

Indexed 21/1 APR. R5

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

1966 RESEARCH VESSEL PROGRAMME

REPORT: RV CLIONE : CRUISE 1

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

STAFF:

Brenda Thompson (PS)
J Casey
S P Milligan
R A Ayers
P M Hudson
A I Mitchell (Institute of Marine Biochemistry)

DURATION:

Left Lowestoft 1515h 3 January
Arrived Lowestoft 0930h 13 January
All times are Greenwich Mean Time

LOCALITY:

Southern North Sea and Eastern English Channel

AIMS:

1. To participate in the ICES co-ordinated herring larvae survey of regions IVC and VIID during the sampling period 1-15 January.
2. To sample herring larvae and their potential food organisms in a study of their diet.
3. To sample potential herring larvae predators and to examine their gut contents.
4. To sample herring larvae, other zooplankters and phyto plankton for lipid analysis, with emphasis on polyunsaturated fatty acids.
5. To collect samples of herring larvae for subsequent analysis of feeding status.
6. To collect sea bed sediment samples and Macer sledge samples for copepod and dinoflagellate studies for Dr A Lindley IMER, Plymouth.

NARRATIVE:

Problems with the ships gyro caused a delay in sailing until 1515h on 3 January. Plankton sampling was begun at a station approximately 30 n.miles NE of Lowestoft at 1900h and continued in deteriorating weather conditions until 2330h on 4 January when 60 knot southerly winds prevented further work.

Sampling was resumed at 0900h on 5 January and continued until 0600h on 7 January when a combination of problems with the ships steering gear and bad weather forced a break in work until 1130h on the same day. There was a further break of 6hrs for cable repairs on 8 January after which sampling continued until 0945h on 10 January when a south westerly gale forced CLIONE to seek shelter in Margate Roads.

An attempt was made on 12 January to continue sampling and CLIONE left Margate Roads at 0945h; however the continuing south westerly gale and the accompanying sea state made conditions unworkable and course was set for Lowestoft. CLIONE docked at 0930h on 3 January.

RESULTS:

AIM 1 79 stations of the herring larvae survey were completed; 35 in the Southern Bight and 44 in the eastern Channel using the 53 cm sampler. (Figs 1A and 1B.)

Some of the samples were sorted during the cruise and the results indicate that the number of larvae in the Southern North Sea area may be higher than in the corresponding period of 1985 (Fig 2).

Integrated temperature from the surface to the lowest point of each sampler dive is shown in Figs 3 and 4. The pattern is similar to that found in previous years with warmer water occurring west of 0° longitude in the English Channel, and temperatures of 5° to 6°C occurring off the Belgian and Dutch coasts of the Southern North Sea.

AIM 2 No samples of herring larvae were taken specifically for stomach analysis. The fine mesh auxiliary plankton sampler was used on three stations in the eastern English Channel to collect samples of potential food organisms in an area of relatively high numbers of herring larvae.

AIM 3 There was no opportunity to attempt to sample potential herring larvae predators.

AIM 4 Relationships between lipids in phytoplankton, zooplankton and herring larvae, with emphasis on polyunsaturated fatty acids.

Due to the curtailment of sampling by poor weather conditions, only two small samples of herring larvae were obtained, both from the Eastern Channel, in the area off the mouth of the Tamme. 28 litres of seawater from the same area were filtered through a glass microfibre filter to provide a phytoplankton sample.

All these samples were immediately immersed in a chloroform/methanol mixture (2:1) containing 0.01% butylated hydroxytoluene, sealed and stored in a deepfreeze.

Lipid analyses will be carried out at the Institute of Marine Biochemistry, Aberdeen.

AIM 5 No samples of herring larvae were taken for the subsequent analysis of feeding status.

AIM 6 The Macer Sledge was deployed at two sampling stations and the Day Grab at three stations. Twelve sea bed sediment samples and two Macer sledge samples of near bottom plankton were collected for Dr A Lindley IEMER Plymouth.

The poor weather conditions which prevailed for most of the cruise prevented completion of the proposed schedule of work and 17 stations of the herring larvae survey grid remained unsampled.

