

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

1990 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA : CRUISE 11

STAFF:

B W Jones (27 Nov-11 Dec)
C T Macer (11-20 Dec)
J Casey
W A Dawson
P A Large
C L Whiting
S Warnes
M Sherlock
C Stone (NCC)
M Lemoine (IFREMER) (27 Nov-4 Dec)
Y Morizur (IFREMER) (4-11 Dec)

DURATION:

Left Lowestoft 1500 h, 27 November.
Arrived Lowestoft 1130 h, 20 December.

All times are Greenwich Mean Time

LOCALITY:

Eastern and Western Channel (VIIId and VIIe)

AIMS:

1. To carry out a groundfish survey using the Portuguese High Headline Trawl.
2. To record temperature and salinity profiles using the CTD.
3. To collect flesh samples from cod, plaice, and mackerel from the western Channel for AEP1.
4. To collect otolith samples from possible prey species for future use in prey identification.
5. To collect liver and gas gland material from cod for PML.
6. To freeze any bass caught for studies on maturation and spawning.
7. To collect specimens for the fish identification course.
8. To sample mackerel in the mackerel box.
9. To collect samples for the North Sea Task Force Monitoring Plan.

NARRATIVE:

The ship proceeded to the Dover Straits where the first station on the groundfish survey was commenced at 0730 h on 28 November. The survey continued westwards mainly in the southern half of the Channel until 1150 h on 4 December, when an exchange of IFREMER staff took place by pilot boat at Cherbourg. The survey was then resumed in the southern sector working in a westerly direction, being briefly interrupted by bad weather on 8 December. The western limit of the grid in this sector was completed on 9 December, and the ship then began to survey the northern half of the Channel working eastwards. On 11 December an exchange of staff took place by pilot boat at Plymouth. Work commenced at 1550 h on 13 December on a trawl (midwater and bottom) and echo survey for mackerel between the Eddystone and Start Point, and this was completed at 1850 h on 14 December. The groundfish survey was then resumed, and this was completed off Brighton at 1655 h on 19 December, when the ship left for Lowestoft.

RESULTS:

Aim 1. As expected, many of the grounds in the Channel proved difficult to fish, and gear damage was frequently encountered, even on some tows which had been previously logged as being clear. A total of 61 one-hour hauls with the Portuguese trawl were made, of which 12 were invalidated by gear damage. Valid hauls were made in 42 of the 60 sub-rectangles in which the survey area had been divided. Of the sub-rectangles not covered, 15 were not fished due to lack of time, ground information or bad weather, and 3 were fished but no valid hauls were completed. Records from the Scanmar height and door-distance sensors were logged from each haul, though a fault developed with the latter sensor early in the trip.

A total of 67 finfish species was caught during the survey, with an average catch-rate of 201 kg per hour. The predominant species was scad (74 kg/hr), which was widespread but particularly abundant in the

western Channel. Next in abundance were species which averaged 10-15 kg/hr, including spurdogs, herring, pilchard, poor-cod, whiting, and mackerel. Species which averaged 2-5 kg/hr included various dogfish, cod, bib, black sea bream, bass, and sting ray (5 specimens only).

Aim 2. Temperature and salinity CTD profiles were logged on the computer at each valid trawl station, and Nansen bottle salinity samples were also taken at surface and bottom for calibration.

Aim 3. Flesh samples from cod, plaice, and mackerel were collected for AEP1 from the western Channel between Start Point and the Cherbourg peninsula.

Aim 4. Otoliths from different sizes of various fish species were collected for future use in stomach content prey identification.

Aim 5. Liver and gas gland samples from 8 cod were frozen in liquid nitrogen for PML.

Aim 6. Bass were caught from most areas of the Channel in small quantities and were frozen for subsequent examination. However, a larger catch of 233 kg (132 fish) was taken in rectangle 29E7, and part of this catch was sampled on board.

Aim 7. Specimens from a wide variety of species were frozen for use in the identification course.

Aim 8. Few mackerel were detected or caught in the area surveyed between the Eddystone and Start Point. Most of the pelagic trace fished on was identified as pilchard or (predominately) scad, although the work was hampered by gear damage. However, mackerel samples were obtained from several areas in the Channel.

Aim 9. Samples of whiting (50 fish), dab (25 fish), and plaice (20 fish) were obtained for the Task Force programme.

Miscellaneous

1. The following pelagic samples were frozen: sprat (2), herring (2), pilchard (1).
2. Two ovaries from monkfish were preserved for fecundity studies.

B W Jones
C T Macer
21 January 1991

SEEN IN DRAFT:

B C
J H

INITIALLED:

J G S

DISTRIBUTION:

Basic List +
Scientific Staff (Lowestoft)
M Lemoine (IFREMER)
M Morizur (IFREMER)
C Stone (NCC)
D Livingstone (PML)
M Pawson

Acknowledgement: We thank our IFREMER colleagues for their help and support.