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

1979 RESEARCH VESSEL PROGRAMME

REPORT: RV CIROLANA: CRUISE 2

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

STAFF:

- W G Parnell
- T Williams
- D J Symonds
- T J Hulme
- A Watson
- C N Humphreys
- T Watson
- J Dann
- Mrs M Boon
- C Kuiter (RIVO) 1-8 February

DURATION:

Left Grimsby 0800 h. 1 February
Arrived Grimsby 1710 h. 27 February

LOCALITY:

North Sea

AIMS:

1. To participate in the ICES international young fish survey for 1-group herring and gadoids.
2. To sample post-larval herring using the Isaacs-Kidd midwater trawl.
3. To take surface and bottom temperature and salinity readings on each trawl station.
4. To fish as many stations as possible within the Norway pout small meshed fishery area using a high-headline trawl, and to obtain biological samples from all gadoids caught.

Other aims received too late for inclusion in the published cruise programme were:

5. To collect samples of as many species as possible for the University of York Environmental Archaeological Unit.
6. To obtain blood samples from cod, haddock and plaice. (Dr Purdom)
7. To obtain herring samples from two or three areas. (Mr Turner)

NARRATIVE:

RV CIROLANA sailed from Grimsby at 0800 h. 1 February and proceeded to a position approximately 40 miles off the Humber to fish the first of the 36 squares allocated to England in the international young fish survey. The survey consisted of a specified number of 30 minute tows with the French GOV trawl and two tows with the Isaacs-Kidd mid-water trawl within each statistical square. Fishing was carried out in those squares adjacent to the English north-east coast between 53° and 55° N and out to 2° E (Figure 1) for the first four days, though no work was possible on 3 February when the ship was forced to dodge in a severe south-westerly gale. On 5 and 6 February CIROLANA worked the block of squares bounded by 54° and 55° N and 4° and 6° E. On 5 February Mr Kuiter was informed by radio that his father was seriously ill and arrangements were made to transfer him to TRIDENS which was en route for Ijmuiden on 7 February. CIROLANA steamed north to work the squares between 56° and 57° N on 7 February but when the rendezvous was made with TRIDENS at 1820 h. that evening a sudden increase in wind speed to gale force made conditions too dangerous for the transfer of Mr Kuiter. CIROLANA accordingly steamed for Ijmuiden where he was put ashore by pilot boat at 1200 h. 8 February. The survey was resumed the next day and those squares between 56° and 57° N and 2° and 6° E fished between 9 and 11 February. Further squares between 58° and 59° and 0° and 5° E were fished before a severe easterly gale forced CIROLANA to dodge from 2145 h. 13 February until she reached Esbjerg at 1112 h. 16 February. During this period moderate icing occurred and the steam into port was through large areas of pancake ice. While in Esbjerg contact was made with other survey participants from the Netherlands, Denmark and France, and a meeting was held to exchange data and to discuss problems associated with the survey.

The departure from Esbjerg was delayed for 24 hours by the continuing gale force winds. On sailing from Esbjerg at 1000 h. 19 February CIROLANA recommenced fishing off the Danish coast between 55° and 56° N and 6° and 8° E and then completed the survey by fishing a block of 3 squares between 57° and $57^{\circ}30$ N and 6° and 9° E. Course was then set for the Norway pout box at 1230 h. 23 February. With the short time left available it was decided after consultation with Dr Pawson to concentrate fishing activity to the area between 58° - 59° N and 0° - 1° E, the main objective being to obtain samples of Norway pout gonads for fecundity studies. A total of 11 hauls was made in the area before course was set for Grimsby at 1200 h. 26 February. CIROLANA docked at 1710 h. 27 February.

RESULTS:

1. A total of 48 trawl hauls, 3 of which were invalid, were made in the 36 statistical squares fished during the international young fish survey. Otoliths collected from herring, whiting, cod, haddock and Norway pout were read at sea, and raised age and length distributions calculated. The distribution of each of these species by year class is shown in figures 2 - 6.
2. 72 tows were made with the Isaacs-Kidd trawl and all catches identified. The distribution of post larval sprat and herring is shown in figure 7.
3. Surface and bottom temperatures were taken by means of Nansen casts on each trawl station.
4. Eleven trawl hauls, 2 of which were invalid, were made in the Norway pout box south of 59° N. The maximum catch of Norway pout was 93 Kg/hour and

was taken NW of the Fladden. High catches of large haddock (689 Kg/hour) and large whiting (279 Kg/hour) were also taken in the general fishing area. In addition to the normal biological sampling, gonads of 52 Norway pout were collected for fecundity studies. Samples were also collected from the Egersund on the young fish survey for similar fecundity work and length/weight analysis.