Brenda Thompson
12 January 1986

SEEN IN DRAFT G Sinclair
R Graham

INITIALLED: D J G

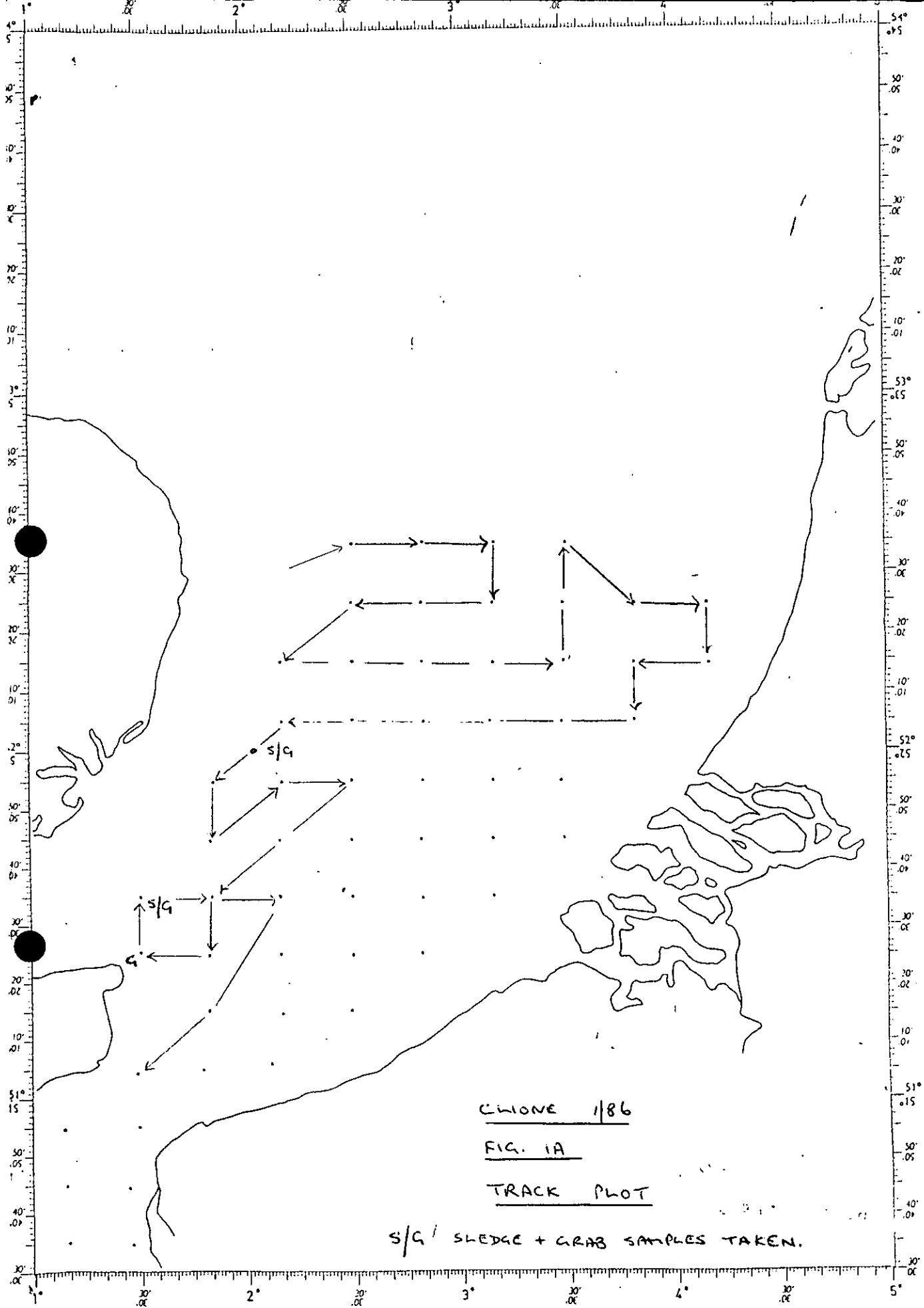
DISTRIBUTION: Basic List+
Staff on cruise
Dr V Christensen (Denmark)
Herring larvae Working Group (6)

