

CENTRE FOR ENVIRONMENT, FISHERIES & AQUACULTURE SCIENCE
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK NR33 0HT

1997 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES 3(b) 1997

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Peter Walker
Andy Lawler
Jon Elson
Paul Hudson

DURATION: 20-26 March 1997

LOCALITY: Irish Sea East

AIMS:

1. To conduct a TV survey of the eastern Irish Sea Nephrops grounds using a towed sledge and underwater TV camera to evaluate burrow density and estimate Nephrops biomass.
2. To estimate sex ratio and size composition using trawl caught samples.
3. To collect sediment samples by Day grab to establish the burrow density in relation to sediment type.

NARRATIVE

Scientific and RVSU staff (excluding SIC) travelled to Liverpool on Wednesday 19 March and joined CORYSTES on 20 March. The SIC joined CORYSTES from the ICES Nephrops Working Group at Lysekil, Sweden at 1600. CORYSTES left Liverpool at 2200 GMT(UT) that evening and steamed to the southern end of the sampling grid. Deployment of the TV sledge began at 0551 on 21 March. Visibility at the first two stations was very poor. The new depressor vanes were removed to reduce turbulence and stations further offshore were worked. Visibility remained variable, but at many stations it was possible to do Nephrops burrow counts. A total of 33 stations (Figure 1) was successfully worked with the TV sledge and Day grab until adverse weather halted work at 1740 on 22 March. CORYSTES stayed on station over-night. While the wind had dropped the next morning, the remaining swell made it too dangerous to deploy the sledge. Trawling was successfully undertaken at three stations (Figure 1) before it was time to steam home to Lowestoft. CORYSTES docked in Lowestoft at 1030 on 26 March.

RESULTS:

Aim 1. A total of 33 stations were successfully surveyed using the TV sledge. It was not possible to complete the grid of 50 primary stations due to adverse weather conditions. Counting Nephrops burrows was hampered by poor visibility at several stations. Unfortunately there had been some stormy weather prior to the survey, and it was a period of spring tides. Initial burrow counts ranged from 0 to 255 per 10 minute tow, with up to 15 emergent Nephrops noted. The video tapes will need to be re-analysed to confirm burrow counts and numbers of emergent Nephrops. The highest burrow counts appear to correlate with the finer surface sediments shown on the British Geological Survey chart of the area.

Aim 2. Three trawl hauls were made in the area which the TV survey indicated had the highest burrow and emergent Nephrops counts. Totals of 250, 165 and 172 Nephrops per half hour tow were made. All samples were sexed and measured, with those from the last tow also being weighed to estimate a length/weight relationship. Figure 2 shows the length distribution by sex from the last station, clearly showing the sex ratio favouring males at this time of year. The female size distribution essentially ends at 28mmCL. Most females larger than this are ovigerous (berried) at this time, and remain in their burrows.

Aim 3. At each TV station a Day grab was used to collect a sample of the surface sediment for later analysis for particle size and estimation of organic content.