5. Sixty-one specimens of 15 different species were deep frozen for E.A.U. of the University of York.
6. Samples of cod and haddock blood were preserved. (Dr Purdom).
7. Fifty whole herring caught on the Fladden were deep-frozen. (Mr Turner).
8. Otoliths were taken from cod, haddock and whiting in North Sea areas 1, 2, 3, 6 and 7 to supplement the market sampling programme (Mr Bedford).

W G Parnell
1 March 1979

SEEN IN DRAFT: THF, WJS

INITIALLED: AJL

DISTRIBUTION:

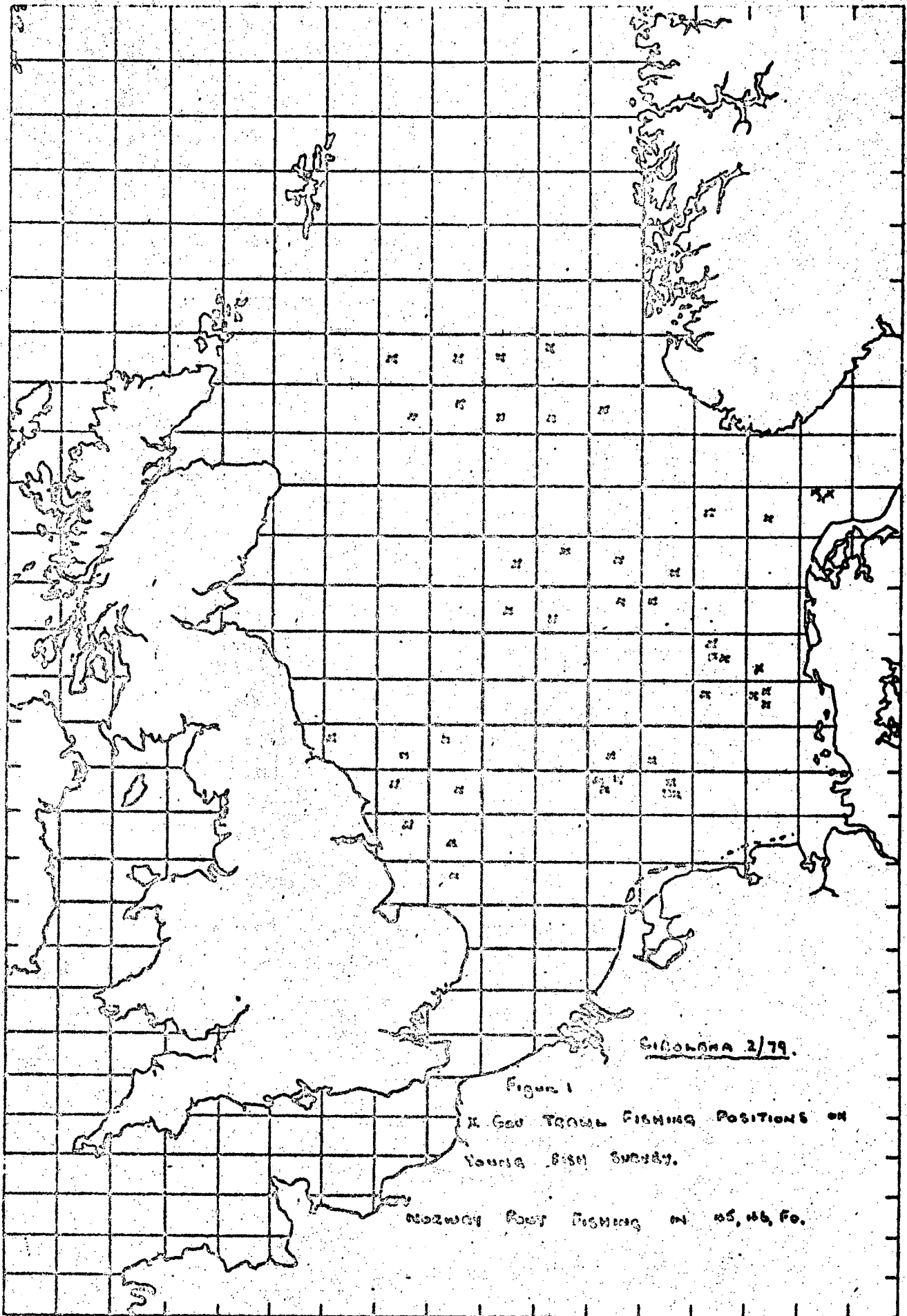
Basic list +

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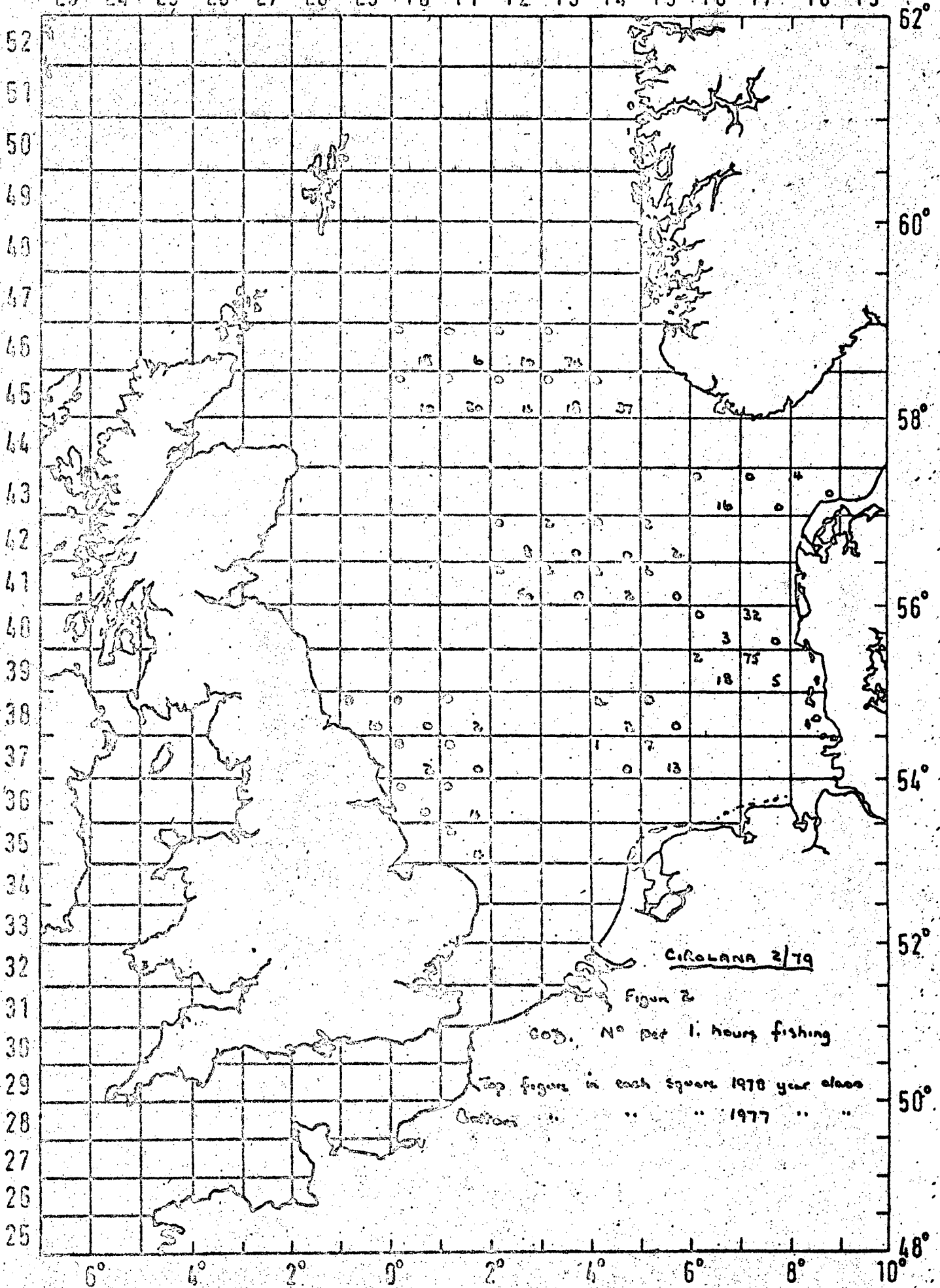
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Figure 1

