

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

1990 RESEARCH VESSEL PROGRAMME

REPORT: RV CORYSTES: CRUISE 3

STAFF: D J Symonds
S Flatman
L E Woolner
P M Hudson
P A Large
B F M Harley

DURATION:

Left Lowestoft 1045 h, 9 ~~March~~ **FEBRUARY**
Arrived Lowestoft 1000 h, 26 ~~March~~

LOCALITY: Bristol Channel

AIMS:

1. To assess sole egg production in the Trevoise Head spawning area as part of the programme to determine spawning stock biomass.
2. To collect ovaries from sole for fecundity estimation.
3. To investigate sole feeding during the spawning season.
4. If time permits, to carry out a pre-recruit flatfish survey in the Bristol Channel.

NARRATIVE:

The main feature of this cruise was the succession of low pressure areas tracking across the North Atlantic resulting in only the occasional brief respite from the strong to severe gale force winds and heavy swells.

After a good passage to the Dover Straits, progress in the English Channel became increasingly difficult as winds increased from the westerly quarter. Course was eventually altered to Tor Bay where CORYSTES anchored at 0700 h on 11 March. Arrangements had been made to pick up spare parts for the main engine from Newlyn so a passage was made on the 12th to an anchorage in Mounts Bay. With continuing bad weather, mainly from the west and south-west, CORYSTES remained at anchor until 0845 h on the 15th when, with some improvement in the forecast, the ship proceeded to the first plankton station west of Lands End. The survey continued, often in marginal conditions, until 2030 h on the 18th when gale force south-west winds and a large swell finally curtailed sampling. Shelter was sought off Clovelly in Bideford Bay until the morning of the 20th but only 3 stations were completed before sampling was again stopped by severe south-westerly gales. A further lull in the weather allowed 7 more stations to be occupied before plankton sampling had to be terminated.

After an overnight steam, trawling commenced in an area about 6 miles north-west of Trevoise Head at 0900 h on the 23 March in relatively good weather and continued uninterrupted until 1340 h on the 24th. The last station, however, was carried out in deteriorating weather conditions and,

with an increasing south-westerly wind and heavy swell, course was set for Lowestoft.

RESULTS

Aim 1 Sixty-seven of the proposed 94 stations in the first plankton grid were completed with the 76 cm High Speed Tow Net. Conditions prevented analysis of the samples at sea. Surface temperature, salinity and chlorophyll 'a' were monitored continuously throughout the survey and logged at 15 minute intervals. Surface salinity samples were taken at each station for calibration of both surface unit and the profiling unit on the plankton sampler. The plankton grid was not repeated, as planned, due to time lost with the weather.

Aims 2 and 3 Twenty-seven, mainly 1 hour tows, were made with the 4 m beam trawl fitted with a small meshed liner. Catch rates of sole were generally good with the best being in the dark (up to 3/4 basket) and at dawn (1 basket).

Ovaries in maturity stage 4 were taken from 46 soles and 36 plaice for fecundity studies. The female soles were mainly in the size range 33-42 cm and none under 28 cm were caught.

Ovaries in maturity stages 4-7 from 44 soles were preserved for studies on atresia.

The stomachs of all sampled soles were examined. Nearly all were empty and the only food remains found consisted of NEREID worms and amphipods.

In addition to the otoliths taken from the sampled sole and plaice, otoliths were taken from selected commercial species to augment the market sampling programme:

Sole	95
Plaice	102
Lemon sole	71
Megrin	17
Cod	39
Ling	4
Pollack	6
<u>L. piscatorius</u>	4

Samples of edible crab (for Dr B Thompson) and dab and whiting (for A Franklin) were deep frozen.

Aim 4 The pre-recruit flatfish survey in the Bristol Channel was not carried out.

D J Symonds
1 March 1990

SEEN IN DRAFT: MJW, WM

INITIALLED:

DISTRIBUTION:



Basic list+

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