

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

1982 RESEARCH VESSEL PROGRAMME

REPORT: G A REAY: CRUISE 3
(PROVISIONAL: Not to be quoted without prior reference)

STAFF

D Harding (SIC)
G J Howlett
T Boon
R Turner
S Warnes
K Tucker

DURATION

Dept Aberdeen 1400h BST 9 March
Arr Aberdeen 1430 h BST 29 March

LOCALITY

Northern North Sea

AIMS

1. To describe the distribution of gadoids within the Norway pout fishery area using the semi pelagic high headline trawl.
2. To study the interaction between species by examining feeding preferences in relation to bottom type and depth of water.
3. To collect samples of benthos and near bottom plankton to compare with the stomach contents of fish.
4. To collect gonads from Norway pout for fecundity studies.
5. To collect fish samples for (a) whole weight gutted weight conversion factors (b) for the fisheries officers identification course, (c) for York University.
6. To collect tissue and blood samples from haddock for stock identification.

NARRATIVE

RV G A REAY sailed on schedule from Aberdeen at 1400h BST on 9 March 1982. Sampling commenced on 10 March under the lee of the Orkney Islands in strong north westerly winds which became gale force later in the day and prevented further fishing. Weather continued to be stormy until the 17 March allowing only those stations sheltered from the main force of the wind by the Orkney and Shetland Islands to be worked. On the 17 March the first full day's work was accomplished and with the weather staying favourable the cruise was completed and 40 stations sampled within the Pout Box out at the shelf edge. Gear damage was experienced on two tows, on the first occasion (Station 21) the net was replaced and on the second occasion (Station 25) the net was damaged beyond repair. The ship docked at Aberdeen in the morning on Wednesday 24 March to collect a new net and take on water and fuel before sailing in the

early afternoon to continue the trawl survey. The survey was accomplished without further delays and RV G A REAY docked at Aberdeen on Monday 29 March at 1430 h BST.

RESULTS

All the aims were accomplished except for the collection of plankton samples. The small Agazzis benthos dredge did not fish well and was abandoned after the second day. Benthos samples were therefore examined from the main trawl.

Forty stations were sampled using the G.O.V. Trawl and the catch rates of all fish and for the most important gadoids and herring are summarised in Tables 1 and 2.

Gonads from 25 ripe female Norway pout were preserved in Gilsons fluid and samples of fish of breeding size selected at each station and frozen. Samples of Norway pout, haddock cod and whiting were also collected for the analysis of stomach contents and the stomachs preserved in formaline or alcohol. Samples of Norway pout were also frozen for stomach and whole gut analysis.

Blood samples from selected specimens of haddock collected at nine locations, ^{were} centrifuged and frozen for analysis on return to Lowestoft.

221 specimens of fish belonging to eleven species were processed and frozen for later analysis at Lowestoft for project 193A to calculate whole weight/gutted weight conversion factors.

Finally a thermistor was deployed at each station to obtain surface to bottom temperature profiles. The original location of this instrument and the chart recorder in the shackle store proved to be an unfortunate choice. The store is damp and this affected the performance of the instrument and its chart recorder. They were dried out and a space found for the digital read out on the bridge, after which the instrument behaved normally.

D Harding - SIC
6 May 1982

SEEN IN DRAFT: W E Clark - Master

INITIALLED: DJG

DISTRIBUTION:

Basic List

D Harding (SIC)
G J Howlett
T Boon
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Table 1. Catch rates of fish/hour fished

Station	Code	Total Catch		Depth	
		Baskets	Kilograms	Fathoms	Meters
1	31A	18	608	40	
2	34	70	2,527	40	
3	35	34	1,242	40	
4	51	32	1,765	60	
5	53	25	852	80	
6	60	18	643	80	
7	40	13	462	70	
8	38	32	1,163	75	
9	66	11	352	80	
10	64	22	724	63	
11	49	19	626	63	
12	43	30	1,056	69	
13	45	10	376	74	
14	46	5	145	77	
15	37	18	631	80	
16	36	9	327	60	
17	33	5	175	60	
18	25	14	498	60	
19	28	4	262	80	
20	27	5	208	80	
* 21	20	3	92	50	
22	19	11	433	50	
23	17	8	327	44	
24	13	6	195	34	
** 25	9	16	1316	50	
26	10	4	133	44	
27	7	9	302	42	
28	1	11	398	55	
29	77	30	1002	69	
30	30	11	365	61	
31	31	24	865	57	
32	32	28	911	54	
x 33	29	-	-	-	
34	18	14	474	45	
35	2	9	314	45	
36	6	19	939	40	
37	8	35	1365	48	
38	5	4	138	41	
39	4	2	86	34	
40	3	17	577	35	

