

INDEXED
JH
026
MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1987 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 6a/b

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

(a) R B Mitson (b) J H Nichols
E G Shreeve C G Brown
J H Nichols M W Easey
B R Riches R P Flatt
C S A (2) R A Ayers
A Gouldby

DURATION: (a) Left Lowestoft 0730 h 7 May (b) 0830 h 8 May
Arrived Lowestoft 1925 h 7 May 1000 h 14 May

LOCALITY: Central North Sea - north east coast of England.

AIMS: (a) To test the multi-net sampler.

(b) 1. To carry out a plankton survey over a grid of approximately 80 stations (Figure 1) in order to estimate the production of Nephrops larvae.

2. To take additional plankton samples in areas of highest larvae abundance, to estimate haul to haul and spatial variability.

3. To trawl for adult Nephrops and sample the catch for length, weight, fecundity and maturity data.

4. To collect a sample of Euphausiids for the analysis of their mercury content. (AEP2).

NARRATIVE: (a) RV CLIONE anchored in Corton Roads for initial functional tests of the multi net; and then proceeded to the Smith's Knoll area for towing trials. These were completed by 1700 h and CLIONE returned to Lowestoft docking at 1925 h.

(b) RV CLIONE left Lowestoft at 0825 h, 8 May and steamed to the starting position of the plankton survey grid 27 nml N x E of Flamborough Head. Sampling began at 2250 h, 8 May and proceeded uninterrupted until the grid was completed off the Farne Islands at 2230 h, 11 May (Figure 1).

Between 0630 h and 2220 h 12 May, seven bottom trawl hauls were made from the Farne Deeps to an area about 12 nml off North Shields.

A further seven plankton sampling stations were completed between 2345 h, 12 May and 1330 h, 13 May in the area where Nephrops larvae densities were expected to be highest. Progress around this mini-grid, which included one

collection tow for Euphausiids, was slowed by a heavy northerly swell. This resulted in the abandonment of two further stations south of latitude 54°50'N

The work of the cruise was completed with one further trawl haul at latitude 54°50'N longitude 01°60'W from 1410 h to 1510 h, 13 May. RV CLIONE then set course for Lowestoft arriving there at 1000 h, 14 May.

RESULTS:

- (a) A full report of the trials is filed on FLR 4840A. Briefly the stability of the net was good, but the net bars did not appear to be fully opening at all times. The net bar-detection system was good and gave an unambiguous indication of the status of the nets. The unresolved problems are now mechanical and related entirely to the actions of opening and closing nets.

- (b) 1. A total of 77 plankton survey stations was completed using the standard 76 cm high-speed tow net. No Nephrops larvae were found during the preliminary examination of about 20 samples from the area where larvae densities were expected to be highest. It appears that hatching had not begun and that this might be attributable to the low bottom temperatures of around 5.5°C observed during sampling in this area. However no firm conclusions can be drawn regarding temperature and the absence of larvae until comparisons have been made with the 1976 surveys.

The timing of the present series of surveys is based on those done in 1976, which are the only data available for this area. Those surveys indicated no hatching in April, rising rapidly to a peak hatching in mid-May.

2. No attempt could be made to estimate spatial variability of Nephrops larvae and instead a mini-grid of seven stations was sampled at the end of the cruise. These samples, taken over the expected peak hatching area, have not yet been examined.
3. A total of 8 trawl stations were worked using the 60 mm. Nephrops trawl. The stations were done in a line running roughly from the Farne Deeps to approximately 10 nml off Hartlepool.

Catches of Nephrops were disappointingly small with the highest catch of seven Nephrops taken about 30 nml NE of the River Tyne. No berried females were found and no length weight or maturity data was obtained. Three of the trawl hauls yielded no Nephrops at all, including one, two hour tow over the dusk period.

4. One 15 g (wet weight) sample of Euphausiids was collected at a position approximately 10 nml NE of the River Tyne. This sample was returned deep frozen to AEP2 for mercury analysis.

MISCELLANEOUS:

- (i) Long rough dabs were collected from all trawl hauls and returned deep frozen to the laboratory for Micheni Ntiba (FSM1).
- (ii) Two samples of herring were collected and returned deep frozen for routine sampling (FSM2).

(iii) Four diseased specimens of the common dab were collected and deep frozen for FDL Weymouth.

J H Nichols
28 May 1987

SEEN IN DRAFT: DJG

INITIALLED: JRF, PM

DISTRIBUTION:

Basic List +
R B Mitson
E G Shreeve
J H Nichols
B R Riches
C S A (2)
C G Brown
M W Easey
R P Flatt
R A Ayes
A Gouldby

