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

1981 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 7

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

STAFF

F R Harden Jones

G P Arnold

R C A Bannister

E G Shreeve

T Y Lee

Ms L Emerson

DURATION

Left Lowestoft 0935 h 20 May

Arrived Lowestoft 0625 h 30 May

All times are Greenwich Mean Time

LOCALITY

Middle North Sea

AIMS

1. To study, jointly with RV CORELLA, the behaviour of plaice on a summer feeding ground with particular reference to stomach contents and diurnal vertical migration.
2. To bring back live plaice for laboratory studies.
3. To survey the North Smithic sandbank (Bridlington Bay) for a reported discharge of groundwater.
4. To locate and survey with sector-scanning sonar an area of paving stones off Cromer which is reported as being a refuge for large lobsters. A diving team (working from a zodiac) was available to support this survey.

NARRATIVE

CLIONE left Lowestoft 0935 h on 20 May and steamed to Cromer to locate and survey the lobster refuge using sector scanning sonar. During this period of the cruise two members of the staff of Loughborough University's Department of Electronics were on board in connection with trials of a new sector scanner display (a digital converter and colour monitor). The Cromer survey started at 1340 h and when completed, the visitors were taken ashore by the diving team at 1912 h and landed safely at West Runton. CLIONE then steamed to a rendezvous with CORELLA. The next day (21 May) fishing with a bottom trawl commenced along a standard line just to the south of Markhams Hole. Work continued until 1900 h on 26 May when CLIONE left the area for Bridlington. On the 27 May the North Smithic bank was surveyed by echo sounder and a grid of 35 CTD stations was completed, positions being referenced to the North Smithic buoy by radar. Two CTD anchor stations were worked and a sector scanner survey was carried out. At 2111 h CLIONE left Bridlington Bay and returned to the Markhams Hole area where plaice for laboratory studies were

collected and the trawl survey completed at 0245 h on 29 May. More plaice for laboratory studies were caught to the north east of the Indefatigable Banks later in the day, and when this work was completed CLIONE steamed to Corton Roads and anchored for the night. CLIONE entered Lowestoft on 29 May and tied up at 0625 h.

RESULTS

1. Feeding behaviour. The stomachs of over 1100 plaice were examined and the results showed a diurnal pattern of feeding activity, the proportion of plaice caught with empty stomachs being highest at night and lowest in the afternoon.
2. Live plaice. The fish required for the laboratory programme were caught and landed in good condition.
3. Groundwater at North Smithic. No evidence was obtained to support the suggestion that groundwater was seeping from the limestone beneath the sandbank. However, on a south going tide, several stations on the top of the bank had bottom water of a lower temperature and higher conductivity than that recorded elsewhere in the water column.
4. Cromer lobster refuge. The area of paving stones was not located by sector scanning sonar in the reported position.
5. Other activities.
 - a. Dr Arnold tested a new Sea-Tech transmissometer.
 - b. A new fish release cage was tested and found to require some modification.
 - c. A plaice fitted with an acoustic transponding tag powered by lithium batteries was kept under surveillance for several hours. The tag worked well.
 - d. The Loughborough digital converter and colour monitor was tested (in polar and B scan display) when surveying wrecks and when fish tracking.
 - e. The height of the wreck of the tanker 'Georgia' which lies to the north east of Cromer pier was measured and another wreck to the north of the pier surveyed. The results will be sent to the Wreck Officer, Hydrographic Department, Taunton.
 - f. Ms Emerson collected numerous blood and muscle samples from plaice in support of laboratory studies.

F. B. Harden Jones
5 June 1981

SEEN DRAFT: J. R. French - Master
G. F. Lee - Fishing Skipper

INITIALLED: DJG

DISTRIBUTION:

Basic List

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