x Net damaged at start of haul no wt
 ** Net damaged way through haul - 30m haul weighed

Table 2 Catch/hour of main gadoids and herring

Station	Cod		Haddock		Whiting		Norway Pout		Saithe		Herring	
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
1 (31)	6	10	2533	344	935	51	1088	25	-	-	?	140
2 (34)	5	4	7824	1325	4416	359	-	-	-	-	13441	773
3 (35)	2	<1	1879	264	7344	870	-	-	-	-	320	29
4 (51)	27	28	2114	449	393	71	3612	21	798	480	8	2
5 (53)	9	27	2179	357	214	83	3457	323	1	1	-	-
6 (60)	7	31	873	170	175	678	44775	210	-	-	39	9
7 (40)	10	93	1582	114	232	34	-	-	-	-	1228	161
8 (38)	36	53	1481	352	1260	252	5248	32	1	6	-	-
9 (66)	16	15	623	17	150	39	27850	139	24	72	-	-
10 (64)	34	58	2456	244	323	82	49179	278	5	16	-	-
11 (49)	17	30	2440	453	210	48	5739	41	4	15	-	-
12 (43)	61	142	2717	701	432	81	7056	34	-	-	279	51
13 (45)	15	19	793	168	519	120	1800	12	-	-	21	4
14 (46)	20	20	165	32	236	45	2380	17	3	21	-	-
15 (37)	3	10	1242	154	1434	231	1908	17	-	-	1983	210
16 (36)	1	<1	2786	200	590	80	-	-	-	-	-	-
17 (33)	6	29	1817	74	23	3	4001	34	-	-	203	14
18 (25)	47	88	2069	279	518	74	3229	25	-	-	1	<1
19 (28)	59	116	285	123	346	66	4224	32	-	-	5	<1
20 (27)	28	25	439	49	382	68	6345	57	1	2	-	-
21 (20)	63	31	128	38	13	2	-	-	-	-	-	-
22 (19)	56	33	2075	383	5	<1	179	2	-	-	16	1
23 (17)	46	78	778	237	13	2	39	<1	-	-	5	<1
24 (13)	13	129	145	42	49	8	-	-	-	-	1	<1
25 (9)	116	456	668	81	67	6	313	3	16	66	1	<1
26 (10)	17	34	204	25	158	45	-	-	-	-	2	<1
27 (7)	3	2	1493	104	213	152	-	-	-	-	2	<1
28 (1)	20	48	1967	208	203	49	4758	62	-	-	151	5
29 (77)	2	12	1506	210	1176	786	319	3	-	-	1044	72
30 (30)	1	5	2659	230	246	25	9860	82	-	-	293	14
31 (31)	4	17	4400	370	2655	289	952	9	-	-	1334	29
32 (32)	22	29	4404	561	720	86	3592	40	-	-	3065	145
33 (29)	-	-	INVALID HAUL		-	-	-	-	-	-	-	-
34 (18)	15	17	1846	243	1188	127	-	-	-	-	2	1
35 (2)	15	70	567	73	996	128	-	-	-	-	227	14
36 (6)	7	87	1183	94	4680	455	144	2	-	-	69	6
37 (8)	8	16	1089	88	8415	1015	1000	14	6	50	8	1
38 (5)	1	13	770	49	428	33	-	-	-	-	6	1
39 (4)	1	<1	33	6	58	5	-	-	-	-	-	-
40 (3)	55	106	613	159	226	43	8	<1	1	1	3	<1

Table 3.

