

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

1990 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 3

STAFF: B W Jones
J Casey
W A Dawson (Second part)
R Flatt (First part)
B C Mumford
M J Boon
S Warnes
A J Sutcliffe (First part)
K Winpenny
M C Squirrell

DURATION: 2 March - 3 April (All times G.M.T)

LOCALITY: South-western Approaches, Bristol Channel, western English Channel

AIMS:

1. To carry out a trawl survey of the western Celtic Sea.
2. To carry out a sole egg survey in the Bristol Channel.
3. To sample juvenile fish.
4. To undertake atresia studies on mackerel.

NARRATIVE:

CIROLANA sailed from Lowestoft at 1300h on 2 March and made a good passage in fine weather to the Celtic Sea where a start was made on the trawl survey on the morning of 4 March. Between 4 March and 8 March 15 trawl stations were completed successfully. The ship then steamed overnight to the starting position for the sole egg survey grid. The sole egg survey commenced on the morning of 9 March and continued until midnight on 13 March. 81 sole egg survey stations were worked successfully. CIROLANA docked at Falmouth on the morning of 14 March for the mid-cruise break and to enable staff changes to be made and to land equipment required on the next CORYSTES cruise.

CIROLANA departed from Falmouth at 2000h on 15 March and overnight made an echosounder search for mackerel in the area between Falmouth and Start Point. As soon as it was light, fishing with handlines commenced to obtain mackerel to be kept alive in the deck tank for atresia studies. By 1100h over 100 adult mackerel had been caught. The ship then steamed to the shelf edge where the trawl survey could be resumed in a depth of water which was sufficient to allow re-spooling on the trawl winch drums of the 400 fathoms of warp which had been re-marked in Falmouth.

The trawl survey continued from 17 March until 30 March. On 31 March four trawl hauls were made to measure the effect on headline height of varying the number

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

Aim 2. 81 stations of the sole-egg survey grid were completed successfully. The remaining three stations had to be abandoned due to equipment failure which could not be repaired in the time available before the arranged rendezvous with the Falmouth pilot.

Aim 3. Juvenile fish were sampled for recruitment studies. Preliminary assessments indicate that 1-group hake are of average abundance. Juvenile horse mackerel were restricted to the western approaches to the Channel, but only small numbers were caught. 1-group mackerel were located in the western channel and on the shelf edge. In the latter area the main concentration was off the southwest of Ireland which was rather more north than usual.

Aim 4. Handlining for mackerel took place off Start Point after the vessel left Falmouth. An initial sample of adults was taken and 97 fish were placed alive in a deck tank. Further samples were taken from the tank on the following four days by which time sampling or deaths had accounted for all the fish.

MISCELLANEOUS:

1. Water samples for salinometer calibration were taken from the south-western edge of the survey area (J Reid).

2. Fish samples were taken from two groups of stations for contaminant studies (A Franklin):

Group 1	Whiting	12
	Cod	4
	Dab	3
	Plaice	3
Group 2	Whiting	18
	Plaice	5

3. Monkfish gonads were preserved for reproduction studies (M Greer Walker).

4. Fish specimens were frozen for the English Heritage reference collection (P Walker).

5. Part of a ribbon of monkfish eggs was caught in the trawl and was brought back to the laboratory, some alive and some preserved.

6. Various specimens were preserved for use on fish identification courses.

7. Samples of mackerel and herring were preserved for parasite studies (K McKenzie, D.A.F.S).

8. Hake eyeballs were collected for age determination studies.

9. Observations on horse mackerel maturity were made, and muscle samples were obtained for genetic studies.

10. The CTD cable was streamed and re-spooled on the winch.

11. Scanmar equipment was used on the trawl throughout the cruise to record headline height and either door or wing spread. The results have become much more reliable since the hull-mounted receivers were fitted.