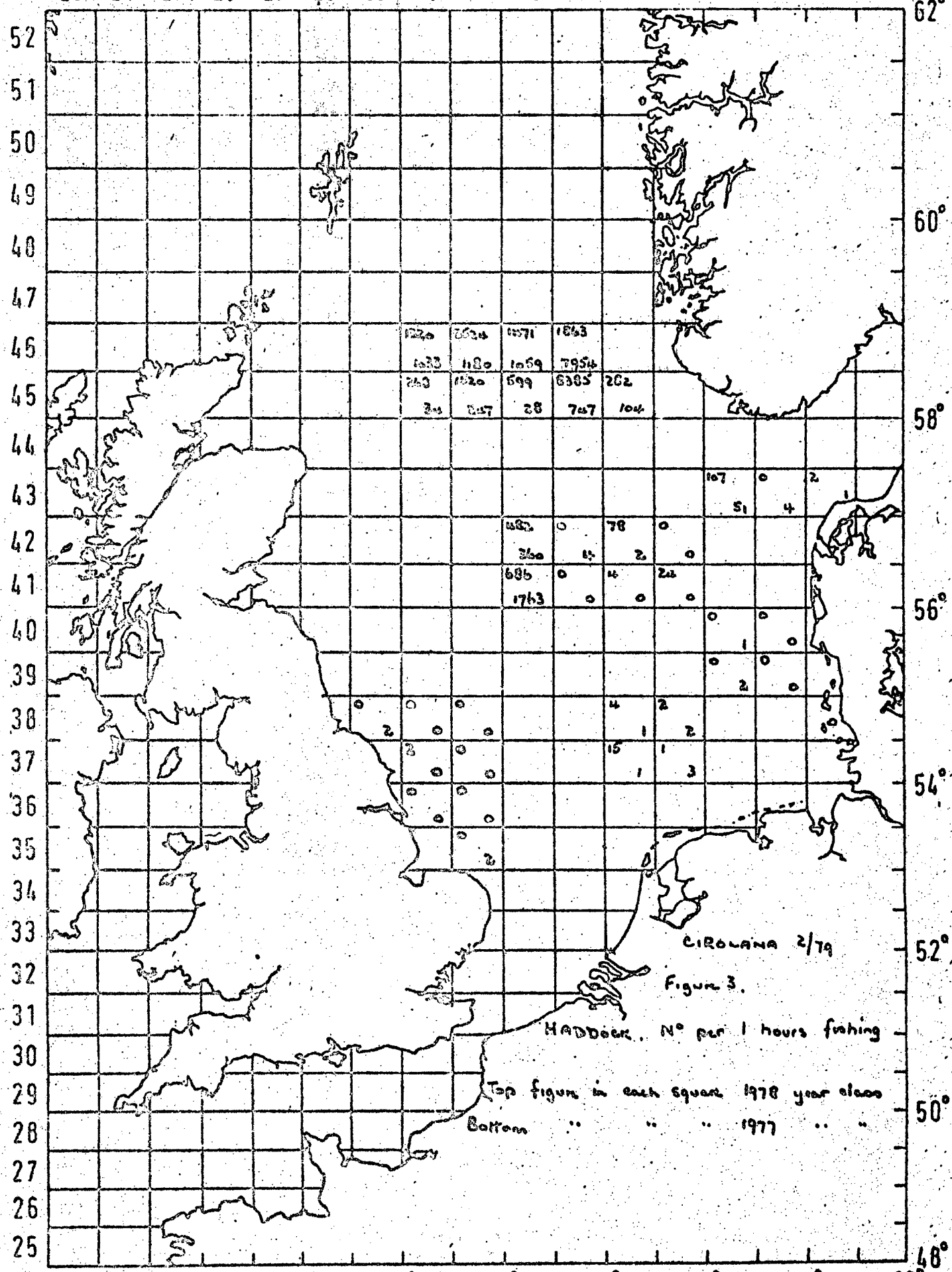
R. GAD TRAWL FISHING POSITIONS ON
YOUNG FISH SURVEY.

