

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

1991 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 3a

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DURATION: 20-28 March 1991

LOCALITY: English Channel, chiefly VIId

AIMS:

1. To carry out a plankton survey using a 76 cm high speed tow net to determine:
 - (a) the distribution, abundance and production of sole (*Solea solea*) eggs as part of the ICES coordinated programme to estimate the female sole spawning stock biomass in divisions IVb and c and VIId and e;
 - (b) the distribution and abundance of the planktonic stages of crab (*Cancer pagurus*), spider crab (*Maia squinado*), and bass (*Dicentrarchus labrax*) and other ichthyoplankton as time allows.

NARRATIVE:

RV CORYSTES sailed from Lowestoft at 1030 h on 20 March and after completing engine trials off Lowestoft steamed to the first plankton station in the Thames Estuary at 2159 h. Three samples were taken in the Thames before moving to the eastern Channel to begin the main survey grid. Sampling continued in improving weather conditions until 0214 h on 23 March when the depressor sub-frame and attached Guildline unit was lost at station 29 (Figure 1). An attempt was made to recover the gear by trawling for it with a Granton trawl. This was abandoned for the time being when the trawl was badly damaged and a replacement TTN unit rigged while steaming south to the next station. It was then discovered that the spare Guildline unit was faulty and it was necessary to steam to Newhaven to await the delivery of a new unit by road from Lowestoft. Approximately 14 hours were lost before CORYSTES could return to station 29 and was able to recover the Guildline and depressor frame on the first tow. At 0557 h the plankton grid was resumed and despite strong NE winds was completed by 2300 h on 26 March. As there was insufficient time to sample additional stations in the western Channel, CORYSTES steamed to the southern North Sea completing a group of 5 extra stations before docking at Lowestoft at 0740, 28 March.

RESULTS:

Aim 1a

A total of 69 hauls was completed in VIId and IVc using the HSTN. Preliminary results (Figure 2) indicated that sole eggs were most abundant east of a line from Beachy Head south to the French coast. Concentrations of stage I eggs occurred off Rye Bay on the English coast, off the river Somme on the French coast and to a lesser extent in the Baie de la Seine. Most eggs were in stage I (74%) with only 5% at stage IV. There was no evidence that thermal stratification had developed at any of the stations.

Aim 1b

No crab larvae were found in the preliminary examination of the samples, suggesting that spawning of *Cancer pagurus* had not yet begun. Small numbers of bass eggs were identified mainly in the central Channel stations.

Salinity and temperature profiles were taken from surface to bottom at all HSTN stations and a continuous log made of surface salinity, temperature, light and chlorophyll 'a' fluorescence along the survey track.

Richard Millner
27 March 1991

SEEN IN DRAFT: MJW
RG

INITIALLED: GPA

DISTRIBUTION:

Basic list +
B Thompson
M Easey
R Flatt
A Lawler
R Harrop
J Riley
J Nichols

R de Clerck, Belgium
M Giret, IFREMER, France
A Rijnsdorp, RIVO, Netherlands

DIs, SE, SW, E

SFCs: Kent and Essex, Sussex, Southern, Devon, Jersey, Guernsey

Fig 1

CORYSTES 3A/91

CRUISE TRACK
STATION NUMBER

COASTLINE



