

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

1988 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 10  
(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF

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W A Dawson  
S M Stevens  
P A Large  
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R A Ayers

DURATION

25 November-19 December

LOCALITY

Celtic Sea

AIMS

1. To carry out a trawl survey of the western Celtic Sea.
2. To sample juvenile fish.
3. To sample pelagic shoals.
4. To collect ovaries of Lophius sp.

NARRATIVE

CIROLANA sailed from Lowestoft at 2100h on 25 November and made a good passage to the area off Start Point where she arrived in the early evening of 26 November. During the night an echo survey was made to locate shoals of pelagic fish. On the following day CIROLANA fished in two areas where shoals had been located during the night and then made two further hauls on the Eddystone grounds before heading to Plymouth where CIROLANA's inflatable went in to collect Dr Casey.

Fishing on the Trawl Survey commenced on 28 November. Work was suspended, due to adverse weather, at 1100h on 3 December until the morning of 5 December but after working two further stations weather conditions again prevented any further work until mid-morning on 6 December. For the remainder of the cruise fishing continued in ideal weather conditions. A brief call was made to St Ives Bay on 16 December where a member of the crew, who required medical attention, was taken ashore by St Ives lifeboat. On 17 December four trawl hauls were made on shoals of pelagic fish that had been located in the area south of Start Point. This completed the work of the cruise and at 1800h on 17 December CIROLANA made course for Lowestoft where she docked at 0500h on 19 December.

## RESULTS

A total of 64 trawl hauls was made; 56 hauls (3 invalid) were made on the Trawl Survey and a further 8 hauls were made on pelagic fish shoals. All trawl hauls were worked using the Portuguese High Headline trawl fitted with rubber bobbins, a buot tickler chain (not used on Stations 62 to 64), and a codend liner. Polyvalent trawl doors were used. 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 the southernmost line of stations in the French zone for which permission to fish had been denied by the French authorities. Of the three invalid tows two were repeated successfully to give a total of 53 valid survey hauls.

Catches of demersal species were generally larger than in December 1987. The following were the most important species in terms of weight in the catch:

Blue whiting	706 kg
Cod	489
Spurdog	439
Monk (both species)	317
Norway pout	276
Hake	262
Megrim	254
Poor cod	184
Haddock	162
Ling	123
Whiting	114

Cod, haddock and monk catches were considerably higher than last year. Hake catches were slightly higher with the majority in the length range 23-29 cm. 0-group hake were very poorly represented in the catches suggesting that the 1988 year class is of very low abundance.

Pelagic species taken during the survey were generally lower in abundance than in 1987. Catches of the main species were as follows:

Horse mackerel	2248 kg
Herring	256
Mackerel	211

Horse mackerel were taken mainly in the south-eastern part of the survey area. Length compositions contained modes which were identifiable as 0- and 1-group fish. The 0-group fish were almost three times as abundant as in December 1987 and the 1-group fish were also very much more abundant as this age-group was barely represented in the catches last year. The herring were all taken at a single station off the south-west of Ireland which had not been worked on previous surveys. Virtually all the mackerel were taken at a single station to the south-west of Cornwall and consisted predominantly of 0-group fish.

Aim 2. Juvenile fish of the main species were sampled for recruitment studies.

Aim 3. The first and the last fishing days of the cruise were spent fishing on shoals of pelagic fish located in an area south of Devon. In all eight tows were made from which the total catch of the main pelagic species were as follows:

Horse mackerel	6450 kg
Mackerel	1961
Pilchard	90
Anchovy	50

Mackerel and horse mackerel were comprehensively sampled.

Aim 4. Ovaries of both species of Lophius were collected as requested.

#### MISCELLANEOUS

1. Two boxes of small horse mackerel were collected for use as fish food (Bromley).
2. Ovaries of 1-group mackerel were collected for fecundity studies (Witthames).
3. Five bass were preserved frozen (Pickett).
4. Sixty whiting were preserved frozen for the John Leman High School.
5. Fish specimens were preserved for fish identification courses.
6. Fish specimens were preserved for the University of York (P Walker).
7. Hake eyeballs were collected for ageing studies.
8. Fish samples were collected for use on Fishery Officer courses.

B W Jones  
23 December 1988

SEEN IN DRAFT: R Graham - SFM  
M Willcock - Master

INITIALLED: DJG

DISTRIBUTION:

Basic List +  
B W Jones  
T K Stokes  
T J Hulme  
J Casey  
W A Dawson  
S M Stevens  
P A Large  
S Warnes  
R A Ayres

# CIROLANA 10/88

SHOWING :  
STATION POSITION  
STATION NUMBER  
COASTLINE