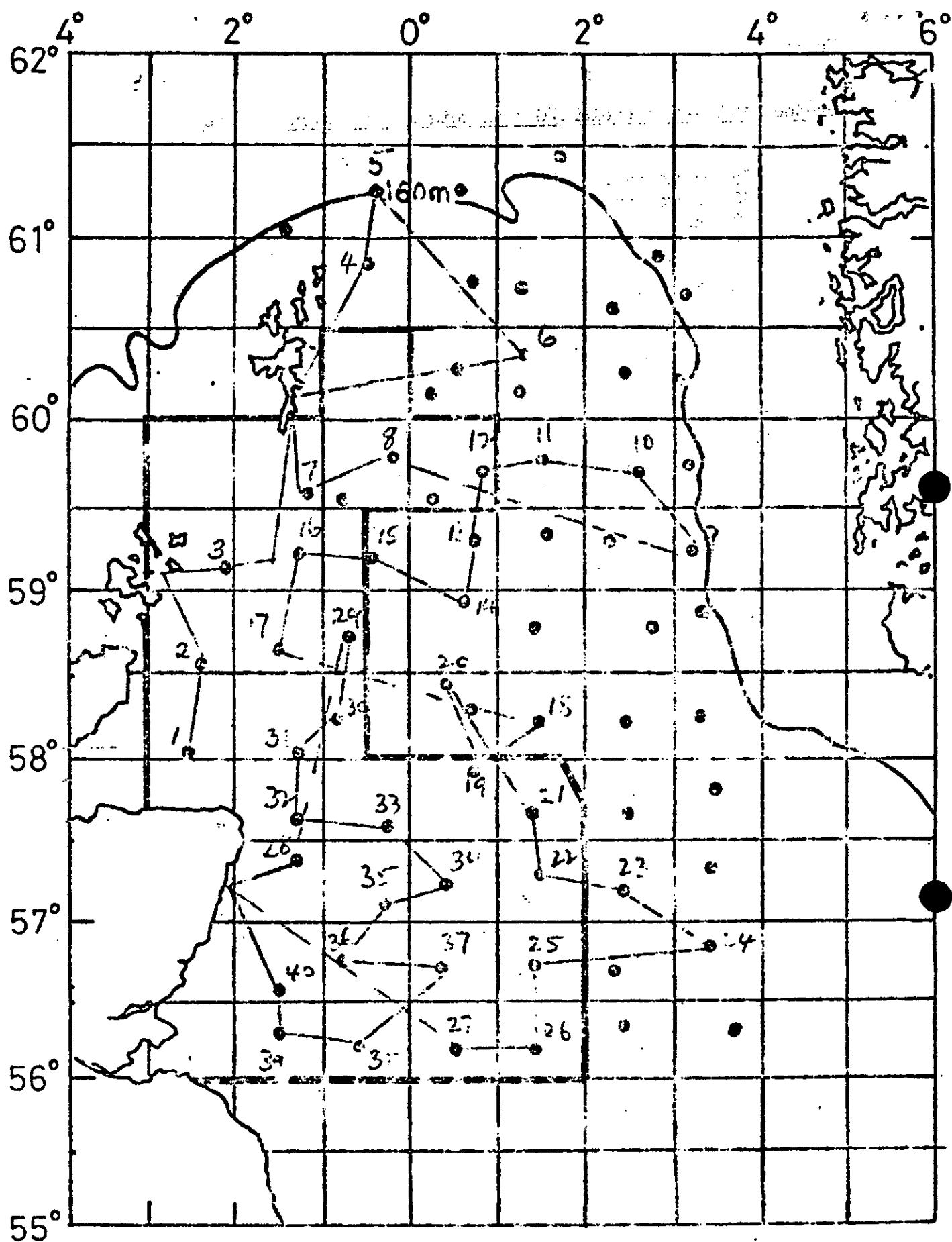
Project 193A - Wholeweight/Gutted weight conversion factors

33	Large haddock
30	Large cod
72	Saithe
16	Ling
14	Catfish
7	Anglerfish (Monk)
14	Dab
23	Witch
7	Lemon sole
2	Spurdogs
3	Turbot

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1974-1975 1976-1977 1978-1979 1980-1981

1982-1983 1984-1985 1986-1987 1988-1989



GA REAT 3/82 CRUISE TRACK
9-29 MARCH 1982