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

1983 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE: CRUISE 8
(PROVISIONAL: Not to be quoted without prior reference to the author)

STAFF:

T J Hulme
C L Whiting
T Watson
R Flatt
M Macdonald - Port Staff
J H Nicholls - (25-30 June)

DURATION:

Left Lowestoft 1750 h, 8 June
Arrived Lowestoft 0930 h, 30 June

All times are Greenwich Mean Time

LOCALITY:

Western North Sea

AIMS:

1. To determine the distribution and abundance of 0-group gadoids in the North Sea, west of 1°E and south of 60°N, being the English contribution to the ICES co-ordinated programme.

2. To collect samples of 0-group gadoids of different species from the same area for a comparative study of their feeding.

3. To locate and define the north-east coast front and to sample plankton in relation to it.

4. To test the new Guildline/Oriel towed environmental sensor.

NARRATIVE:

CLIONE left Lowestoft at 1750 8 June and steamed overnight to rectangle 37E9 commencing the English part of the ICES 0-group gadoid survey there on the morning of 9 June.

There were some initial problems with shooting the IYGP trawl which resulted in a lot of damage to the head-line transducer cable. As a consequence of this, a rendezvous was made with RV G A REAY in the Moray Firth (rectangle 44E7) on the evening of 13 June, when a new drum of cable was transferred to CLIONE.

Sampling progressed slowly, with only 17 stations completed, plus two TTN hauls in rectangles 47E7 and 46E6, before CLIONE docked at Lerwick very late on 17 June. After changing the trawl doors, sampling restarted on the morning of 19 June and, with a further two TTN hauls in rectangles 44E7 and 39E8, the last programmed rectangle was completed on the evening of 26 June. The track chart for the cruise is attached. Regular exchanges of catch data were made with RV EXPLORER during the survey.

At 2015 25 June, Mr Nichols joined CLIONE from the North Shields pilot boat, and during the dark hours of 25-26 and 26-27 June, 1200 sea surface drifters were released on three different transects from the English north-east coast. See attached chart.

Work on the north-east coast front was carried out between am 27 June and early evening 29 June using a 76 cm TTN, a CTD probe and a Benthos plankton camera. The Oriel/Guildline towed environmental sensor was successfully tested, with and without a drogue and at different towing speeds. CLIONE docked at Lowestoft at 0930 h 30 June.

RESULTS:

1. All of the 40 IYGPT stations allocated to CLIONE were sampled. Catch rates of cod, haddock and whiting when compared both with those taken last year and the 1973-78 geometric means for the same area, were all much greater. Those for saithe were about the same, whereas Norway pout catches were quite markedly down.

2. Samples of 0-group gadoids of different species were collected and preserved from four areas, east (rectangle 47E7) and west (rectangle 46E6) of Orkney, in the Moray Firth (rectangle 44E7) and off the north-east coast of England (rectangle 39E8). TTN hauls were also made in these rectangles.

3. An area of stratified water north of 54°25'N with an area of mixed water to the south was located during a transect of eight plankton sampling stations between positions 54°33'N; 00°25'E and Flamborough Head. The boundary layer or 'front' between them was diffuse, manifesting itself at the surface by a temperature change of about 2°C over 10 n.ml. Plankton samples were taken at different depths within each of the three zones (stratified, boundary and mixed) which were first identified by CTD lowerings. Standard hauls were also made in each zone.

   Considerable experience was gained in using the profiling CTD and that fixed to the plankton sampler to indentify and maintain position in a selected layer or zone.

