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

1990 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: 6b

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DURATION: 17-26 May

LOCALITY: Bristol Channel/Western Channel/Celtic Sea.

AIMS:

1. To assess the production of sole eggs in the Bristol Channel as part of a series of surveys to determine total seasonal production in that area.

2. To sample on up to 31 stations in the English sector of the western English Channel for the larvae of *Cancer pagurus*.

3. To fish with handlines for samples of two and three year old mackerel in ICES regions VIIE and VIIJ. Suitable specimens will be kept live in the circular tank and returned to Lowestoft for estimation of atresia.

4. To observe and record the distribution and abundance of sea-birds at sea as part of the Nature Conservancy Council programme to construct a distribution atlas for British sea areas.

NARRATIVE:

RV CORYSTES sailed from Lowestoft at 1415 h 17 May and steamed to a position 15 nautical miles south of Start Point. On arrival there at 1430 h 18 May one hour was spent feathering for mackerel before continuing on to the start of the plankton survey grid off Lands End (Figure 1). The sole egg survey was started at 2245 h 18 May and continued in good weather until its completion at 0300 h 23 May. During this survey additional sampling, for bass eggs and larvae, was carried out off Trevose Head, off Ilfracombe and south of the Gower Peninsular.

On completion of the sole egg survey RV CORYSTES steamed south to 48°34'N:08°'W to fish for spawning mackerel for atresia studies. On arrival there at 1230 h 23 May, feathering with four rods began, and continued until 1545 h. After a two hour steam to the north, a further one and a half hours was spent feathering for mackerel until 1915 h, when passage was made towards the start of the final plankton survey grid in the western Channel (Figure 1). This survey, using the 53 cm sampler, was started at 0230 h 24 May at 49° 40'N: 05° 52'W, and completed south of Start Point at 0447 h on the following day. Course was then set for Lowestoft arriving there at 1100 h on the following day.

RESULTS:

1. A total of 84 stations was completed as part of the series of Bristol Channel sole egg survey (Figure 1). Sole eggs and larvae did not appear to be abundant in these samples, although the volume of plankton present precluded anything other than a preliminary examination of a few of them. Gadoid larvae and the larvae of pilchards were numerous in many of the samples from the eastern half of the survey area.

   During the survey a total of 14 hauls was made with the two metre ring net in areas where bass eggs and larvae could be expected. These samples were not examined on board, but will be returned to Lowestoft for a study of egg development and larvae shrinkage.

   The volume of plankton in the 76 cm sampler, and in particular the prevalence of Phaeocystis, presented sampling problems throughout the survey. After 26 stations the mesh size was changed from 60 mpi to 50 mpi to reduce the clogging effect. Most of the Phaeocystis was in association with the inshore boundary of thermaly stratified water with a stratification parameter of less than 25 J per.M^3.

   Thermal stratification was strong over the western part of the area with values >50 J per.M^3 at the north-western corner.

2. Twenty two samples was collected in the western Channel for studies of the distribution and abundance of crab larvae (Figure 1). None of these samples were examined on board.

3. Sixteen immature mackerel were taken off Start Point, (area VIIE) for studies of the effect of year class size and age, on recruitment to spawning.

   Sampling for mature mackerel was carried out in area VIIH instead of VIIJ. A total of 308 fish were caught at the two stations fished. Of these, 88 were kept live on board in the annular tank, and returned to Lowestoft, for atresia studies, at the end of the cruise. The remainder were sampled, either as controls for the atresia studies, or for comparison with those taken in area VIIE at the start of the cruise.

4. An observer from the Nature Conservancy Council "sea birds at sea team" was on board throughout the cruise. He made observations on the distribution and abundance of sea-birds in the Bristol Channel, South West Approaches and the English Channel. Important concentrations of Gannets and Auks, especially Guillemots and Razorbills, were found along the north Devon coast and close to the Skomer and Skolkholm Islands. These areas are probably significant feeding areas for breeding sea birds from various large colonies. Elsewhere the sea areas were found to be less important for sea birds during late May. Interesting observations of land birds, on and around the ship were also made.

J.H.Nichols
18 June 1990

CORYSTES 6B 1990

FIGURE 1

SHOWING :

CRUISE TRACK

STATION NUMBER