

R1/7

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

9
4MR64

CRUISE REPORT

F.R.V. "MARA"

23rd March - 10th April, 1964

The vessel was unable to leave Fraserburgh until 26th March due to bad weather. The time in port was spent rigging nets and preparing gear. Lifting rings were fitted to the Skagen trawl doors. The weather improved slightly by the 26th and the ship left at 0800 hrs for Bell Rock.

Echo surveying at the area to the east of Bell Rock commenced at 1745 hrs. By 2100 hrs the weather had deteriorated so much that it was decided to return to Aberdeen; the navigation buoys at Dundee were adrift. The ship tied up at Torry Dock at 0245 hrs on the 27th. Heavy swell kept the ship in port until 31st, when it again put to sea for Bell Rock at 0730 hrs. The sea conditions were still impossible for working and Mara put back to Aberdeen.

It was decided, as time was running short, to work in the Tod Head area as and when conditions allowed. Working from Aberdeen and Montrose, eight hauls were made using a rig modified for trawling over rough ground. A camera survey was made over the same ground.

Work at Bell Rock started on 6th April, working out of Dundee. An echo survey and camera survey were made of an area to the west of Bell Rock. Nine hauls were made using manilla, nylon, and polypropylene trawls with the hard-ground gear. The course of each survey and tow was plotted on prepared Decca charts.

Warnings of southerly gales were issued on the 9th and by the middle of the afternoon, conditions had deteriorated locally and the ship returned to Aberdeen. The programme ended with two hauls off Girdleness on the 10th.

E. S. STRANGE

26th June, 1964.

HAUL No. M34/4 DATE 1/4/64 AREA Tod Head LARGE/SMALL MESH

DURATION OF HAUL 1 hour No. of SHEETS 1

Whiting Haddock Cod

200			20			20
1		2	1			1
2		3	2			2
3		1	3			3
4		1	4	1		4
5		2	5			5
6		1	6			6
7		1	7	1		7
8		2	8			8
9		2	9			9
30		2	0	1		20
1		1	1	1		1
2		2	2			2
3		2	3			3
4			4			4
5		1	5	1		5
6		1	6			6
7		1	7	1		7
8		2	8			8
9			9	2		9
40		1	0			40
1		2	1			1
2			2			2
3			3			3
4			4			4
5		1	5	1		5
6			6			6
7			7			7
8			8			8
9			9			9
50			0			50
1			1			1
2			2			2
3			3			3
4			4			4
5			5	1		5
6			6			6
7			7			7
8			8			8
9			9			9

$\frac{1}{60} \times \frac{4}{12}$

COUNT 32 RANGE See FRACTION SAMPLED
 COUNT 13 RANGE See FRACTION SAMPLED
 COUNT 13 RANGE See FRACTION SAMPLED

HAUL No.

LARGE/SMALL MESH.

HAUL No.	AREA	DATE	DURATION OF HAUL
20			
1			
2			
3	1		
4			
5	1		
6	1		
7	2	1	
8			
9	1		
0	1		
1			
2			
3			
4	1		
5			
6			
7			
8			
9			
0	2	13	16

COUNT RANGE FRACTION SAMPLED

ALL ALL ALL

SPECIES

Lemon Sole $\frac{1}{22}, \frac{1}{29}, \frac{1}{31}, \frac{1}{35}$ (4)

Common Dab $\frac{1}{14}, \frac{1}{20}, \frac{1}{21}, \frac{3}{22}, \frac{1}{23}$ (7)

L R Dab $\frac{1}{15}, \frac{1}{17}$ (2)

Agonus $\frac{1}{11}$ (1)

Blotch $\frac{1}{26}$ (1)

Ling Tot $\frac{1}{29}$ (1)

Butterfish $\frac{1}{24}, \frac{1}{24}$ (2)

Inverts.