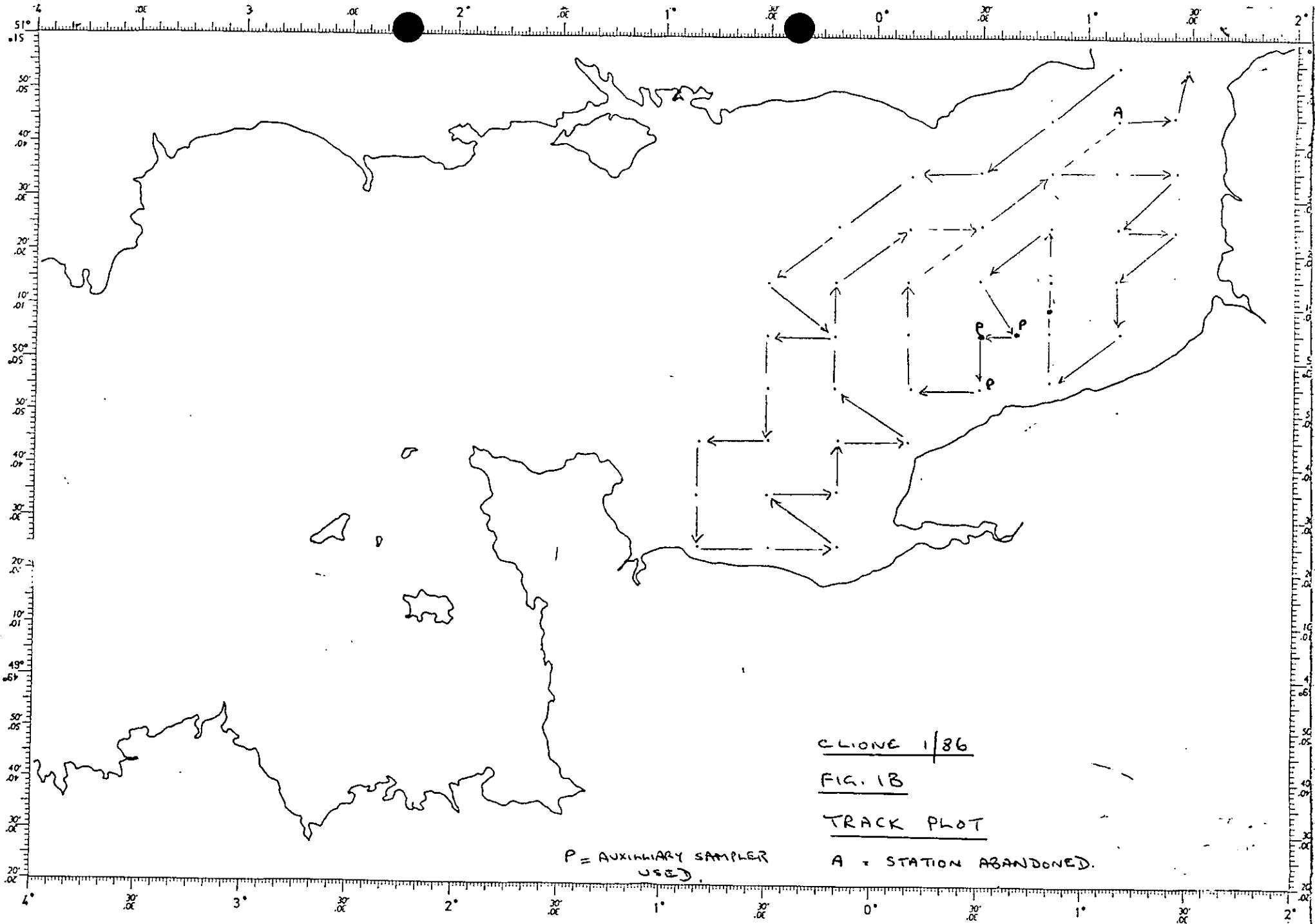
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APPENDIX TO REPORT : RV CLIONE : CRUISE 1





