

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

1991 RESEARCH VESSEL PROGRAMME

REPORT : RV CIROLANA : CRUISE 10

STAFF :

S Flatman (SIC)
M R Vince
J Casey
P A Large
M J Boon
R A Ayers (2-20 December)
B F M Harley
A J Sutcliffe

DURATION :

Left Lowestoft 1105 h 26 November
Arrived Lowestoft 0700 h 19 December
All times are Greenwich Mean Time

LOCALITY :

English Channel, Celtic Sea and Western Approaches

AIMS :

1. To determine the distribution of cod, and in particular the 1990 year-class, using a modified Portuguese high headline trawl.
2. To tag 1500 cod for migration studies.
3. To determine the distribution of other demersal species, and collect biological samples for age and maturity studies.
4. To collect 20-30 mature plaice gonad samples from stations off the southern coast of Ireland (J Horwood).
5. To examine stomach contents of selected fish species.
6. To collect samples of spawning herring (Dr G Carvalho, University of Wales).

NARRATIVE :

RV Cirolana sailed from Lowestoft at 1105h on 26 November and steamed to the western English Channel to commence the trawl survey. The first station, at position 50°21.5'N 2°14.8'W, was completed at 0849h on 27 November, and RV CIROLANA settled into a survey routine of three one-hour tows during daylight hours. Mr Ayers joined the ship by Searider in Torbay on 2 December, and the First Officer rejoined on 4 December by the same procedure; otherwise the survey continued uninterrupted until the afternoon of 17 December when deteriorating weather conditions prevented further trawling. With gale force winds forecast to last several days, and the planned survey grid complete, RV CIROLANA made passage for Lowestoft, where she docked at 0700h 19 December.

RESULTS :

Aim 1.

62 tows were completed with the Portuguese high headline trawl, 10 of which were invalid due to severe net damage. Figure 1 shows the cruise track and positions fished.

The trawl was fitted with SCANMAR sensors, recording headline height, door spread and water temperature at each station. All SCANMAR data were logged to computer file, although problems were experienced with the data logging software being suspended during the tow. The problem was reported to RVST, and was resolved by moving the SCANMAR serial input to a different port on the logging computer, as suggested. No further data logging problems were experienced.

Catches of cod were low, 23kg per hour being the best catch. Numbers of 1990 year-class cod were low over the entire survey area, with a maximum catch of 9 fish per hour off the south coast of Ireland. Figure 2 shows the distribution of the 1990 year-class given by the survey results, and Figure 3 the total cod distribution.

Aim 2.

The numbers of cod caught were insufficient for tagging purposes. Those that were caught were generally in poor condition, most with bruising on the head.

Aim 3.

All fish caught were weighed and measured, or, as in the case of cuttlefish and octopus catches, weighed and counted.

Figures 4 and 5 show the distribution of whiting and hake catches.

Otolith samples taken were as follows :

Species	ICES Division						Total
	VIIa	VIIe	VII f	VIIg	VIIh	VIIj	
Cod	28	4	29	37	6	3	98
Hake	0	27	23	43	34	18	145
Megrim	0	15	11	71	60	99	256
Plaice	0	11	32	23	5	2	73
Sole	1	2	3	7	1	0	14
Anglerfish :							
L. piscatorious	4	1	2	16	2	3	28
L. budegassa	0	0	0	3	4	7	14
Bass		15					(scale samples)

In addition, samples of lemon soles were frozen for analysis at Lowestoft (Mr J Kotas), and a sample of mackerel from a station within the mackerel box was frozen.

Aim 4.

Gonads from 23 mature plaice were preserved in Gilson's fluid. Otoliths from these fish were read on board, and the fish were found to be between 2 and 7 years old.

Aim 5.

Stomach contents of the following fish species were examined and recorded :

cod	whiting	hake	pollock	spurdog	turbot
witch	john dory	anglers	thornback ray		spotted ray

Aim 6.

Very few herring were caught, and all were either immature or spent.

