds)

AIMS:

1.　To conduct a TV survey of the English W Coast Irish sea Nephrops grounds using a towed sledge and underwater TV camera to evaluate burrow density and estimate Nephrops biomass in the area 53° 48'-54° 39' N and 3° 22'-3° 59' W.

2.　To backup the TV survey with a trawl survey to establish the size composition and sex ratio of the Nephrops catch.

3.　To collect sediment samples by Day grab to establish the type of substrate most suitable for Nephrops.

(ADDITIONAL REQUESTS)

4.　To retrieve CTD rosette lost during 9b part of the cruise.

5.　To rendezvous with FV Royal Sovereign in the area of the Hastings Shingle Bank to investigate effects of dredging on crab pots being worked in the area.

NARRATIVE:

Staff joined Corystes at Liverpool on 29 September at 14.00 h and sailed at 12.00 on 30 September to the southern part of the survey area where sea conditions were unsuitable. It was decided to sail to a more sheltered inshore position where TV work commenced at 19.00. Because of the additional aims the video and trawl survey had to be rationalised. A total of 54 TV stations were completed and preliminary Nephrops burrow counts were made over a ten-minute part of the tow which was recorded on videotape for further detailed analysis at the laboratory. Sediment

samples were taken by Day grab at each TV station. A total of 4 trawl stations were completed in the area of highest Nephrops concentration in two sediment type areas. All Nephrops were measured and sexed to obtain a length distribution and sex ratio at each trawl station. It was necessary to cease trawling at 07.30 on 3 October in order to sail to the position of a CTD rosette lost during the second part of the cruise. The search commenced at 13.00 on 3 October and by 15.00 the equipment was successfully located and retrieved. Corystes then headed towards the Hastings Shingle Bank to rendezvous with FV Royal Sovereign on 5 October. FV Royal Sovereign was contacted on 5 October and TV camera work was carried out between 08.15 and 14.25. Corystes then headed for Lowestoft.

Corystes docked at Lowestoft at 10.00 on 6 October.

RESULTS:

1. A total of 54 tows with the sledge-mounted TV camera were made over the full extent of the Nephrops fishing grounds and excellent results were obtained for the majority of these. Preliminary Nephrops burrow counts were made at each TV station. All burrow counts, usually of 10 minutes duration, were recorded for further laboratory analysis. Preliminary results (Figure 1.) suggest that the highest densities of burrows are found in the areas where high catches of Nephrops are obtained commercially.

2. A total of 4 trawl tows of half an hour duration with a Boris 600 prawn trawl were made in the area of greatest Nephrops density to establish the size composition and sex ratio of Nephrops on different parts of the ground, and to relate to the burrow counts of those grounds. Catches were low, partly because of the time of year. All Nephrops caught were sexed and measured.

3. Sediment samples taken by Day grab were frozen for future particle size analysis.

4. The CTD rosette was successfully located and retrieved.

5. TV observations were made at various locations across FV Royal Sovereign's crab pots and on the edge of the Shingle Bank in the vicinity of the dredging area. Clear observations were obtained and there appeared to be no turbidity in the area or silting of the groundrope. Recordings were obtained and further analysis of these tapes will be made.

CLIVE BROWN
(Scientist-in-Charge)
5 October 1998

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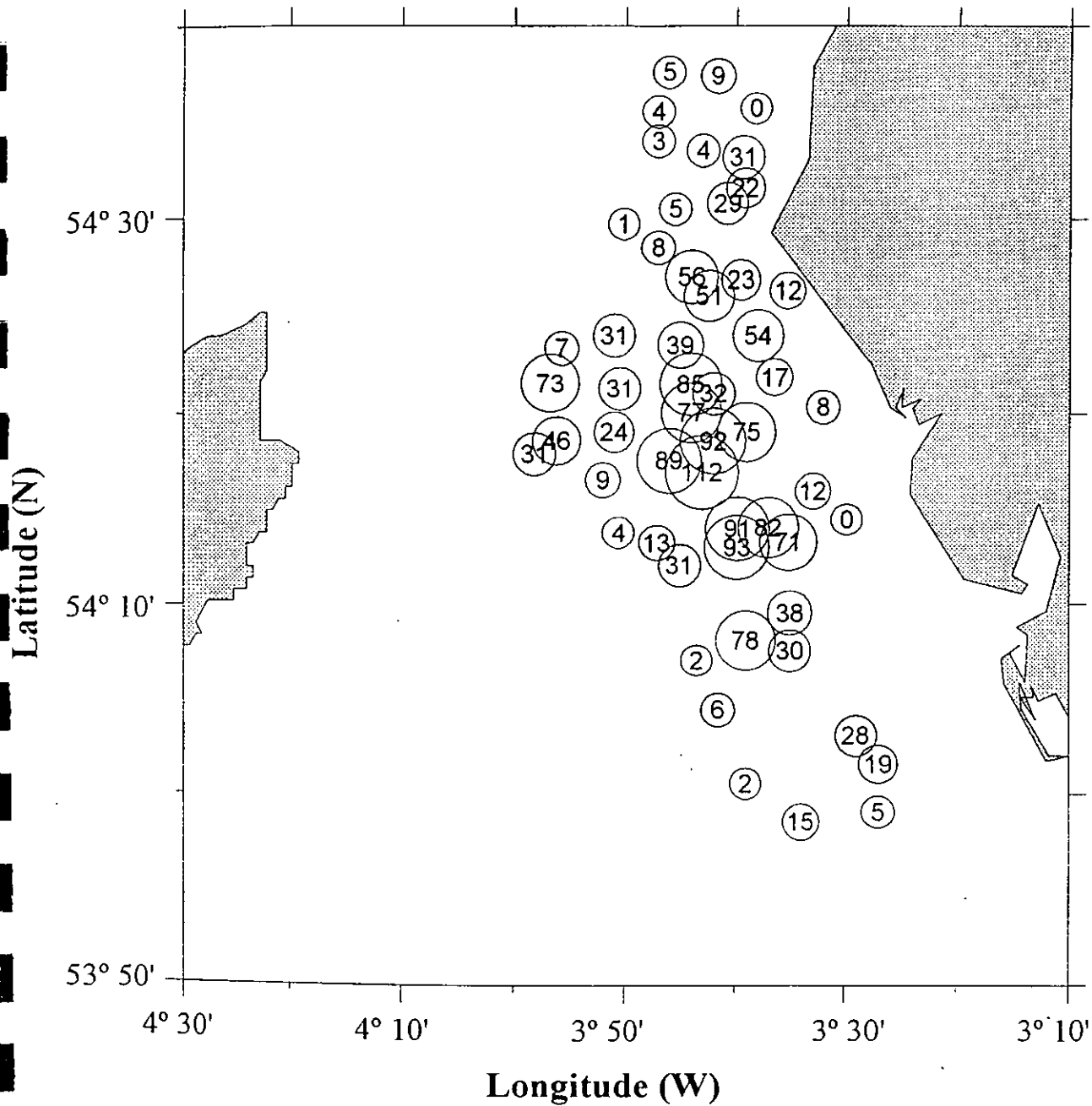
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**Figure 1 - Burrow counts in the Eastern
Irish sea - Corystes 9c/98**