B W Jones
11 April 1990

SEEN IN DRAFT: R Graham (SFM)
M J Willcock (Master)

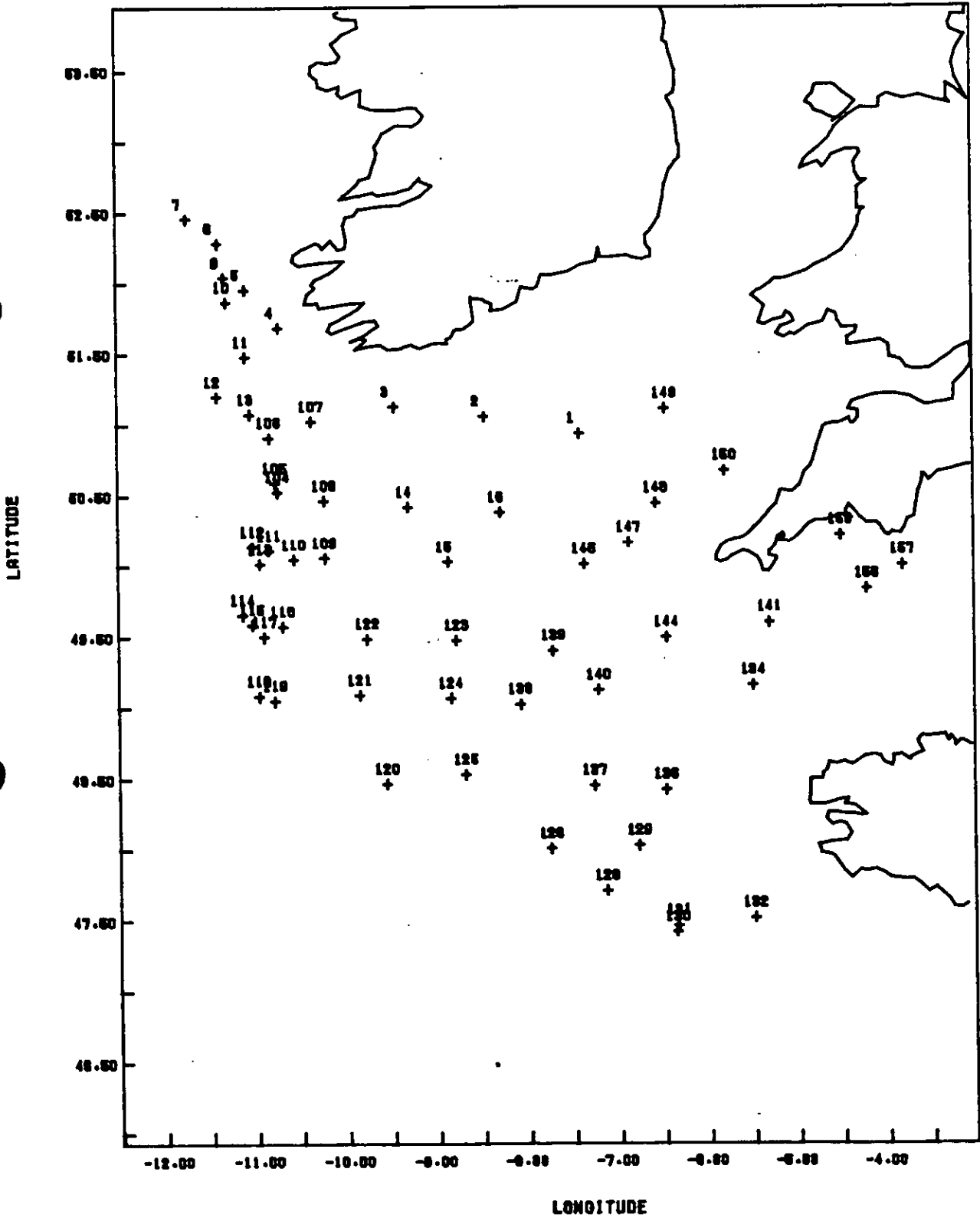
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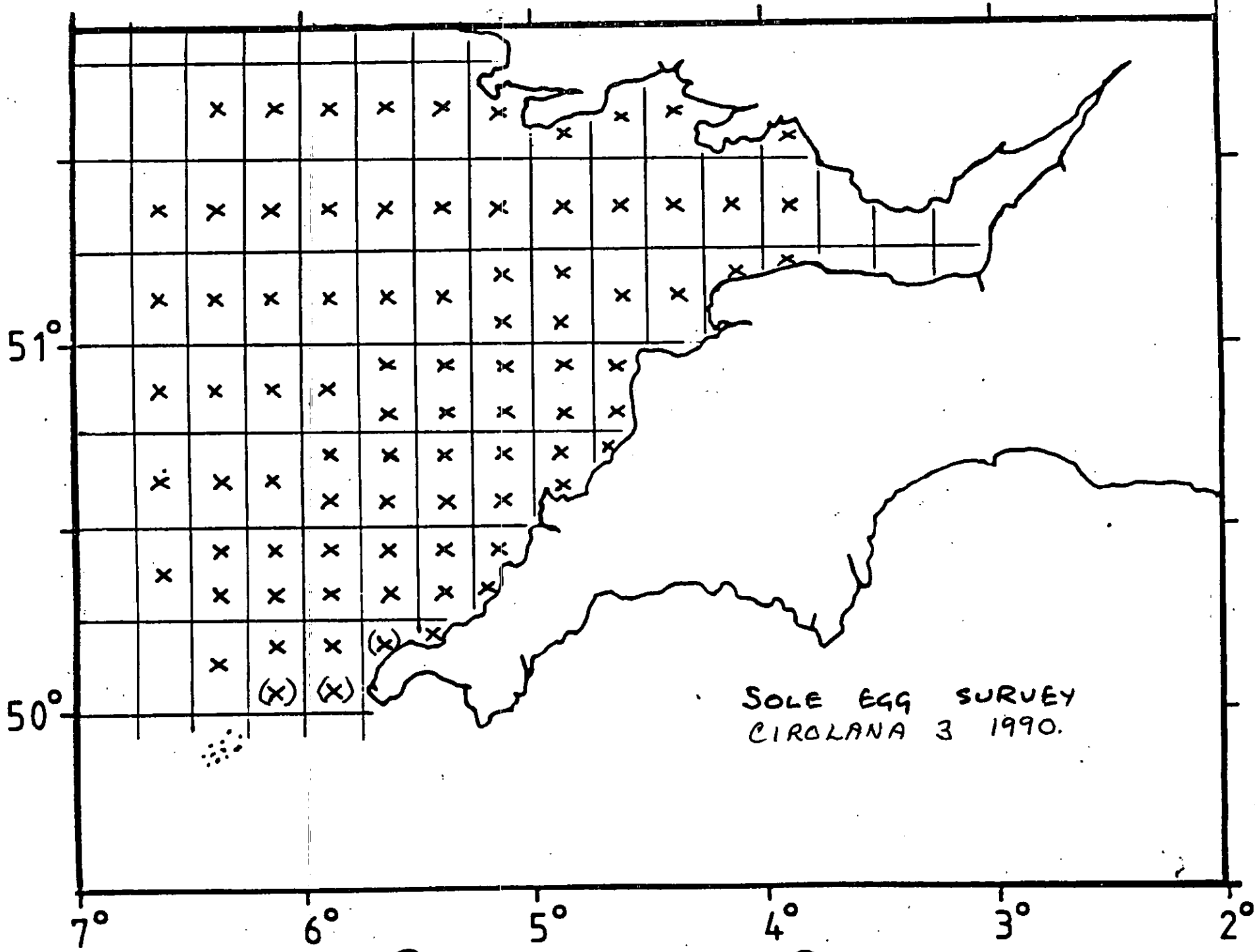
DISTRIBUTION:

Basic list+
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CIROLANA 3/90

SHOWING :
STATION POSITION





SOLE EGG SURVEY
 CIRROLANA 3 1990.