NORWAY BOAT FISHING IN '05, '06, '06.

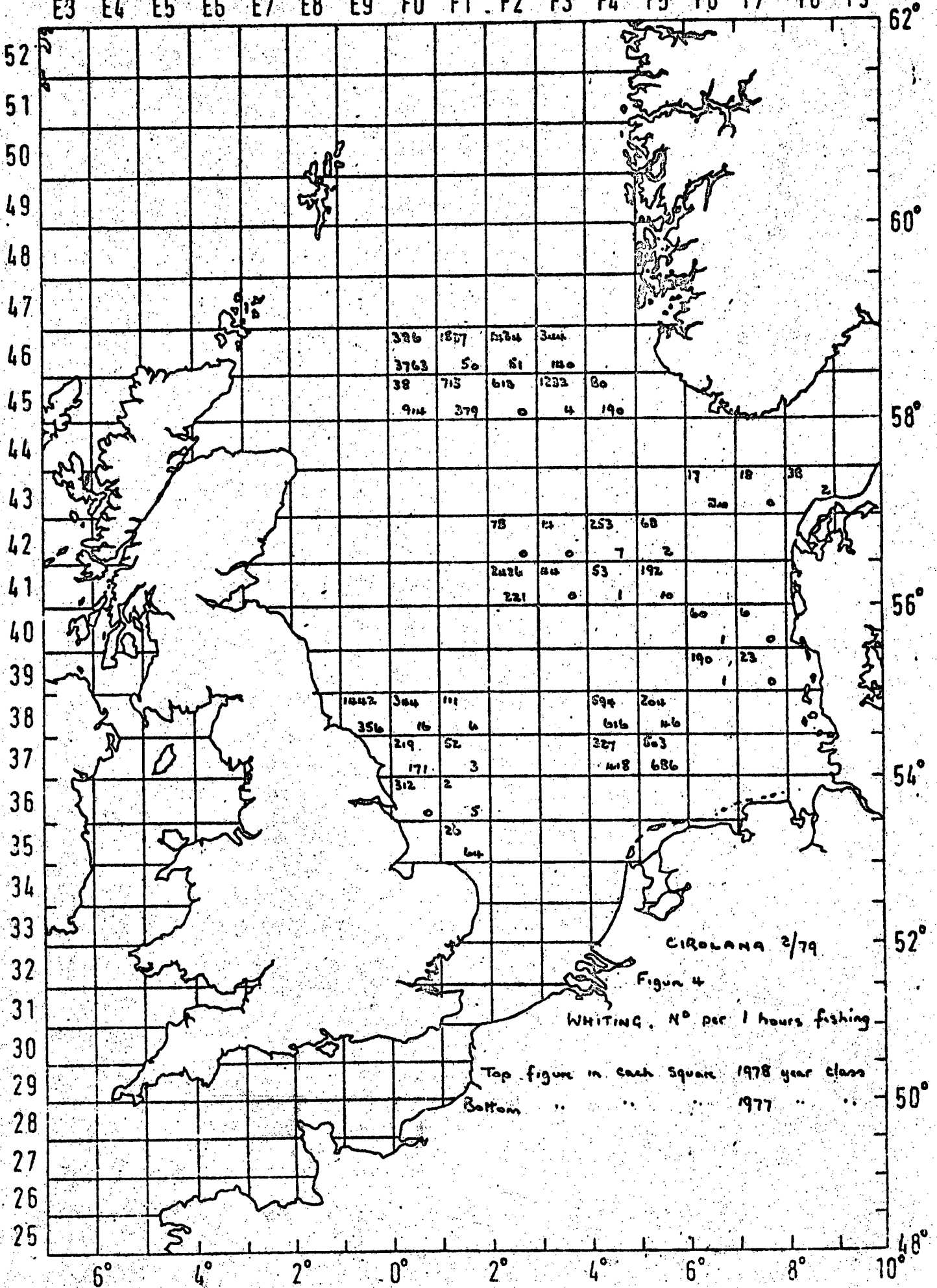
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CIRROLANA 2/79

Figure 4

WHITING, No per 1 hours fishing

Top figure in each square 1978 year class

Bottom 1977

