

In Confidence: Not to be quoted without reference to the Laboratory

FRV "Explorer"

Cruise 2/78

REPORT

31 January - 21 February 1978

Objectives

- 1) To take part in the International Young Herring and Gadoid Pre-recruit Survey in the North Sea.
- 2) To examine freshly caught fish for parasites.

Narrative

"Explorer" sailed at 1830 hours on the 31 January 1978 and proceeded to the Dogger Bank area. South-easterly gales delayed the commencement of work until the 2 February. The Dogger Bank stations were completed before south-easterly gales again delayed work on the 5 February. From the 6 February until the mid-cruise break on the 10 February work proceeded without incident. "Explorer" sailed from Esbjerg on the morning of the 11 February to complete the remaining stations off the Danish coast. Weather conditions deteriorated and work was curtailed on the 11 February. "Explorer" developed a mechanical defect and anchored off the Danish coast on the afternoon of the 12 February to carry out repairs. The remaining trawl station was completed on the 13 February and "Explorer" then steamed to two statistical squares in the Dogger Bank area to complete Isaacs-Kidd trawls omitted at the start of the cruise. "Explorer" then proceeded to the Fladen area to undertake the next part of the programme. Work started again on the 15 February but was interrupted on the evening of the 17 February due to a family bereavement to a crew member which caused "Explorer" to be diverted to Hamnavoe (near Scalloway). Work recommenced on the 18 February and proceeded without interruption until the morning of the 21 February when worsening weather terminated the programme. "Explorer" proceeded to Aberdeen and docked at 2130 hours on the evening of the 21 February.

Trawling

trawl

Forty-three hauls were made using a bottom herring trawl with a 20 mm cod end. The 43 trawls consisted of 40 of one hour's duration, 1 of 30 minutes duration and 2 foul trawls.

Catches varied from $\frac{3}{4}$ to 23 baskets, the average per trawl being $6\frac{3}{4}$ baskets.

Fishing yielded a good variety of the major species. The results are presented in the following table as numbers per block of squares for 10 hours fishing.

1) AREA	1	2	3	4	5	6	7	8
No. of Hauls	4	4	10	8	4	4	6	1
Species								
HERRING	22	12	3724	1745	25	308	23	320
SPRAT	70	3790	16122	7274	198	135	0	170
COD	1135	310	527	1998	65	28	37	50
HADDOCK	3302	105	781	41	16288	6285	1645	24990
WHITING	1042	998	16081	10210	13848	1875	1078	22600
SAITHE	2	0	0	0	0	2	2247	0
2) FLATS	3148	6760	16404	15590	3032	1175	52	1310
NORWAY POUT	202	10	3	0	24562	9325	1997	130
SQUID	1952	195	39	0	3798	588	33	280

- 1) See attached chart 2) 'Flats' consisted mainly of Common Dabs and L. R. Dabs.

Sampling of pre-metamorphosis herring larvae was made using the Isaacs-Kidd midwater trawl on 58 occasions.

Parasite Studies

Seventy-two juvenile mackerel were dissected and examined for potential tag parasites. Seventy-six per cent were infected with a digenean which appears to be a hitherto undescribed species and may have some potential as a tag.