1 Nephrop

4 Echinoderms

3 Sponge

4 Starfish

COUNT RANGE FRACTION SAMPLED

~~12~~

HAUL No. MCH/5 DATE 1/4/64 AREA Tod Head LARGE/SMALL MESH

DURATION OF HAUL 1 hour No. of SHEETS 1

Whiting

Haddock

10			20			0
1			1			1
2			2			2
3			3			3
4			4			4
5			5			5
6			6			6
7			7			7
8		1	8			8
9		2	9		1	9
20		1	0		5	0
1		1	1			1
2		2	2			2
3		2	3			3
4		2	4			4
5			5		1	5
6			6			6
7			7			7
8			8			8
9		1	9			9
0			0			0
1			1			1
2			2			2
3		1	3			3
4			4			4
5			5			5
6			6			6
7			7			7
8			8			8
9			9			9
0			0			0
1			1			1
2			2			2
3			3			3
4			4			4
5			5			5
6			6			6
7			7			7
8			8			8
9			9			9

COUNT RANGE FRACTION SAMPLED

11
RL

COUNT RANGE FRACTION SAMPLED

5
DL

COUNT RANGE FRACTION SAMPLED

Col

Lemon Sole

Common Dab

30		16		6		6
1		7		7		7
2	/	8		8	1/29	8
3		9	/	9		9
4		20		0		0
5	/	1	1/37	1	/	1
6		2	1/38	2		2
7		3	/	3		3
8		4	1/39	4		4
9		5	3	5		5
40		6	/	6	/	6
1		7		7		7
2		8	/	8		8
3		9	/	9		9
4	/	30	2	0	/	0
5		1	/	1	2	1
6	/	2	/	2	2	2
7		3		3		3
8		4	/	4		4
9	/	5		5		5

16 8

COUNT RANGE FRACTION SAMPLED SPECIES

6		Catfish	2/62	2
7		ling	1/59	1
8		Plaice	1/20, 2/23, 2/30	5
9		L.R. Dab	1/19, 1/27	2
60		Gadus luscus	1/19, 1/21, 2/24	4

143

Inverte 27 Echinoderm + 6 Buccinum 1 holstel

8 BE

COUNT RANGE FRACTION SAMPLED

HAUL No. M64/6 DATE 1/4/64 AREA Tod Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Haddock			Whiting		
20			0		0
1			1		1
2			2		2
3			3		3
4			4		4
5			5		5
6			6		6
7		1	7		7
8			8		8
9		3	9		9
30		1	0		0
1		1	1		1
2		1	2		2
3			3		3
4		2	4		4
5			5		5
6			6		6
7			7		7
8			8		8
9		1	9		9
0			0		0
1			1		1
2			2		2
3			3		3
4			4		4
5			5		5
6			6		6
7			7		7
8			8		8
9			9		9
0			0		0
1			1		1
2			2		2
3			3		3
4			4		4
5			5		5
6			6		6
7			7		7
8			8		8
9			9		9

1/22

10
RL

1
RL

COUNT
RANGE
FRACTION SAMPLED

COUNT
RANGE
FRACTION SAMPLED

COUNT
RANGE
FRACTION SAMPLED

HAUL No.

LARGE/SMALL MESH.....

Place

20	1	6	6	6
1		7	7	7
2	2	8	8	8
3		9	9	9
4	1	0	0	0
5		1	1	1
6		2	2	2
7		3	3	3
8		4	4	4
9		5	5	5
0		6	6	6
1		7	7	7
2	1	8	8	8
3	1	9	9	9
4		0	0	0
5		1	1	1
6		2	2	2
7		3	3	3
8		4	4	4
9		5	5	5
0				

COUNT

RANGE

FRACTION SAMPLED

SPECIES

5		humpbacket	$\frac{1}{38}$	$\frac{1}{42}$		2	
6		cod	$\frac{1}{45}$	$\frac{1}{59}$	$\frac{1}{61}$	$\frac{1}{74}$	4
7		herring	$\frac{1}{19}$				1
8	1	Common Dab	$\frac{2}{16}$	$\frac{1}{22}$	$\frac{1}{24}$		4
9	1	L R Dab	$\frac{1}{18}$	$\frac{1}{20}$			2

