

Mr. Bate.

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

1974 RESEARCH VESSEL PROGRAMME

REPORT: RV CORELLA: CRUISE 7

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

STAFF:

- D Harding
- D S Tungate
- J H Nichols
- C Garrod
- R Mepsted (Student)

DURATION:

Left Lowestoft 1400 h, 1 May
 Arrived Lowestoft 0900 h, 10 May
 All times are Greenwich Mean Time

LOCALITY

Central North Sea - Flamborough Area

AIMS:

1. To carry out an egg and larval survey of the Flamborough spawning area using a new 75 cm unencased plankton sampler.
2. To collect fish for stomach content analysis.
3. To collect samples of young flatfish using a variety of bottom samplers.
4. To collect live planktonic copepods for Mrs B Thompson.

NARRATIVE

CORELLA sailed from Lowestoft on schedule and commenced work calibrating the new multipurpose unencased plankton sampler at 1700 h, 1 May off the North Norfolk coast. The first station on the plankton grid was sampled at 2100 h, 1 May and the grid of stations completed at 1000 h, 4 May. During this period 48 plankton samples were collected; continuous records of temperature, pH, salinity, oxygen saturation, transparency and chlorophyll a content of the surface water made; 48 samples of water collected for more accurate salinity measurements at Lowestoft and 250 sea bed drifters released in batches of 50 at five stations.

CORELLA then sailed to the Yorkshire coast and collections of bottom living fishes, especially young flatfishes, made in Filey Bay and Bridlington Bay on 4 and 5 May. A line of potential sampling stations was surveyed overnight, 5/6 May, between Filey Bay and the edge of the Dogger Bank at 54°26.5'N 01°13.5'E; and samples collected on clear ground on the return run to Filey Bay.

CORELLA anchored in Bridlington Bay in the late afternoon on 6 May and the

"young gadoid" midwater trawl rigged in preparation for collecting material for Aim 2. The young gadoid trawl used for these collections did not fish correctly on Cruise 5; on this cruise the rig was changed and the trawl performed satisfactorily throughout; a diagram of the new rig is appended to this report.

Trawling commenced at 0812 h, 7 May and continued throughout the hours of daylight on each following day until the survey was concluded at 1320 h, 9 May, when the ship steamed to Lowestoft.

Live samples of Calanus were collected at 54°22.8'N 00°07.6'E on 8 May and 54°05.5'N, 00°34.4'E on 9 May for Mrs Thompson and phytoplankton samples were collected on the homeward journey at 53°03.0'N 01°26.5'E for Dr Dodge of Birkbeck College, London.

The cruise ended on 10 May at 0900 h when CORELLA docked at Lowestoft.

RESULTS

All aims set out in the cruise programme were achieved.

The bottom sampler - a new frame trawl - was not really suitable for the rough gravel and stone bottoms found on the survey line east of Flamborough Head and was damaged beyond repair collecting the fifth sample. However, enough samples were collected to evaluate its performance in the series of comparative hauls conducted in Filey and Bridlington Bays. Here the new 2 metre frame trawl was fished against a standard 4 metre beam trawl and a sledge sampler with a 1 metre net opening.

The plankton samples indicated a patch of eggs and larvae of plaice lying in the tongue of colder water off Flamborough Head. Trawl hauls were made through the patch and to the south of the patch, along the expected line of larval drift, for small fish. Large samples of herring, sprat, whiting and sand eels, along with smaller numbers of plaice, dab, cod and gurnard were collected and preserved for stomach content analysis. Most of the remainder of the fish caught was frozen for the 'food production unit' at Lowestoft and samples of sprat measured and preserved for Pelagic Section.

A cruise track and positions of the sea bed drifter releases are appended.

D Harding
29 May 1974

SEEN IN DRAFT: JEMB

CNS

INITIALLED: AJL

DISTRIBUTION:

Basic List

D Harding

D S Tungate

J H Nichols

C Garrod

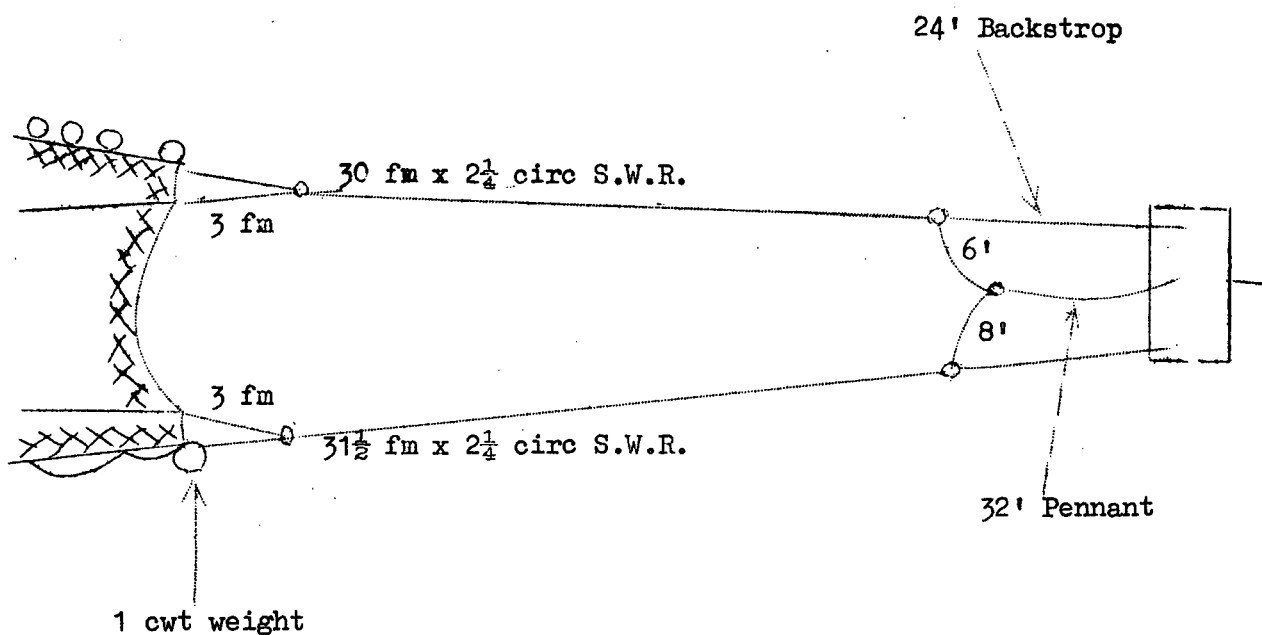
R Nephsted (Student)