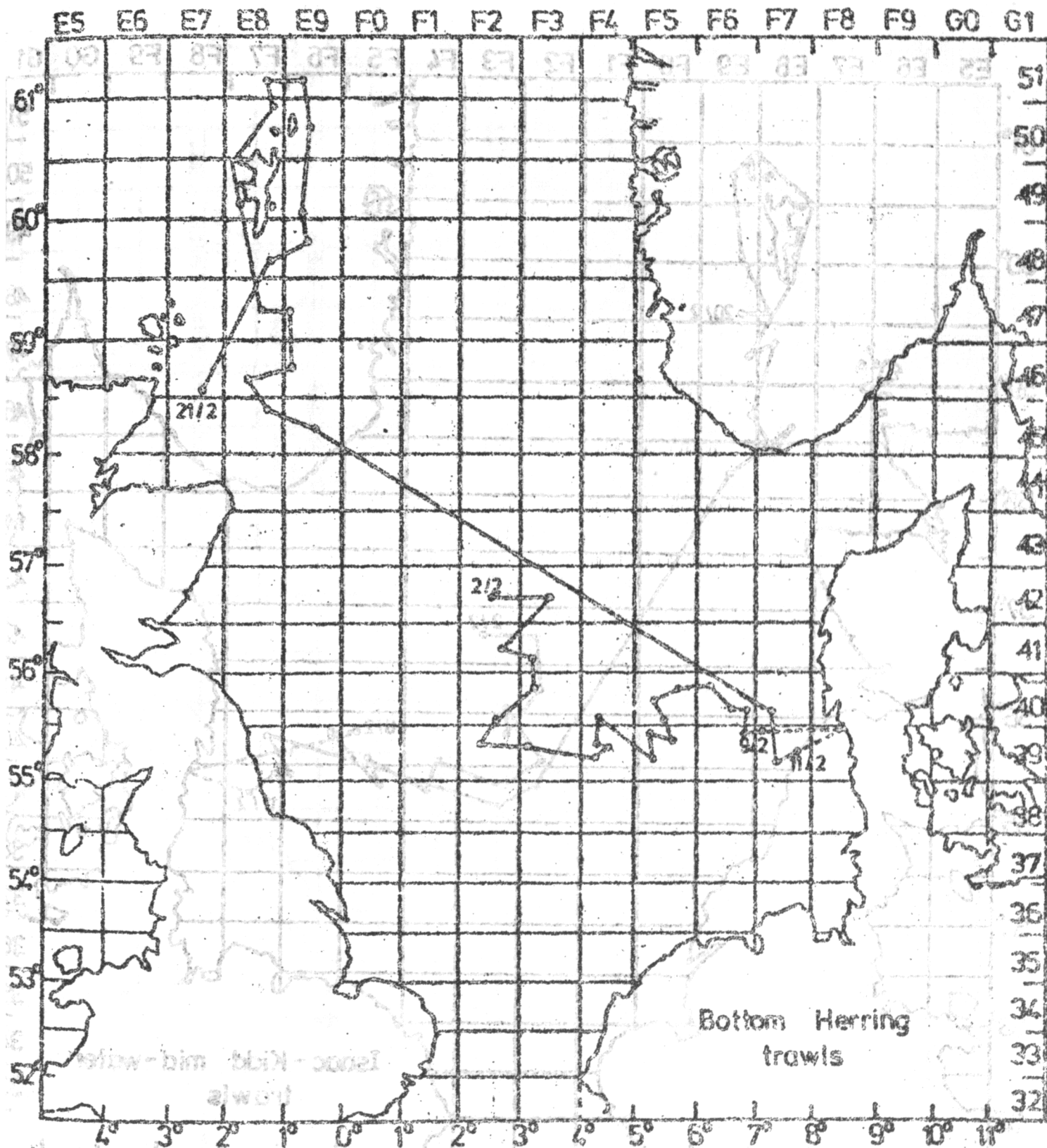
Microscopic examination of kidneys of 936 haddock, sampled in each haul for ICHTHYOPHONUS HOFERI, showed infection in 341. Of those infected 78.3% were from the western half of the North Sea. A total of 374 plaice were similarly examined and 9 showed infection with ICHTHYOPHONUS HOFERI.

General

In conjunction with "Clupea" all stations allocated to Scottish research vessels were completed.