COUNT

RANGE

FRACTION SAMPLED

HAUL No. M 12/7 DATE 2/12/66 AREA Toad Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting			Haddock			Cod		
20			20			30		
1			1			1		$\frac{1}{110}$
2			2			2	1	
3			3			3		$\frac{1}{100}$
4			4		4	4		
5			5		3	5		
6			6		3	6		
7			7	H	10	7	2	
8			8	H	8	8		
9			9	H	11	9		
0			0		4	0		
1			1		2	1		
2			2			2		
3		1	3		1	3		
4			4			4	1	
5			5		1	5	1	
6			6			6	1	
7			7			7	1	
8			8			8		
9			9			9		
0			0			0		
1			1			1	1	
2			2			2	1	
3			3			3		
4			4			4	1	
5			5			5		
6			6			6		
7			7			7		
8			8			8	1	
9			9			9	1	
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		

COUNT RANGE FRACTION SAMPLED Be

COUNT RANGE FRACTION SAMPLED 47 Be

COUNT RANGE FRACTION SAMPLED 14 Be

HAUL No.

LARGE/SMALL MESH.....

Station *hemon Sole*

0	16		6	6
1	7	/	7	7
2	8	0	8	8
3	9		9	9
4	0		0	0
5	1	/	1	1
6	2	/	2	2
7	3		3	3
8	4	/	4	4
9	5		5	5
0	6		6	6
1	7	/	7	7
2	8		8	8
3	9	$\frac{1}{38}$	9	9
4	0		0	0
5	1	/	1	1
6	2	/	2	2
7	3		3	3
8	4	/	4	4
9	5		5	5

9

COUNT

RANGE

FRACTION SAMPLED

SPECIES

5	<i>ling</i>	$\frac{1}{39}, \frac{1}{50}, \frac{1}{61}$	3
6	<i>P. lance</i>	$\frac{1}{35}, \frac{1}{39}$	2
7	<i>LK Dab</i>	$\frac{1}{14}, \frac{1}{21}$	2
8	<i>Raja circulosus</i>	$\frac{1}{33}, \frac{1}{36}$	2

COUNT

RANGE

FRACTION SAMPLED

HAUL No. 2622/8 DATE 2/4/64 AREA Toad Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting			Haddock			Cod		
20			20			30		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		

COUNT RANGE FRACTION SAMPLED 1
DL

COUNT RANGE FRACTION SAMPLED 4
DL

COUNT RANGE FRACTION SAMPLED 12
DL

$\frac{1}{71}$
 $\frac{1}{82}$

HAUL No.

LARGE/SMALL MESH.

Lemon Sole

20		6	6	6
1	$\frac{1}{18}$	7	7	7
2		8	8	8
3		9	9	9
4	/	0	0	0
5	3	1	1	1
6	2	2	2	2
7		3	3	3
8		4	4	4
9		5	5	5
30	3	6	6	6
1		7	7	7
2		8	8	8
3		9	9	9
4	/	0	0	0
5	/	1	1	1
6		2	2	2
7		3	3	3
8	/	4	4	4
9	/	5	5	5

40 /

1 COUNT
 2 RANGE
 3 FRACTION SAMPLED

4 SPECIES
 5 Catfish $\frac{1}{32}$ 1
 6 Plaice $\frac{1}{20}, \frac{1}{30}$ 2
 7 Common Sole $\frac{1}{19}, \frac{1}{21}, \frac{1}{25}$ 3

50

1
 2
 3
 4
 5
 6
 7
 8
 9

15

COUNT
 RANGE
 FRACTION SAMPLED

HAUL No. M 62/9 DATE 2/4/64 AREA Toot Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

<u>Whiting</u>			<u>Haddock</u>			<u>Gel</u>		
20			20			30		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8		1	8		
9			9			9		
0			0		1	0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			0		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		

1/97

COUNT See
 RANGE
 FRACTION SAMPLED

COUNT See
 RANGE
 FRACTION SAMPLED

COUNT See
 RANGE
 FRACTION SAMPLED

HAUL No.....