S Flatman
18 December 1991

SEEN IN DRAFT:

Master JF
Senior Fishing Mate PM

INITIALLED: JGS

DISTRIBUTION:

Basic List +
S Flatman
M R Vince
J Casey
P A Large
M J Boon
R A Ayers
B F M Harley
A J Sutcliffe
M G Pawson
D J Symonds
Southern Sea Fisheries Committee
Devon " " " "
Isles of Scilly " " "
Cornwall " " "
South Wales " " " "
Eire)
France) via Foreign Office
P Connolly via S Flatman

Figure 1. CIROLANA 10/91: CRUISE TRACK

26 Nov - 19 Dec 1991

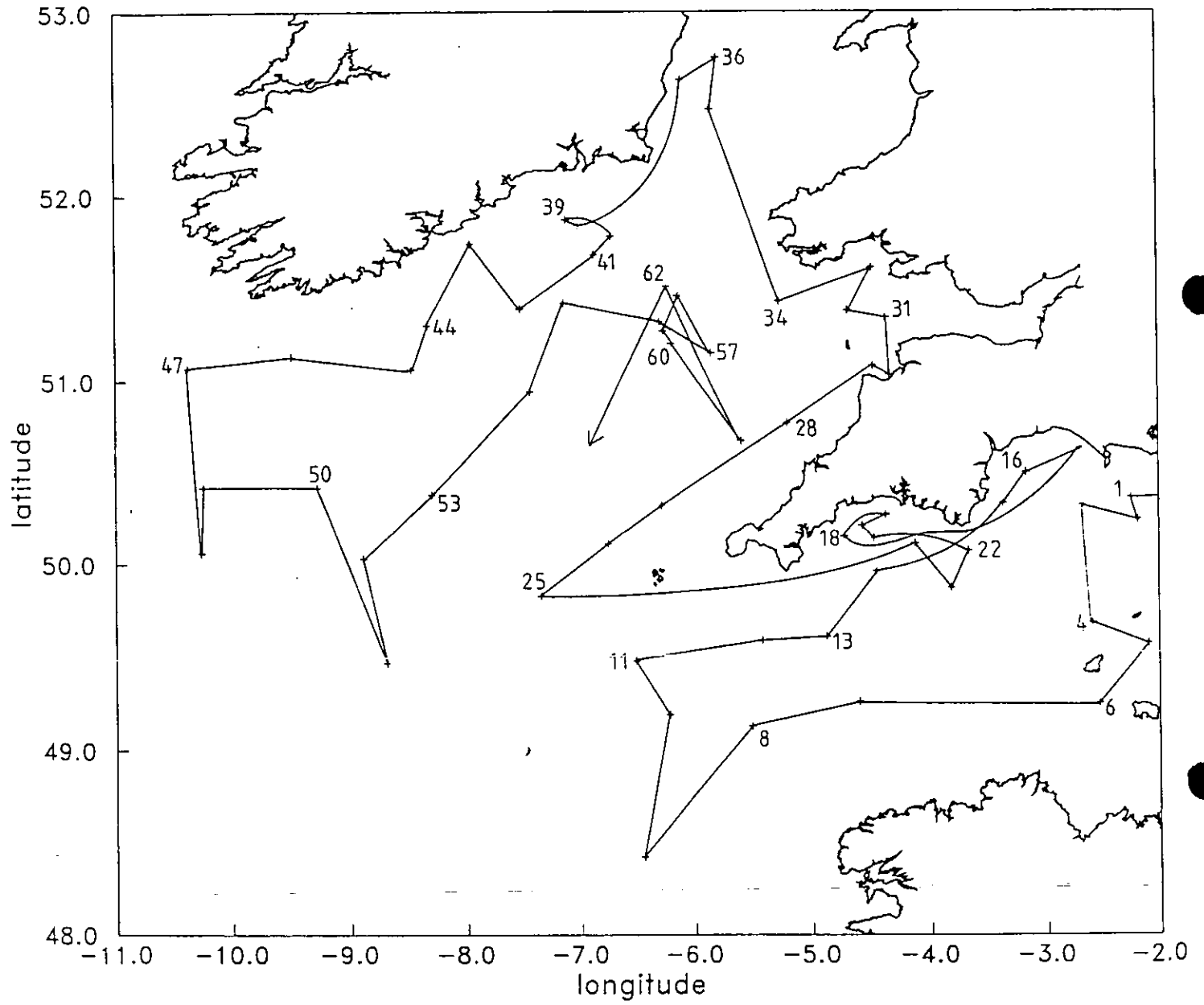


Figure 2.Cod: 1990 yearclass (No/hour)

