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

1989 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA : CRUISE 3

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

STAFF:

B W Jones
J Casey
S Flatman
W A Dawson (from 10 March)
B C Mumford
M J Boon
P A Large
S Warnes
M Squirrel
J Read (to 10 March)
F M Borges (Visitor, Portugal)

DURATION:

7 March-3 April

LOCALITY:

Celtic Sea

AIMS:

1. To carry out a trawl survey of the western Celtic Sea.

2. To deploy current meters for Mr Symonds.

3. To sample juvenile fish.

4. To sample pelagic shoals.

5. To collect ovaries of Lophius sp.

NARRATIVE:

CIROLANA sailed from Lowestoft at 2100 h on 7 March and made a good passage in gradually deteriorating weather conditions to arrive at the area where the current meters were to be deployed on the morning of 9 March. However, adverse weather conditions prevented any work that day. All six current meter rigs were laid on 10 March after which the ship steamed to St Ives where a small boat brought out Mrs Dawson and took Mr Read ashore. CIROLANA then steamed overnight to the first position to be worked on the trawl survey.

Fishing on the Trawl Survey commenced on 11 March and continued until 31 March to complete all planned survey stations. During this period weather conditions, until the last few days were generally poor and work had to be suspended on a number of occasions when the weather became too bad for fishing. CIROLANA called at Falmouth for the mid-cruise break, docking on the morning of 22 March and departing the following morning. After completion of the survey a further day was spent fishing in the western Channel before returning to Lowestoft where the ship docked at 0730 h 3 April.

RESULTS:

A total of 64 trawl hauls was made; 62 hauls (6 invalid) were made on the Trawl Survey and a further 2 hauls were made in the western Channel. All trawl hauls were worked using the Portuguese High Headline trawl fitted with rubber bobbins, a bunt tickler chain, and a codend liner. Polyvalent trawl doors were used. Two rod-and-line stations were worked off Start Point in an attempt to catch large mackerel in shoals off the bottom. A chart indicating the position of each trawl station is attached.

At each station the catch of each species was weighed and all fish, or an appropriate sample, were measured. Samples of otoliths were taken as required. The resultant data were input to computer database using the Groundfish Survey Database programs, and preliminary summations and analyses were made.

Aim 1. All planned stations on the trawl survey were fished with the exception of three stations on the southernmost line of stations in the French zone for which permission to fish had been denied by the French authorities. The six invalid tows were all repeated successfully to give a total of 56 valid survey hauls.

Catches of demersal species were generally good. The total survey catches of the more important species are given in the table below. Catches on the previous two surveys are given for comparison.

Cruise	3/89	10/88	3/88
Number of stations	56	53	49
	Survey Total Catch Kg.		
Saithe	894	75	298
Megrim	647	254	217
Blue whiting	644	706	235
Poor cod	639	184	169
Hake	433	262	262
Spurdog	337	439	112
Whiting	291	114	118
Monk (both species)	275	317	71
Cod	214	489	46
Ling	143	123	28
Haddock	79	162	28

Cod and haddock catch rates were at the upper end of the range recorded over the history of these surveys but in both cases were lower than the exceptionally high levels recorded last December. Hake and monk catch rates were close to the average level while megrim, whiting and saithe were above average:

Catches of the main pelagic species were as follows:

Cruise	3/89	10/89	3/88
Horse mackerel	10732	2248	21123
Herring	121	256	16
Mackerel	13893	211	15700

The main concentrations of both mackerel and horse mackerel were along the shelf edge and in the approaches to the English Channel.

Mackerel, horse mackerel, herring, pilchard and sprat were comprehensively sampled.

Studies of horse mackerel meristic characters were undertaken and blood samples were obtained for racial studies.

Aim 2. All six current meter rigs were successfully deployed in their required positions.

Aim 3. Juvenile fish of the main species were sampled for recruitment studies. 1-group hake were relatively abundant although this yearclass (1988) was poorly represented in the December survey. Young horse mackerel were taken only in small numbers in the survey area but occurred in larger numbers in the western English Channel although most of these were probably 2-group rather than 1-group. Mackerel of the 1988 yearclass were more abundant than in December with the main concentrations on the shelf edge west of Cornwall and at one station in the Channel approaches.

Aim 4. No pelagic trawling was undertaken to sample pelagic fish shoals off the bottom. Two rod-and-line stations were worked south of Start Point in the hope of catching larger mackerel in mid-water than were taken in that area in the bottom trawl. The fish which were caught were all small fish with a length distribution similar to those taken on the bottom.

Aim 5. Ovaries of both species of Lophius were collected as requested.

Miscellaneous

1. Three boxes of sprats were collected for use as fish food. (Dr Bromley).

2. Ovaries of mackerel, megrim and lemon sole were collected for fecundity studies.

3. Fish specimens were preserved for fish identification courses.

4. Samples of herring and sprat were preserved frozen. (Dr Johnson).

5. Hake eyeballs were collected for ageing studies.

6. Fish samples were collected for use on Fishery Officer courses.

7. A sample of horse mackerel otoliths was collected for a university student.

8. A representative collection of fish specimens was preserved frozen for possible use on Open Day. (Mr Ramster).

9. Ovaries of stage 6 mackerel were collected and preserved in formalin for egg batch size and atresia studies. (Dr Greer-Walker).

10. A sample of mackerel was preserved frozen for Dr McKenzie, Aberdeen, for parasite studies.

11. No berried crabs were caught, but some unberried specimens were frozen. (Dr B Thompson).

12. Ovaries of 1-, 2- and 3-group mackerel were collected to estimate the proportion of mature fish and for abortive maturation studies. (Dr Greer-Walker).

13. Rabbitfish were preserved for IMER.

14. The Scanmar equipment was used on the trawl to record headline height and width between wings.

B W Jones
11 April 1989

SEEN IN DRAFT:
R C N
G S

INITIALLED:
D J G

DISTRIBUTION:
B W Jones
J Casey
S Flatman
W A Dawson
B C Mumford
M J Boon
P A Large
S Warnes
M Squirrel
J Read
F M Borges
+ Basic List

CIROLANA 3/89

SHOWING :
STATION POSITION
STATION NUMBER
COASTLINE