LARGE/SMALL MESH.....

0	6	6	6
1	7	7	7
2	8	8	8
3	9	9	9
4	0	0	0
5	1	1	1
6	2	2	2
7	3	3	3
8	4	4	4
9	5	5	5
0	6	6	6
1	7	7	7
2	8	8	8
3	9	9	9
4	0	0	0
5	1	1	1
6	2	2	2
7	3	3	3
8	4	4	4
9	5	5	5

COUNT
 RANGE
 FRACTION SAMPLED

SPECIES
 Lemon Sole
 Common Dab
 Plaice

$\frac{1}{25}, \frac{1}{39}$
 $\frac{1}{21}, \frac{1}{22}, \frac{1}{23}$
 $\frac{1}{35}, \frac{2}{36}, \frac{1}{28}, \frac{1}{45}$

②
 ③
 ⑤

COUNT
 RANGE
 FRACTION SAMPLED

HAUL No. M 124/10 DATE 2/4/66 AREA Toad Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting		Haddock		Cod	
20		20		30	
1		1		1	1
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	1
7		7		7	
8		8		8	
9		9		9	
0		0		0	
1		1	1	1	1
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6	1	6	
7	1	7		7	
8	1	8		8	1
9		9	1	9	
0	1	0		0	
1	1	1		1	1
2	2	2	1	2	
3		3		3	2
4		4		4	
5	2	5	1	5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
0		0		0	
1		1		1	
2		2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	

COUNT RANGE FRACTION SAMPLED See 8

COUNT RANGE FRACTION SAMPLED See 6

COUNT RANGE FRACTION SAMPLED See 7

Common Lab

Common Sole

JUN 30 1968

0	16		26		6
1	7		7	Z	7
2	8	/	8	/	8
3	9		9		9
4	0		0	/	0
5	1	/	1		1
6	2	/	2	L	2
7	3	/	3		3
8	4	/	4		4
9	5		5		5
0	6		6		6
1	7		7		7
2	8		8		8
3	9		9		9
4	0		0		0
5	1		1		1
6	2		2		2
7	3		3		3
8	4		4		4
9	5		5		5

COUNT
RANGE

5
All

6
All

FRACTION SAMPLED

SPECIES

Plaice
ling

1/36
1/88

(1)
(1)

COUNT

RANGE

FRACTION SAMPLED

HAUL No. M 42/11 DATE 3/4/61 AREA Tad Head LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9

0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9

0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9
0
1
2
3
4
5
6
7
8
9

COUNT
RANGE
FRACTION SAMPLED

COUNT
RANGE
FRACTION SAMPLED

COUNT
RANGE
FRACTION SAMPLED

HAUL No.

LARGE/SMALL MESH

lemon Sole

Plaice

0	16	16	6
1	7	7	7
2	8	8	8
3	9	9	9
4	0	0	0
5	1	1	1
6	2	2	2
7	3	3	3
8	4	4	4
9	5	5	5
0	6	6	6
1	7	7	7
2	8	8	8
3	9	9	9
4	0	0	0
5	1	1	1
6	2	2	2
7	3	3	3
8	4	4	4
9	5	5	5
0	6	6	6

$\frac{1}{38}$

2

2

1

1

1

6

COUNT

All

RANGE

All

FRACTION SAMPLED

SPECIES

Saithe

Cod

Catfish

Common Dab

Gadus luscus

$\frac{1}{60}, \frac{1}{67}, \frac{1}{62}, \frac{1}{68}, \frac{1}{45}$
 $\frac{1}{47}, \frac{1}{48}, \frac{2}{50}, \frac{1}{82}, \frac{1}{68}, \frac{1}{45}$
 $\frac{1}{76}, \frac{1}{19}, \frac{2}{23}, \frac{1}{30}, \frac{1}{35}$

(2)

(1)

(3)

(2)

COUNT

RANGE

FRACTION SAMPLED