APPENDIX TO CRUISE REPORT - CORELLA 7/74

1. Sea Bed Drifter release positions:

Stn 20	15251-15300	54°07.5'N	00°45.0'E
Stn 27	15351-15400	54°22.5'N	00°07.0'W
Stn 29	15401-15450	54°22.5'N	00°22.5'E
Stn 31	15451-15500	54°22.5'N	00°52.5'E
Stn 38	15301-15350	54°37.5'N	00°07.0'W

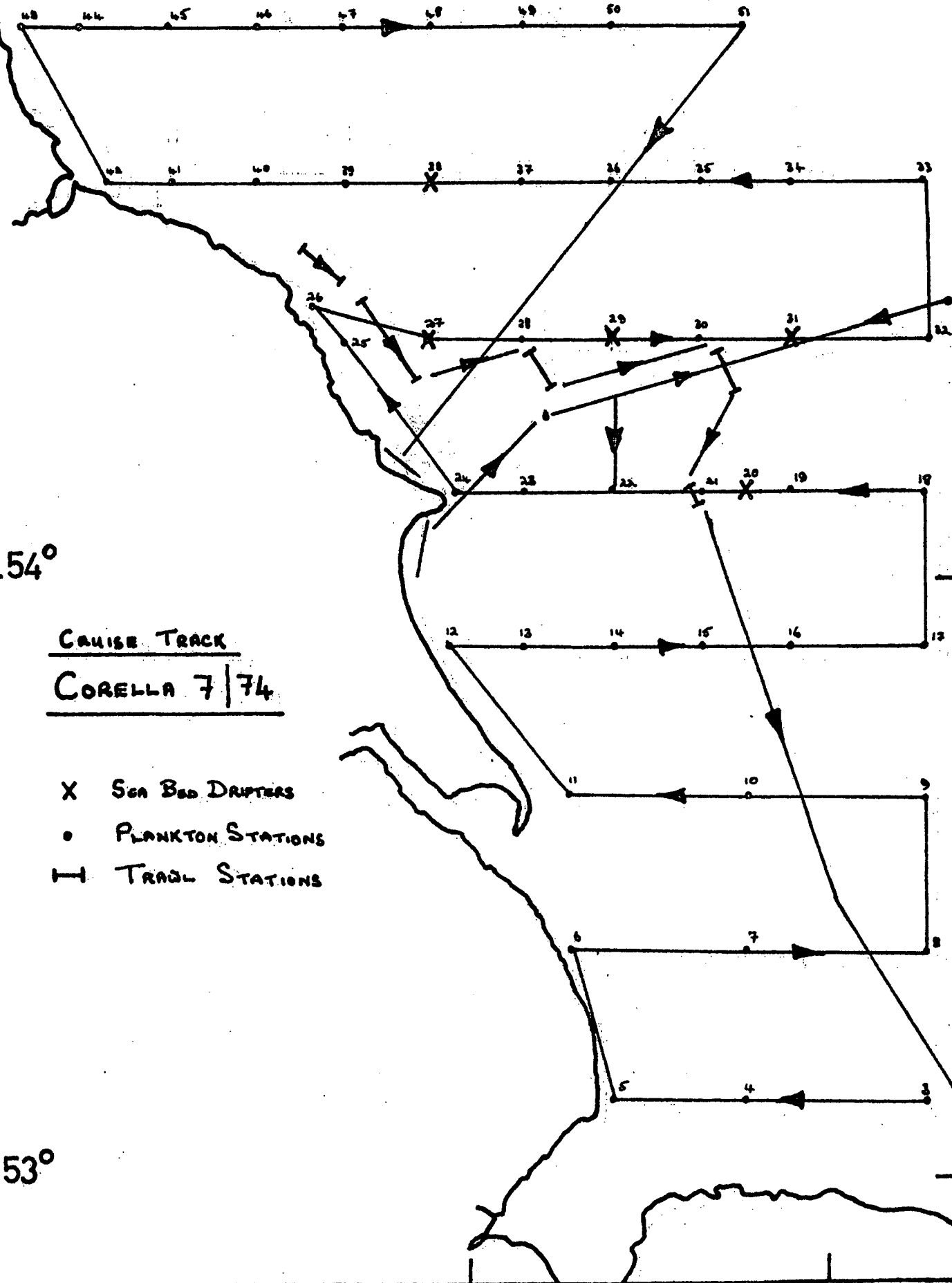
2. New bridle rig used on CORELLA CRUISE 7/74



55° 1°W

0°

1°E



54°

CRUISE TRACK

CORELLA 7/74

- X SEA BED DRIFTERS
- PLANKTON STATIONS
- ┌ TRAWL STATIONS

53°