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R V TELLINA

Report for Cruise 4/1969

Staff: J.D. Riley 5-12/5/69 & 2-6/6/69 Duration:  
D Harding 12-19/5/69 5 May - 6 June  
D S Tungate 19-26/5/69  
J Gregory 29/4/69-16/5/69 ) Based ashore  
P Walker 14-29/5/69 ) at Bradwell

Locality

Blackwater Estuary, Essex and Suffolk coasts.

Aims

1. To measure sole egg production, egg and larval dispersal and mortality in the Blackwater.
2. To measure planktonic vertical distribution of sole eggs and larvae.
3. To map other sole spawning areas on the Essex and Suffolk coasts.
4. To collect shrimp and prawn samples for Mr Warren (Burnham-on-Crouch Laboratory).

Narrative

The cooling water inflow to Bradwell Power station was sampled over a minimum of half a tidal cycle daily between 29/4/69 and 29/5/69 when sampling had to be curtailed due to routine CEGB maintenance engineering.

Sampling from the TELLINA started on 6 May and nearly half the samples were collected by the 12" Tin Tow Net (60 mesh) at the mouth of the Blackwater (Bench Head Buoy) simultaneously with the Bradwell sampling programme.

Four transects from the Bar Buoy to Osea Island up the Blackwater were made, collecting plankton and measuring temperature and salinity. Using the TELLINA's dinghy samples above Osea Island up to Maldon were collected.

A break at Lowestoft was taken from 27/5/69 until 2/6/69 and the chief aim of the last part of the cruise was a search for this year class's metamorphosing 0-group soles. No time was lost for weather or any other cause.

Results

1. Egg production in the Blackwater was monitored at least partially from 29/4/69 until 5/6/69. The sole fishery this year has been poor in this area and presumably as a result of this sole egg catches were below the level expected based on a preliminary survey in 1967. Large numbers of clupeoid and goby larvae dominated the fish larval content of the plankton.
2. Simultaneous sampling of surface and bottom planktonic fish larvae was completed satisfactorily for vertical distribution studies.

3. The rivers Colne, Orwell and Stour and the inshore water off the Deben, the Ore, and inside Sizewell Bank, were sampled for planktonic fish eggs and larvae but less comprehensively than the River Blackwater.
4. Samples of prawns and shrimps were collected by the standard 2M beam trawl during the last week of the cruise for Mr P Warren (Burnham-on-Crouch Laboratory).
5. Samples of live inshore phytoplankton were collected off Benacre Ness with a  $\frac{1}{2}$  International Net (90 mesh + 200 silk) for Mr Wimpenny.
6. About 100 sole skin and muscle samples were collected from the Blackwater for Dr Dando (Plymouth Laboratory).

J D Riley

Initialled: H A C  
Seen in draft: WB

Distribution:

Basic list, plus the following:

Mr Riley  
D Harding  
Mr Tungate  
Mr Gregory  
Mr Walker  
Mr Godfrey, Station Chemist, Bradwell Power Station  
Dr Beauchamp, CEEB Res. Lab., Leatherhead