

THE CENTRE FOR ENVIRONMENT, FISHERIES AND AQUACULTURE
SCIENCE,
LOWESTOFT LABORATORY, LOWESTOFT, SUFFOLK, NR33 0HT

2003 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES CRUISE 4Z/03

STAFF:

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DURATION: 4 - 19 May 2003

LOCATION: Southern North Sea, English Channel and
Western Approaches (VIId, e, f, h)

AIMS:

1. To conduct a plankton survey, using a 53 cm high speed tow net fitted with the Guildline CTD monitoring system, to determine the distribution and abundance of crab (*Cancer pagurus*) larvae in the area bounded by latitudes 48°00' N and 51°30' N and longitudes 7°00' W and 3°00' E, with particular emphasis on the eastern English Channel.
2. To continuously monitor the seabed topography using a combination of swathe bathymetry and QTC ground discrimination.
3. To continuously monitor temperature and salinity of sub-surface sea water.
4. To deploy 5 satellite tracked, Argos drifting buoys

NARRATIVE:

The cruise was switched from RV ENDEAVOUR to the CORYSTES at short notice removing the opportunity to use the swathe bathymetry equipment. CORYSTES sailed at 1200h on Sunday 4 May in good weather and proceeded to the start of the survey grid in the Western Approaches. 4 Argos buoys were deployed on passage at stations throughout the English Channel. The 5th buoy could not be activated because of a broken magnet and was not used.

The plankton survey was commenced at 2300 BST on May 5th, in the south-westernmost area of the survey grid off the western Brittany peninsula, after which north-south grid legs were worked moving gradually from west to east in mostly moderate to fresh winds varying between SW and NW in

direction. On May 9th the cored towing cable on the starboard winch was damaged at the towing junction with the sampler, necessitating a switch to the port winch. Unfortunately the reeving mechanism on this winch was not operating correctly and during the morning of May 12th the cable became loose on the drum during the sampling of the survey's deepest station, making it unsafe to use. It was not possible to rectify this immediately and as arrangements had been made to exchange personnel at Weymouth that afternoon, course was set for Weymouth and the exchange completed without problems. The Corystes returned to the deep station in order to stream and recover the cable. The plankton grid was then resumed and was completed without problems on the evening of May 19th. The Argos buoy deployed in the most easterly position, in the western approaches to the Dover Straits, was recovered in the area of the South Falls off the Kent coast after a 4 hour search in force 5-6 SW winds.

The QTC ground discrimination package was run continuously throughout the survey as was the environmental monitoring package for surface salinity and temperature levels. Water samples for analytical determinations of salinity were taken at every 3rd plankton station.

RESULTS.

The whole of the planned plankton grid, comprising 163 stations, was successfully completed. (Fig. 1) Full analysis of the collected samples will be undertaken in the laboratory. Unstable weather conditions prevented examination of the samples for crab larvae at sea. Problems with clogging of the sampler by phytoplankton were experienced at many stations.

Generally the sea temperature was as expected at the time of year (10 - 12°C) and there were no signs of a thermocline becoming established in any area.

The QTC data will be analysed upon return to the laboratory.

Argos buoys were deployed as follows to provide data on possible larval drift. Positional updates were received at sea twice daily.

PTT 13684; 4/05/03; 50°35'N 00°45.23'E. Drogue at 15 m.

Recovered 18/05/03; 51°13.44'N 01°42.092'E

PTT 13679; 5/05/03; 50°10.16N 01°00.70W: drogue at 15 m.

Ceased transmitting 17/05/03.

PTT 13693; 5/05/03; 50°10.52N 01°59.54W: drogue at 30 m.

Ceased transmitting 14/05/03.

PTT 21825; 5/05/03; 49°32.44N 03°59.96'W: drogue at 30 m.

Failed to transmit.

The tracks of the 3 operational Argos buoys are shown in figures 2 - 4

Corystes docked at Lowestoft on the mid-day tide, 19th May.
My thanks are extended to the officers and crew of Corystes
for their outstanding assistance and co-operation in what
were, at times, difficult circumstances and to my scientific
colleagues for their flexibility and understanding in the
face of unavoidable, last minute disruptions to the original
survey plans.