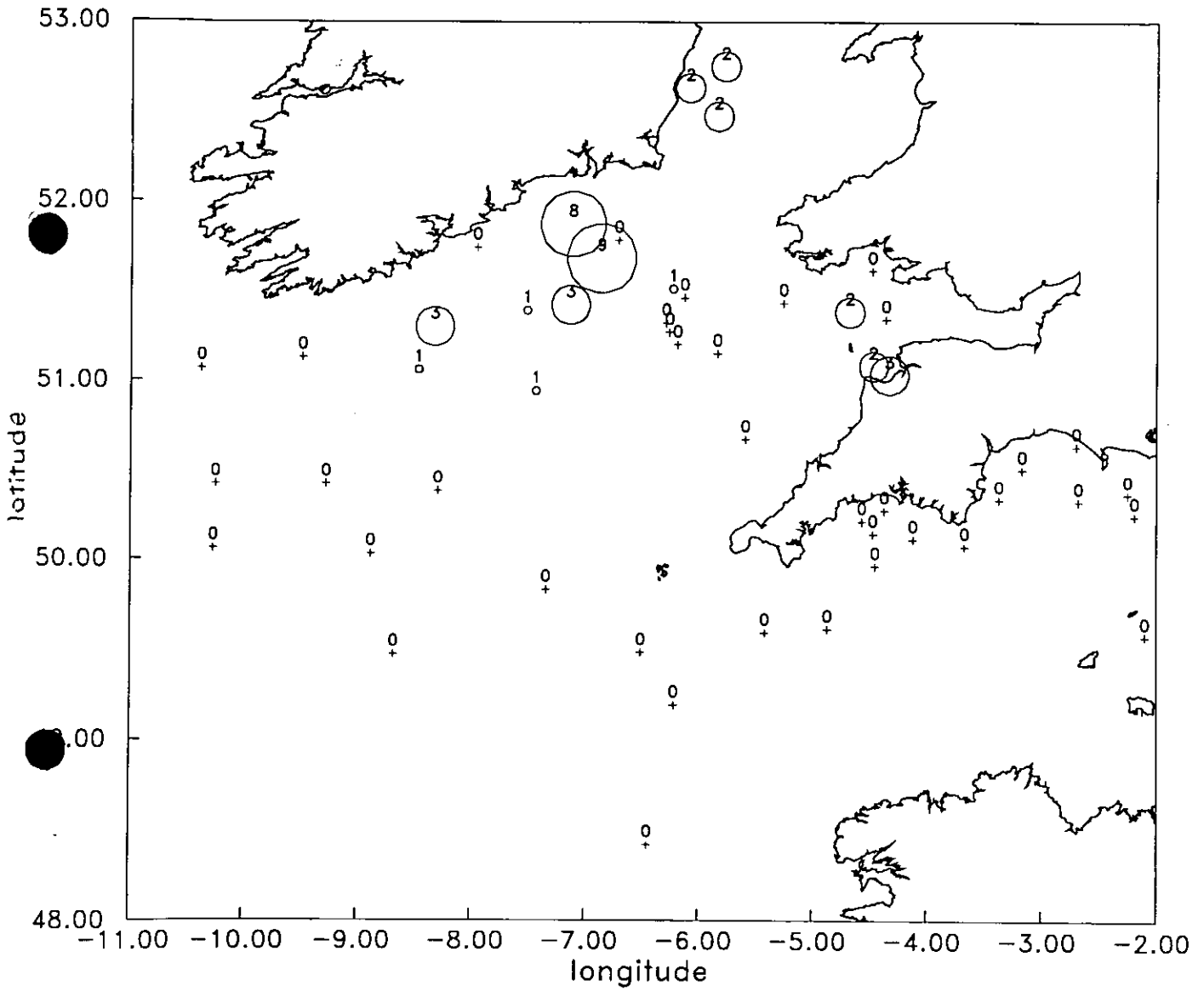


Figure 3. Cod: all ages (No/hour)