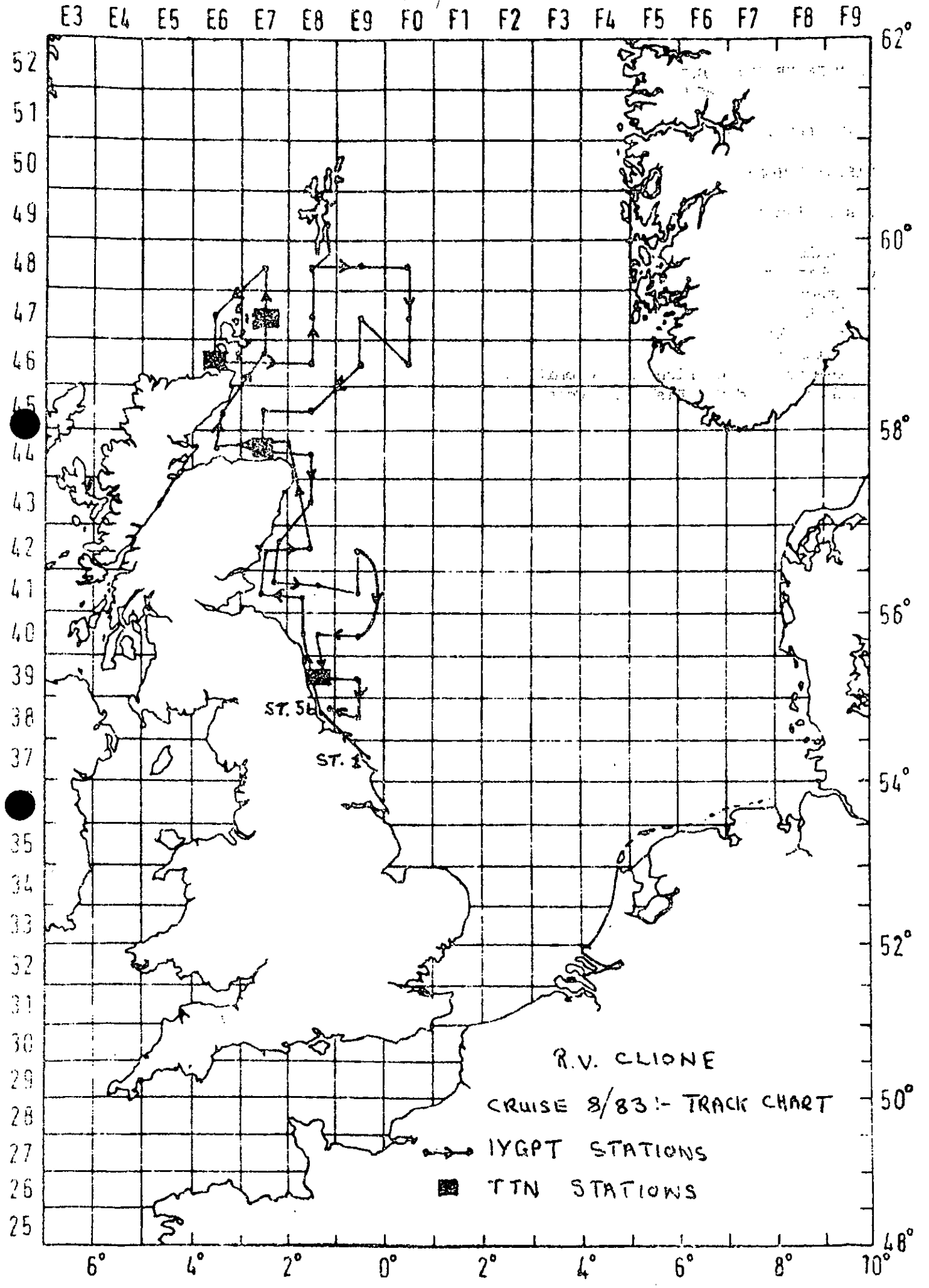
   The 'Benthos' plankton camera mounted on a frame was successfully used at varying depths in the three zones. Films were changed but not developed at sea.

   All plankton sampling and camera work was done in daylight whilst at night profiling transects with the CTD were done to define the geographical position of the 'front' to the east and west of the sampling area.

   Differences in plankton density in association with the 'front' were noted but their significance cannot be commented on until specific analysis of the samples is complete.

4. The Guildline/Oriel towed body dived successfully without a Seripps depressor at speeds up to 8 knots. It was found desirable to fit a small drogue for easier launching and this had no detrimental effect on the performance of the body.

