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

1978 RESEARCH VESSEL PROGRAMME

REPORT: R V CIROLANA: CRUISE 8

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

STAFF:

FSM 2 M G Pawson (NIC)

J P Bridger

G J Howlett

J Dann

B Croucher

FSM 1 R J Turner

RVST B C Mumford

B Large (Scarborough)

H Edge (Grimsby)

DURATION:

Left Grimsby 0730 h, 21 September

Arrived Grimsby 1930 h, 3 October

LOCALITY:

Northern North Sea, 57°30' - 61°30' N; 3°W - 2°E

AIMS:

1. To describe the distribution of gadoids within the Norway pout small-meshed fishery area, using a semi-pelagic trawl.
2. To obtain biological samples of all gadoids taken during the survey, and particularly blood and muscle samples from saithe and haddock.

NARRATIVE:

CIROLANA left Grimsby at 0730 h, 21 September and steamed to the first station, see Figure 1. Thirty two fishing stations were sampled during daylight between 22 September and 2 October, with the exception of 29 September when the ship dodged in a SE gale. CIROLANA returned to Grimsby and docked at 1930 h, 3 October.

RESULTS:

1. Fishing: One hour tows were made at each station with a semi-pelagic trawl fitted with a shrimp-netting cod end liner. This gear had a 35m headline fitted with 42 x 8" metal floats and a central Escocet kite, and a 42m groundrope comprising 2 x 18m of 4" rubber discs and a 6m bosom of 14" rubber disc bobbins and spacers. 4.5 m² Polyvalent trawl boards each with twin 40m bridles and a single 50m bridle were used. Headline heights of 4m at 4 knots and 5m at 3.3 knots were recorded, a towing speed of 3.7 knots being used throughout the survey. Catch rates averaged 0.88t/hr and the species composition of the important gadoids is given in Table I. Cod, haddock and whiting greater than 40, 30 and 35 cm respectively, were

normally not included in the sorted samples.

2. Biological samples: Samples of all gadoids were measured at each station and otoliths were taken for age-length keys in two North Sea roundfish sampling areas (1 & 2). Cod (75), haddock (50), whiting (70) and saithe (40) were bled for electrophoretic studies, and muscle samples from 50 herring and small numbers of each gadoid caught were also taken for comparison tests. Hearts were collected from cod over 90 cm (20), saithe (30), hake (15), Nurse hounds (15) and rays (5 naveus, 3 clavata and 9 montagui), and samples of herring and mackerel were retained for dissection at the laboratory. Four haddock muscle samples were taken for ATPase assay. Diseased fish (2 cod, 1 Norway pout, 2 whiting and 1 saithe) were preserved for FDL, Weymouth.

M G Pawson
9 October 1978

SEEN IN DRAFT: THF
EWP

INITIALLED: AJL

DISTRIBUTION:

Basic List

M G Pawson
J P Bridger
G J Howlett
J Dann
B Croucher
R J Turner
B C Mumford
B Large (Scarborough)
H Edge (Grimsby)

Table I. Analysis of samples of catches on CIROLANA cruise 8/78

Station	Total catch (t/hr)	Percentage by weight in sample (≈ 90 kg)					Percentage undersized by number		
		Norway pout	Whiting	Haddock	Cod	Blue whiting	Whiting (<25cm)	Haddock (<27cm)	Cod (<30cm)
1	1.58	15	48	33	0	0	79	96	0
2	.59	53	29	14	0	0	60	99	0
3	.36	61	28	6	1	0	67	99	0
4	.72	5	13	26	0	0	76	91	0
5	.59	34	21	29	0	0	51	99	0
6	.26	52	28	14	0	0	68	99	0
6A	.39	30	51	12	0	0	-	-	-
7	.24	6	17	28	0	0	63	92	0
8	.61	8	25	47	+	0	19	94	0
9	1.44	71	4	15	2	0	65	96	0
10	.97	27	38	32	8	0	31	96	+
11	.58	80	15	2	0	0	64	100	0
12	.28	65	19	23	1	+	89	99	0
13	1.01	86	2	9	0	+	100	99	0
14	.54	66	6	10	1	9	94	98	0
15	1.76	76	6	14	2	1	86	98	0
16	1.04	57	+	7	0	38	0	100	0
17	.58	65	2	17	3	0	0	51	+
18	1.85	70	1	8	1	13	82	99	0
19	2.39	89	1	6	0	3	21	100	0
20	.97	67	1	16	0	14	94	100	0
21	.30	48	6	22	2	2	98	99	0
22	.68	24	6	8	0	45	7	99	0
23	3.10	21	1	+	0	62	0	100	0
24	.56	59	0	1	0	26	0	100	0
25	.91	50	2	26	1	0	98	98	0
26	.95	59	9	27	2	1	98	98	+
27	.94	36	10	40	5	0	99	97	93
28	.60	55	8	19	0	0	91	98	0
29	.41	36	9	22	0	0	95	93	0
30	1.46	38	8	30	0	0	88	98	0
31	.35	5	19	55	0	0	90	99	0
32	.27	19	23	29	0	0	87	94	0