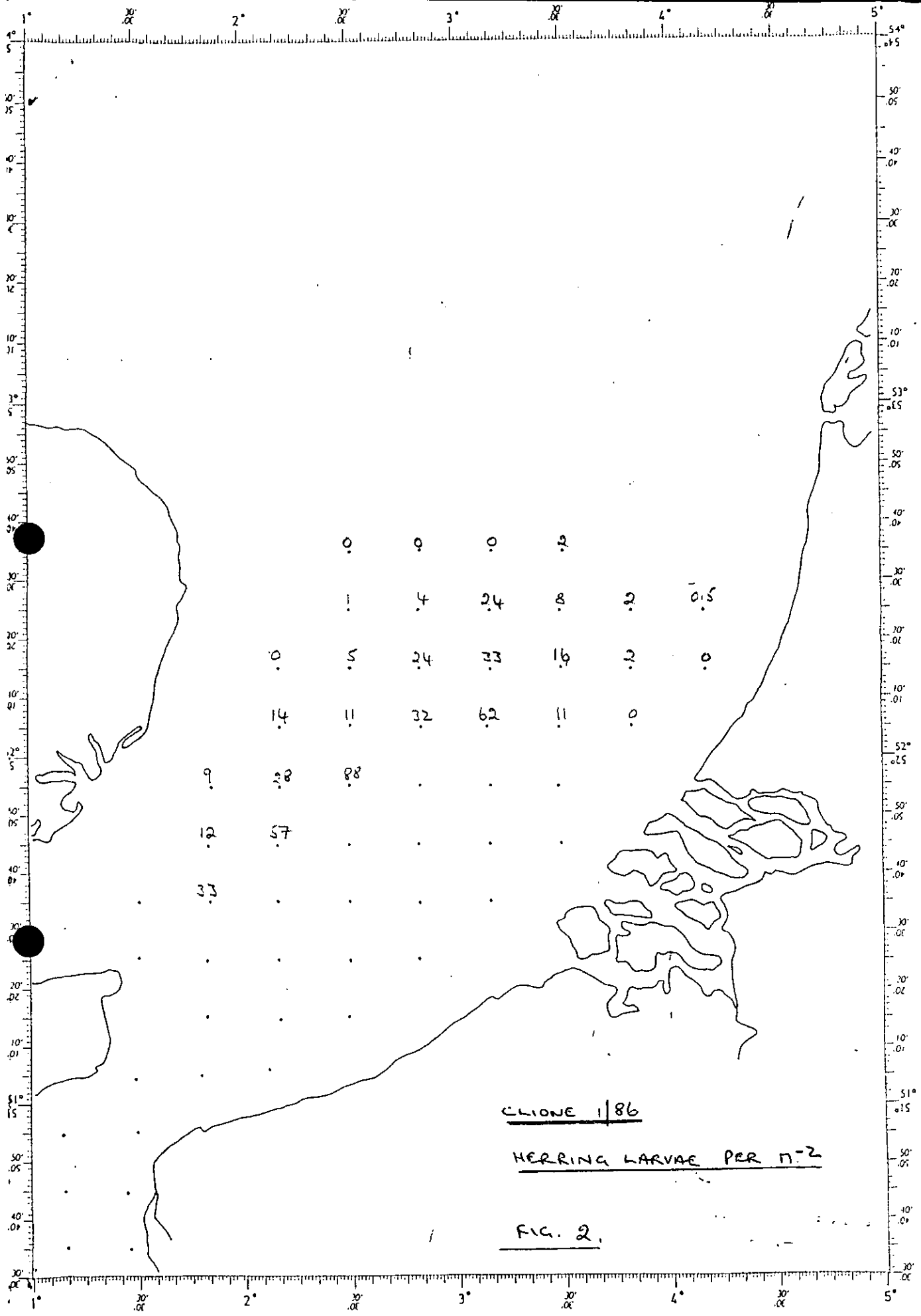
CLIONE 1/86

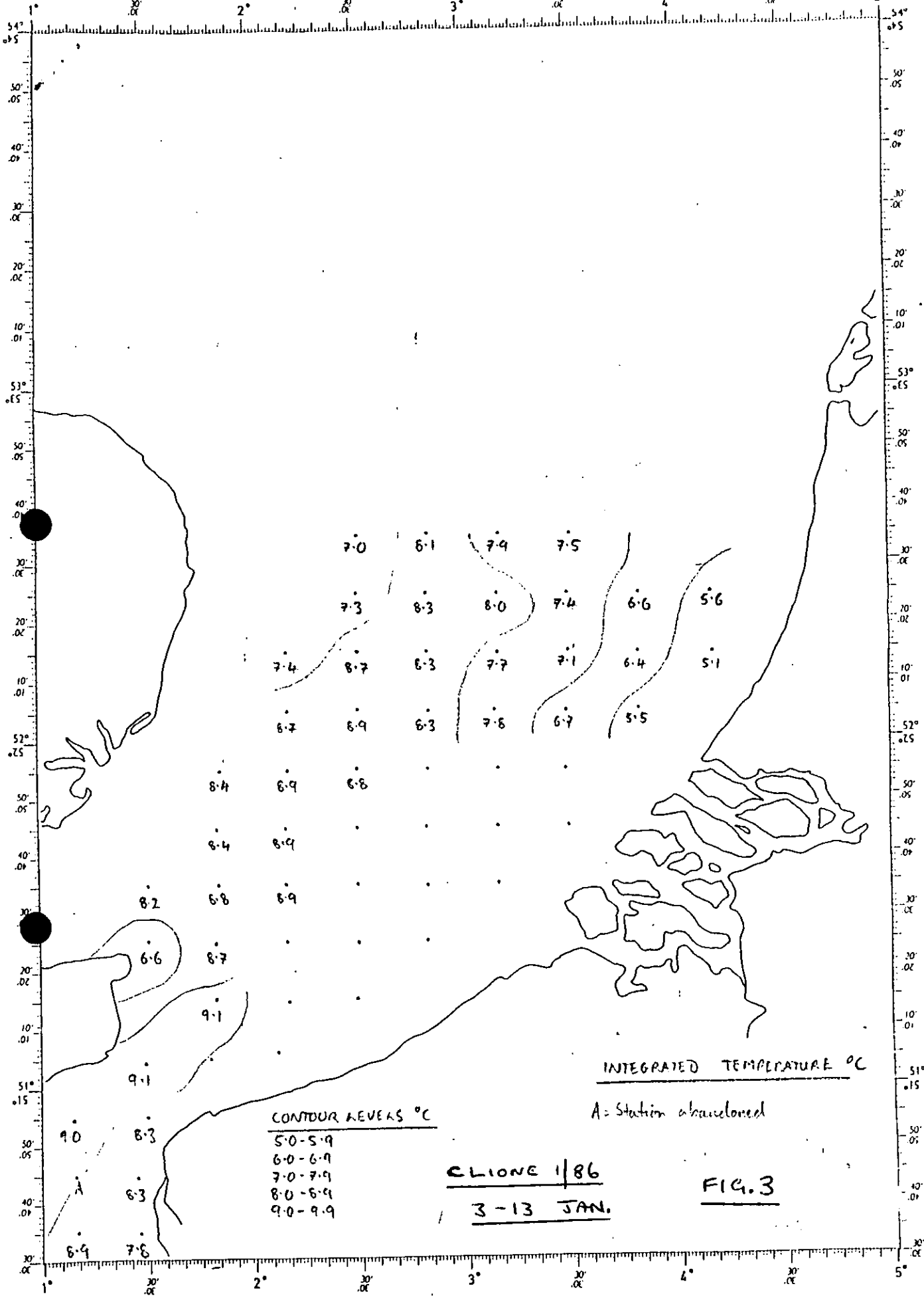
FIG. 1B

TRACK PLOT

P = AUXILIARY SAMPLER
USED

A = STATION ABANDONED.





CONTOUR INTERVALS °C

5.0-5.9
6.0-6.9
7.0-7.9
8.0-8.9
9.0-9.9

CLIONE 1/86
3-13 JAN.

FIG. 3