D. Eaton, 19 May
2003

SEEN IN DRAFT:

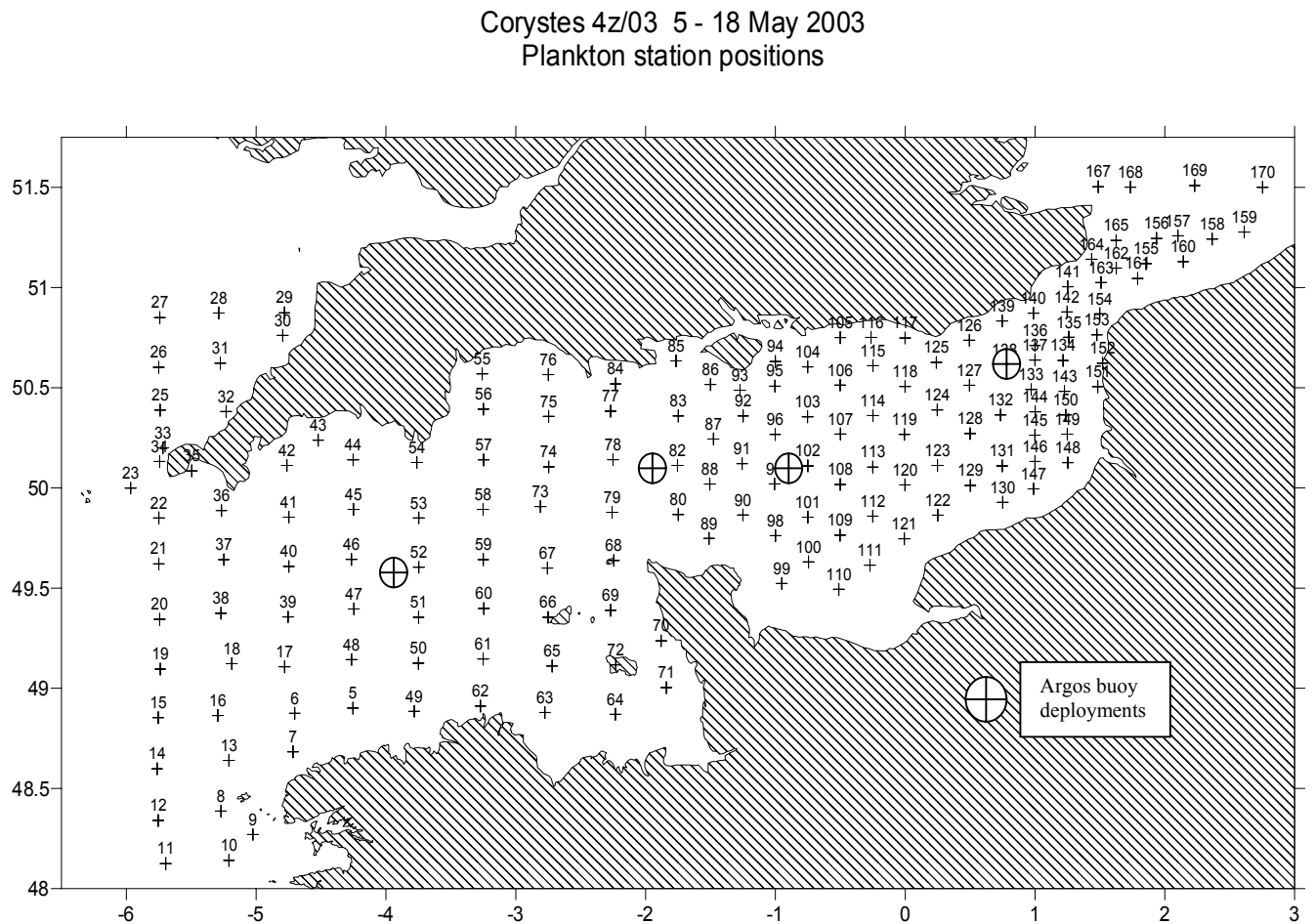
G. Chapman (Master)
A. (Senior Fishing Mate)

INITIALLED:

DISTRIBUTION: Basic List +

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Figure 1. Plankton station and Argos buoy release positions; magnitude of station number indicates order of sampling.



Figures 2 – 4. Argos buoy tracks.