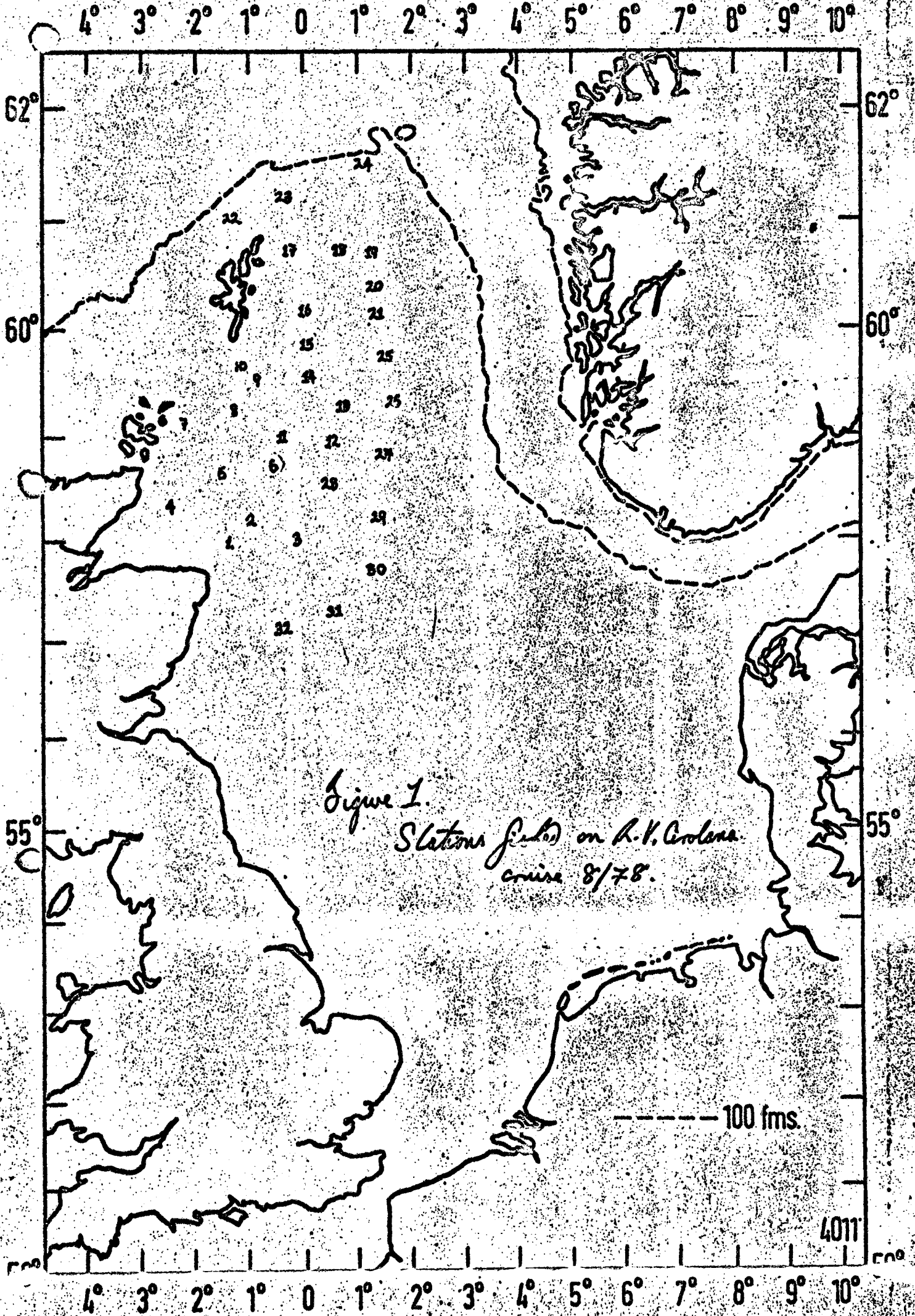


Figure 1.
Station plots on R.V. Cordana
cruise 8/78.

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