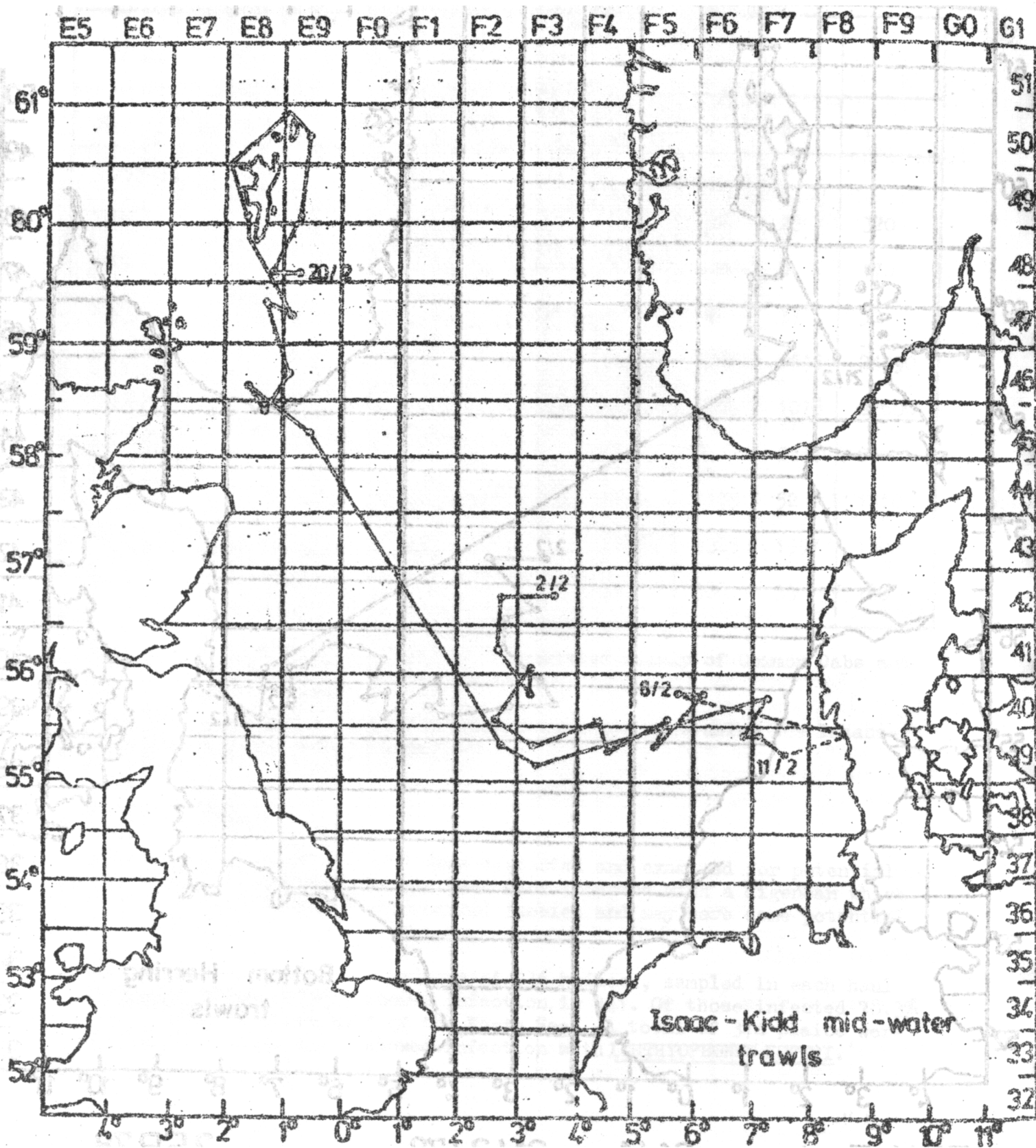
A S JERMYN
13 March 1978

Narrative seen in draft and approved by Captain J W Gillon



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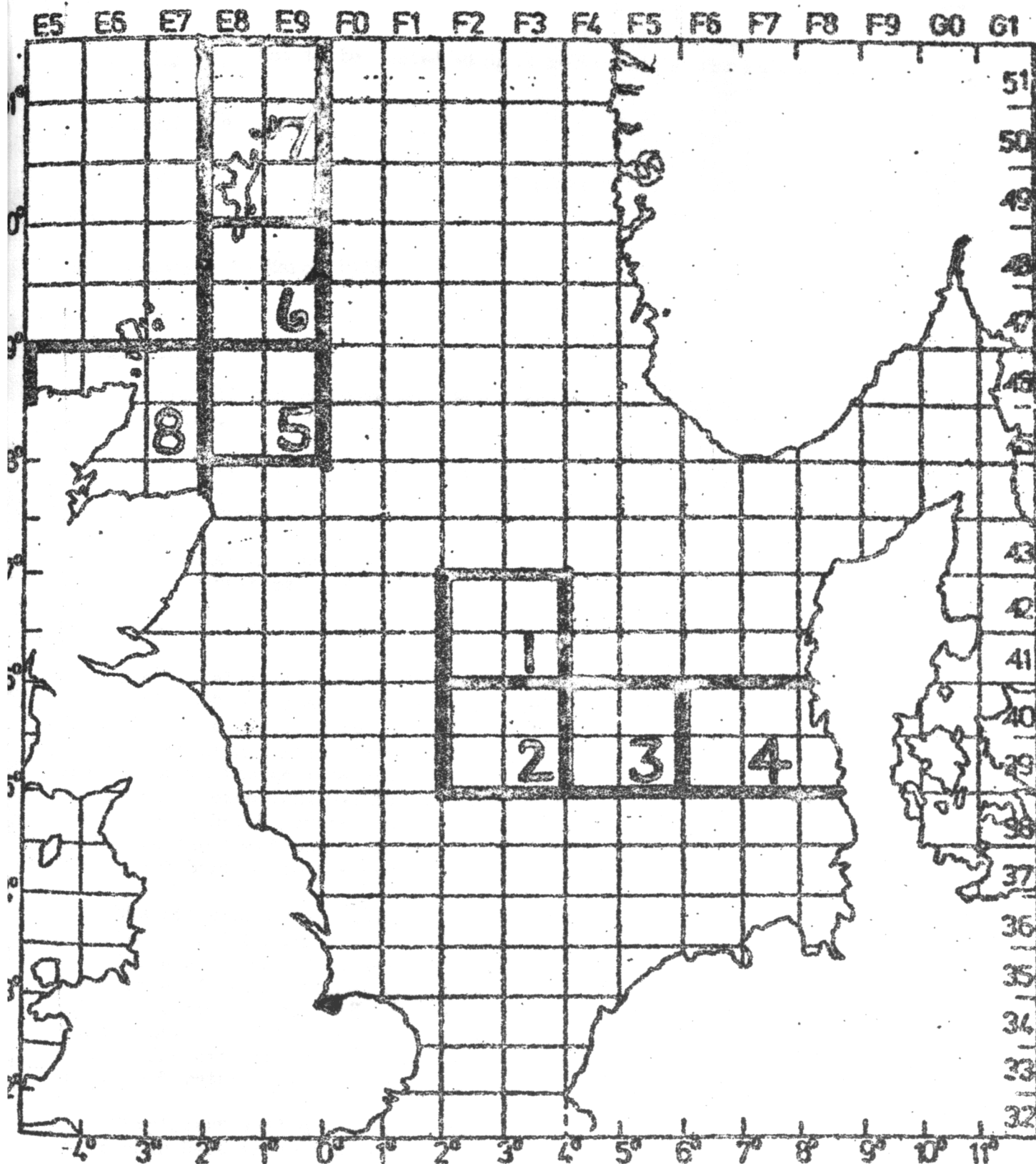
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