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MINISTRY OF AGRICULTURE, FISHERIES AND FOOD
FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1979 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 13
(PROVISIONAL:Not to be quoted without prior reference to the author)

STAFF

P Warren (NIC)
D Bennett 1st half
E Edwards 2nd half
S Lovewell 1st half
C Gough 1st half
P Connor 2nd half
M Slater (Fleetwood)
C Whiting 2nd half

DURATION

Left Lowestoft 1615 h 30 October
Arrived Lowestoft 0725 h 18 November

LOCALITY

NE Coast/North Sea

AIMS

1. To survey Nephrops distribution and abundance in the fishery off the northeast coast, and record by-catch fish species.

2. To check Nephrops escape through various parts of a fish/prawn trawl.

3. To make videotape recordings of Nephrops and burrows using DAFS video sledge (if available for loan).

4. To observe mortalities among Nephrops tagged with various types of persistent tags.

5. To examine all cod stomachs for Nephrops prey.

6. To obtain additional information on Nephrops stock around Silver Pit/ Botney Gut.

7. By-catch observations, including otolith sampling.

NARRATIVE

CORELLA sailed into strong westerly winds which precluded work at Silver Pit/Botney Gut on the voyage north. Instead, trawling was begun inshore near the River Tyne. After two days work on aims 2, 4, 5 the weather steadied and overnight the vessel steamed to Silver Pit. In perfect conditions on 2 November good results were obtained but gales returned the following morning and the ship dodged throughout that day, returning north on 4 November. Trawling began early the next morning but by 0900 h wind had increased to 40 knots and the remainder of that day was spent at anchor in Tees Bay where tagging observations were continued in peace. Strong winds continued through 6 November and CORELLA

anchored off Sunderland. Work continued until the vessel docked at Sunderland to take water and stores and exchange scientific staff. Over the neap tide period, good progress was made on aim 1. On 11 November the officers of the Fishery Protection Vessel, HMS Alderney and Mr Billbridge (DINE) were received on board and the purpose and progress of the present cruise were discussed while trawling proceeded. The morning of 12 November began with heavy swell and work was delayed for several hours but conditions moderated by 1100 h and aims 1, 5, 7 were continued without a hitch. By 15 November the survey was substantially complete and CORELLA called at Blyth to top up with fresh water, leaving only some small mesh liner and cover work to be completed. This was finished by 1030 h 17 November and the vessel steamed for home, arriving 0725 h 18 November.

RESULTS

1st half

(i) Useful progress was made in experiments with covers fitted to the wing and belly of a fish/prawn trawl and work with small mesh liners and covers provided data on Nephrops escapes through a 75mm mesh codend.

(ii) Various persistent tags were tested on all sizes of Nephrops, and tagging mortalities were calculated after intervals in deck storage tanks. Results were related to size of tagged individual. All tagged survivors were successfully transferred by road to the Burnham Lab.

(iii) Samples of Nephrops were obtained from Silver Pit/Botney Gut to determine length frequency distributions for the stock in that area. Only 3% of male and 13% of female nephrops were found to be smaller than the minimum legal size of 25 mm carapace length.

2nd half

(iv) The northeast coast Nephrops stock survey was carried out as planned with 28 half hour trawl stations being completed in the area between Hartlepool-Newbiggin.

(v) Samples of cod, haddock and whiting were measured and otolithed from North Sea roundfish sampling area 4.

(vi) Observations were made on the survival of small discard Nephrops after intervals in deck holding tanks.

(vii) The "blinding" of 75mm codend meshes by a 115mm lifting cover was calculated. Five replicate observations suggested that 74% of codend meshes were blinded by the larger lifting bag mesh. The effective mean codend mesh size might be reduced to 52 mm.

(viii) The stomach contents of 281 cod were examined for Nephrops; predator and prey were measured.

(ix) Live Nephrops were held and transferred to Burnham for moult increment work in the laboratory.

(x) Small mesh liner and cover work provided data on Nephrops escapes through a 50 mm mesh codend.

(xi) Live plaice were collected for the Lowestoft laboratory (Mr Scholes).

