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FISHERIES LABORATORY, LOWESTOFT, SUFFOLK, ENGLAND

1970 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 4

(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

P O Johnson
P J Dare (Conway)
T J Hulme
G Howlett
J Prime

DURATION

Left Lowestoft 1030 hours 7 April

Arrived Lowestoft 0930 hours 20 April

All times are British Standard Time

LOCALITY

North Sea and English Channel

AIMS

1. To investigate by means of echo-survey and mid-water trawling the distribution of sprat shoals off the north-east and east coasts of England, over the Southern Bight and along the English Channel.
2. As well as normal biological sampling, additional material will also be collected for fecundity studies and muscle esterase analysis.
3. Herring will also be sampled when taken and the incidence of nematode infection examined.
4. Continuous surface temperature observations will be made using a thermistor and paper recorder.

NARRATIVE

The timetable for the different areas surveyed during the voyage was briefly as follows:-

7-8 April	Wash - Humber
9-10 April	Teasbay - Farne Islands, up to 30 miles offshore
11-12 "	Outer Silver Pit - Norfolk Banks - Brown Ridges
13-14 "	Central Southern Bight - Offshore Thames - Straits of Dover
15-16 "	French side of English Channel - Channel Islands
17 "	Called at St Peterport, Guernsey
18-19 "	South coast of England from Torbay to the Straits of Dover

The weather was exceptionally good for most of the voyage, with winds rarely exceeding Force 5 (Beaufort scale). 1

RESULTS

1. The results of the echo-survey showed a suprising scarcity of pelagic fish traces generally, but particularly off the north-east coast and Wash area, where only three weeks earlier abundant traces had been recorded during another research vessel survey (ERNEST HOLT, Cruise 2/1970). The extensive concentration then found off the Wash was not relocated, in spite of intensive searching over a wide area, the only remaining patch of high density trace being a small one lying in the inner part of the estuary near the Burnham Ridges.

The best traces recorded lay in the Southern Bight, between the Thames and estuaries. Fishing on these with the Engels trawl proved difficult as it was obvious from the headline transducer records that these shoals were very active and easily eluded capture. It is possible that a good proportion of these were recovering spent herring since small quantities of these, together with spawning sprat were taken.

2. The "bottom lock" counting system used with the 100 kHz sounder was tested during the trip and proved very successful.

3. Samples of sprat were taken from six different localities for muscle esterase analysis, with further material preserved for routine biological examination, fat and fecundity studies. Most of the mature sprats taken were in spawning or near-spawning condition.

4. Samples of herring were also taken from three areas in the North Sea for assessment of nematode infestation with additional samples preserved for routine population studies.

P O Johnson
21.4.70

SEEN IN DRAFT

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