

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

1994 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 9

STAFF:

C T Macer
T J Hulme
T W Boon
R J Read
R A Ayers
J M Elson
D J Brown
P J Welsby
Ms G Leaper (JNCC)
Ms C Pollock (JNCC)

DURATION:

Left Lowestoft 2030h 5 August.
Arrived Lowestoft 0306 h 29 August
All times are Greenwich Mean Time.

LOCALITY: North Sea

AIMS:

1. To carry out a groundfish survey of the North Sea using a standard GOV trawl in order to obtain information on:
 - a) Distribution and abundance of all fish species.
 - b) Length and age distribution of commercially important species.
 - c) Distribution of fish in relation to their environment.
 - d) Distribution of macrobenthos and anthropogenic debris.
 - e) Surface and bottom temperature and salinity data using reversing bottles.
2. To collect material for fish identification courses.
3. To provide fish samples for contaminant analysis.
4. To collect samples of herring (*Clupea harengus*) for the study of Ichthyophonous disease.
5. To collect biological data from ling (*Molva molva*), catfish (*Anarhichas lupus*), silvery pout (*Gadiculus argenteus*), poor cod (*Trisopterus minutus*), four-beard

rockling (*Rhinonemus cimbrius*), bib (*Trisopterus luscus*), and bluemouth (*Helicolenus dactylopterus*).

6. To collect fish food.
7. To return live berried crabs to the Laboratory.
8. To collect whelks for contaminant analysis.
9. To conduct trials of the electronic data capture system.
10. To investigate the feeding of seabirds on fish discards (JNCC Aberdeen).

NARRATIVE

The ship steamed to the first station in the Thames Estuary (rectangle 32F1), where work commenced at 0540h on 6 August. Proceeding northwards in the eastern half of the North Sea, the vessel reached the north-western limit of the grid (rectangle 51E8) on 18 August. There had been brief interruptions to the programme on 14 August due to a north-westerly gale, and on 16 August for engine repairs.

Stations were then worked in a southerly direction in the western half of the North Sea, with a brief diversion on 23 August to pick up a ship's officer by Searider at Aberdeen. The grid was completed at 1357h on 28 August in rectangle 36F2 east of the Humber, when the vessel steamed for Lowestoft.

RESULTS

1. A total of 78 half-hour trawl hauls were made, of which 5 were invalidated by gear damage. This occurred in rectangles 52E8, 49F0, 44F3, 44F5, and 43E8. Valid repeat tows were made in all rectangles except 43E8, so that 73 of the 74 rectangles on the grid were successfully completed. The standard tow positions in rectangles 42F1 and 47F3 could not be worked, due to the existence of new pipelines. The usual biological sampling procedures were carried out on the target species. Photographs of the benthos were taken at each station, and anthropogenic debris was weighed and recorded. Scanmar sensor records of headline height, wing spread and door spread were logged. All data were input to the FSS system. Surface and bottom temperature and salinity data were collected by reversing bottle at all but 5 of the valid trawl stations, the hydrographic winch having broken down on 27 August.
2. Specimens of 49 different species were collected for use in fish identification on the SFI fishery protection officer's course (A Watson).
3. Samples of dab, haddock, herring, mackerel, and cod were collected from selected stations for contaminant analysis (A Franklin).
4. Samples of all herring caught were examined for the occurrence of the *Ichthyophonus* fungal infection (D Bucke). Infected herring were detected in rectangles 45F2 and 45F1.

5. Biological data were collected from all of the minor species targetted by the ICES IBTS Working Group.
6. Approximately 135 kg of small fish was frozen for use as fish food (P Bromley).
7. No berried crabs were caught during the cruise (B Thompson).
8. A total of 62 whelks (*Buccinum* and *Neptunea*) was preserved for contaminant analysis and morphological examination (P Walker on behalf of NIOZ).
9. Trials in which length data were input directly to a laptop via a light pen and bar coded measuring board were very encouraging. The system performed well despite the rugged conditions
10. Staff from JNCC Aberdeen made extensive observations on the abundance of different species of seabirds, and on their feeding behaviour on discarded fish.
11. The installation of a fish hopper into which the codend was emptied and from which fish could be fed directly to the sorting tables was a great improvement on the previous arrangement, and no major problems were encountered.
12. Samples of morlog were collected (J Ramster for BGS)

C T Macer
29 August 1994

SEEN IN DRAFT

Master: RJ

Senior Fishing Mate: MR

INITIALLED: JGP, JWH

DISTRIBUTION:

Basic list +
C T Macer
T J Hulme
T W Boon
R J Read
R A Ayers

J M Elson
D J Brown
P J Welsby
Ms G Leaper (JNCC)
Ms C Pollock (JNCC)

VALID TRAWL STATIONS CIROLANA CRUISE 9/94