T J Hulme
6 July 1983


E3 E4 E5 E6 E7 E8 E9 F0 F1 F2 F3 F4 F5 F6 F7 F8 F9
52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 35 34 33 32 31 30 29 28 27 26 25
62° 60° 58° 56° 54° 52° 50° 48°
6° 4° 2° 0° 2° 4° 6° 8° 10°
ST. 56
ST. 1
R.V. CLIONE
CRUISE 8/83 :- TRACK CHART
IYGPT STATIONS
TTN STATIONS

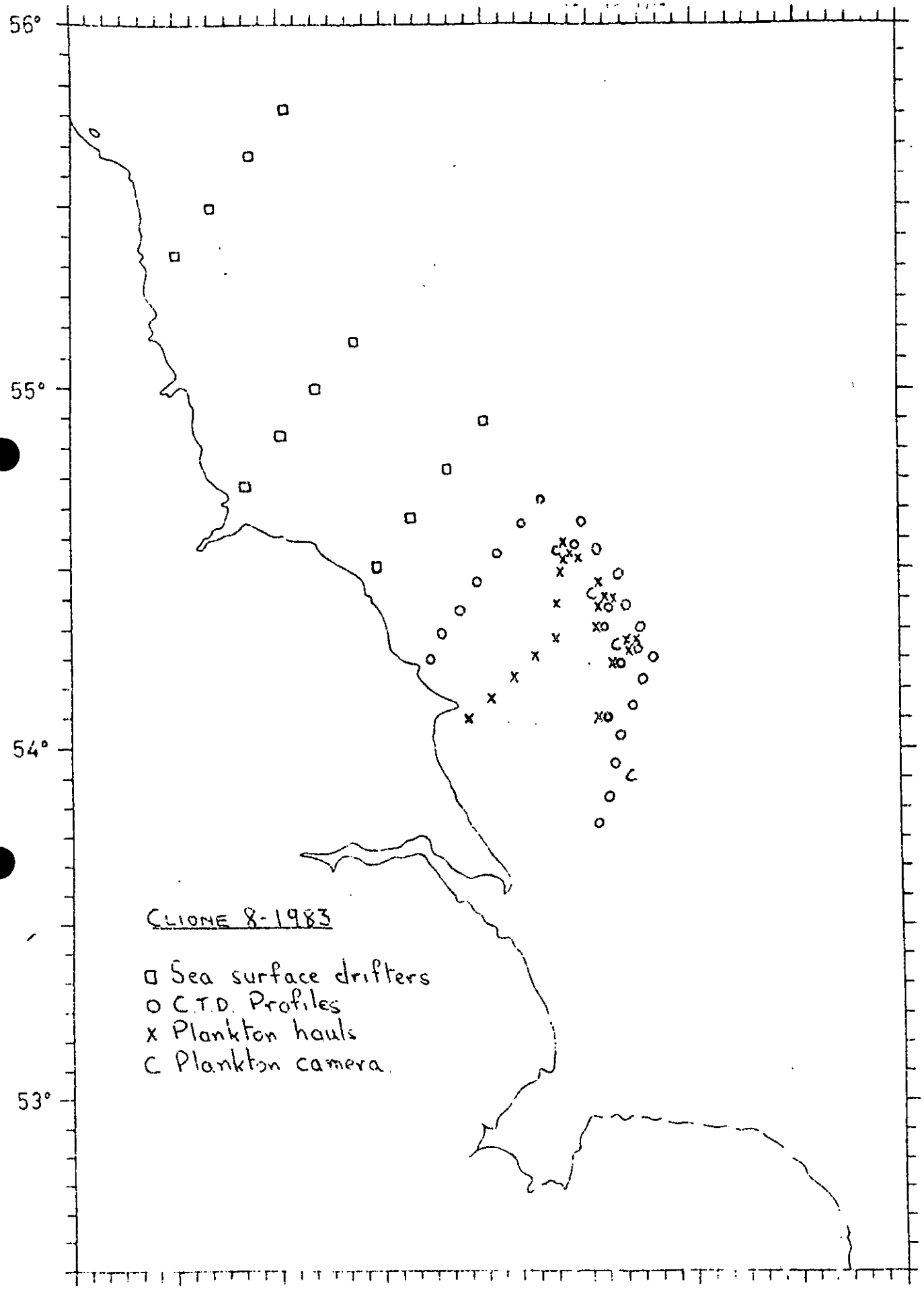
SEEN IN DRAFT: JRF
RCN

INITIALLED: DJG

DISTRIBUTION:

Basic List +

T J Hulme
C L Whiting
T Watson
R Flatt
M Macdonald
J H Nichols
North-Eastern Sea Fisheries Committee
Northumberland Sea Fisheries Committee


56°
55°
54°
53°
CLIONE 8-1983
□ Sea surface drifters
○ C.T.D. Profiles
x Plankton hauls
C Plankton camera