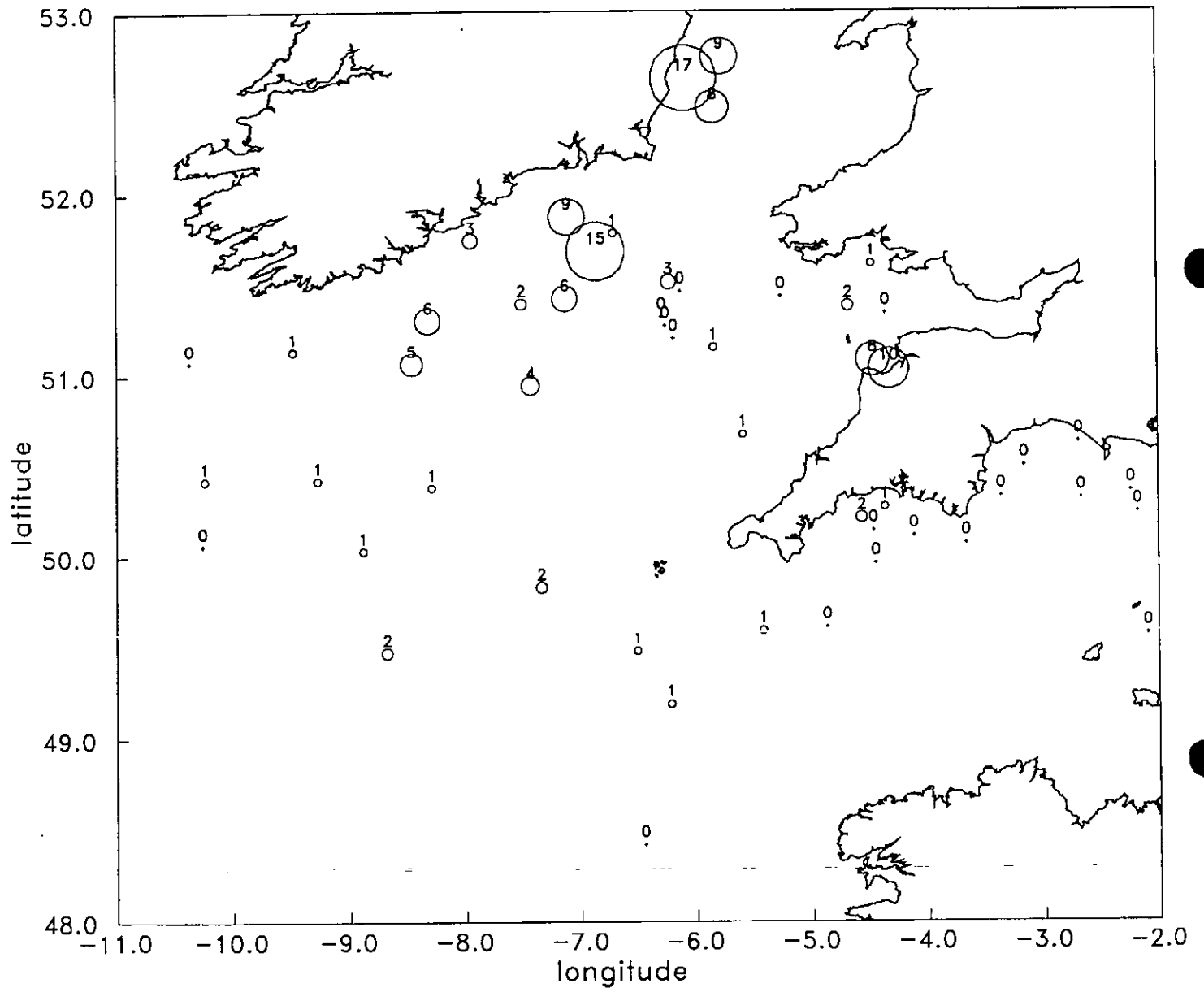


Figure 5. Hake catch weights (kg/h)