David Bennett
26 March 1997

SEEN IN DRAFT: B C.....Captain

W M.....Senior Fishing Mate

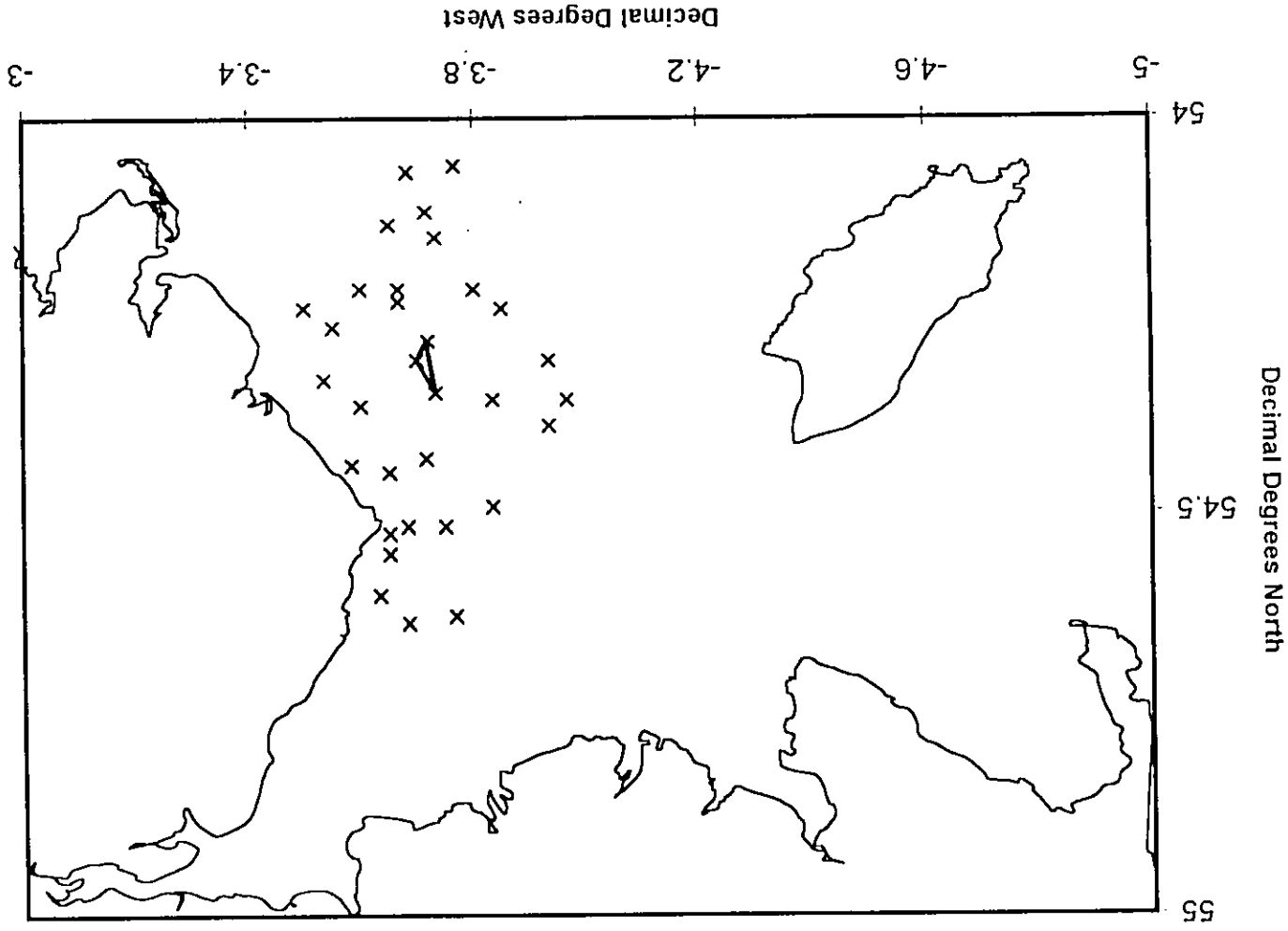
INITIALLED: RCAB

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Figure 1. *Corystes* 3b/97 Irish Sea Nephrops TV Survey. 33 TV/Day grab Stations and 3 Trawl Tows.



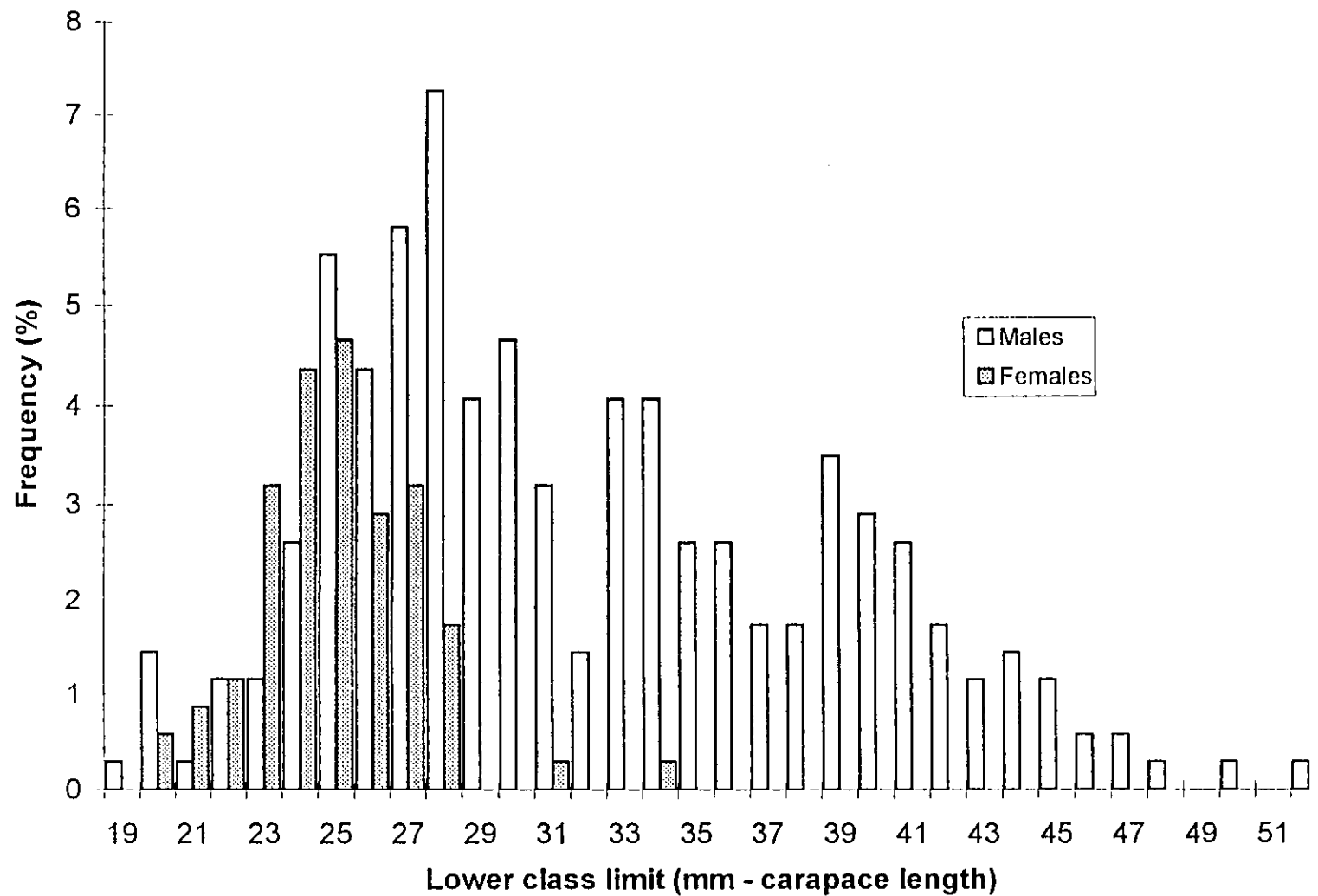


Figure 2. Length frequency distribution of *Nephrops* caught at station 39 Corystes 3b/97