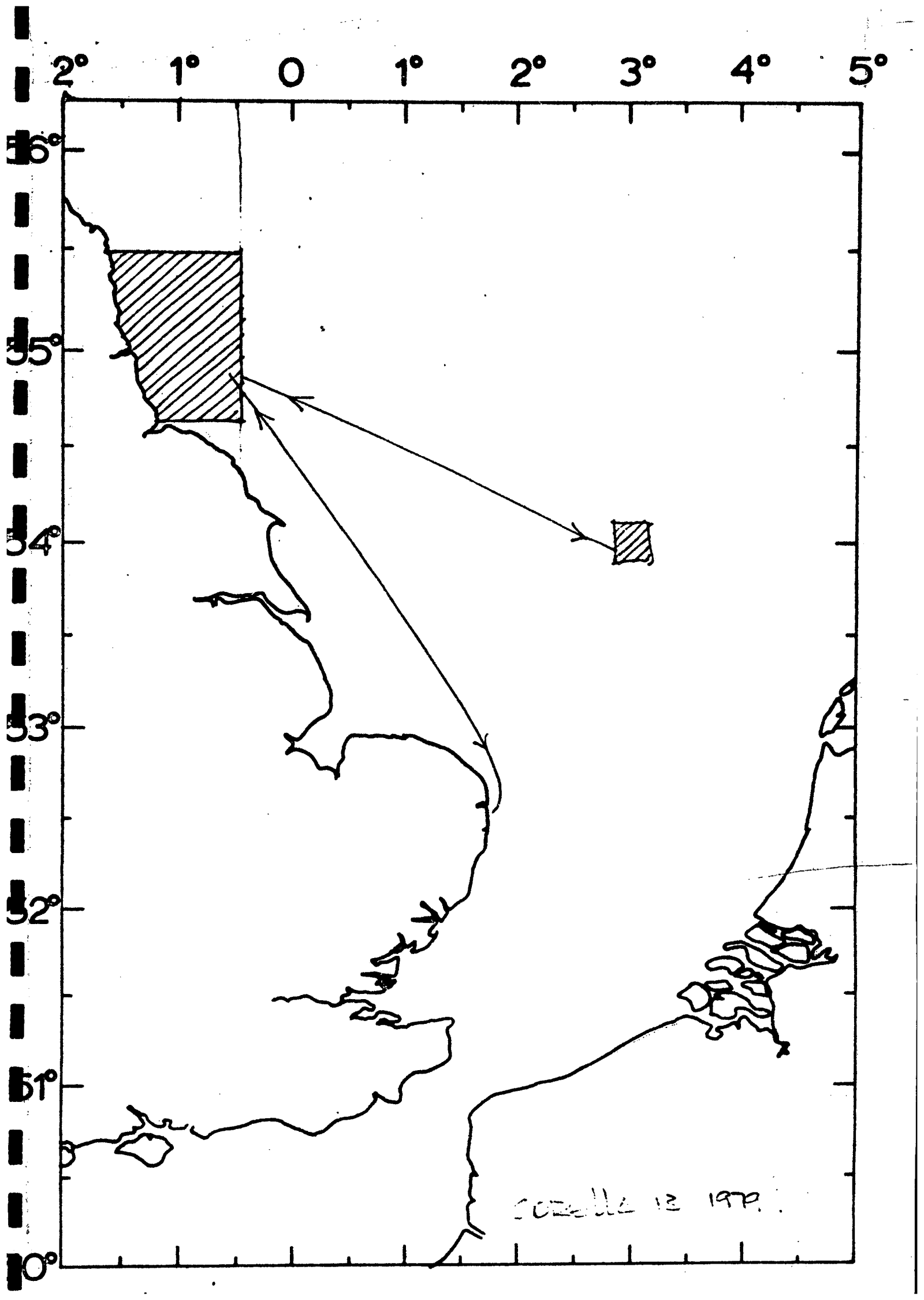
Peter Warren
29 November 1979

SEEN IN DRAFT: G Sinclair
R C Newrick

INITIALLED: AJL

DISTRIBUTION:

Basic List
P Warren
D Bennett
S Lovewell
C Gough
P Connor
M Slater
C Whiting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