

## CRUISE REPORT

F.R.V. "MARA"

4th - 23rd May 1964

Narrative

The scientific staff joined "Mara" at Troon on the 4th May. Work was delayed owing to a westerly gale. Scallop dredging commenced on the 5th and continued until the afternoon of the 19th, when the scientific staff disembarked at Stranraer. "Mara" then made a passage to Buckie, where she arrived on the afternoon of the 23rd.

Gale force winds between south and west limited the amount of dredging carried out on the Ayrshire coast. It was, however, possible to work most days in Loch Fyne, Kilbrannan Sound, the Kyles of Bute and round Arran. Most hauls were with the 6 ft standard dredge, though sometimes a 4 ft standard or a 5 ft Baird dredge, each with a fine mesh bag, was used. In all, 89 hauls were made.

Results

Scallops (Pecten maximus) are widespread in the Clyde and were taken at almost every fishing station. Hauls indicating commercial densities of scallops were taken at the following places:-

Arran off the Cock of Arran; Corrie; Brodick; south-west coast.

Loch Fyne off Inverneil Island; Rudha Dubh.

Kilbrannan Sound off Claonaig Bay; Skipness Bay.

On the Ayrshire coast good hauls were obtained off Girvan.

Some of the stocks sampled have recently been heavily fished and the age-compositions of scallop catches showed signs of this. Compared with catches from unexploited beds round Mull, the Clyde catches contained fewer old scallops. Whereas almost 70% of scallops in the Mull samples had seven or more growth rings, the figures on the beds in the Clyde which are known to be exploited were:-

Cock of Arran 32, Corrie 38, S.W. Arran 42, Claonaig Bay 53, Skipness Bay 40, Girvan 59.

Five-ringed scallops constituted the most abundant year class.

The muscles of the Clyde scallops generally appeared to be in good condition. The state of gonad development varied from place to place, presumably owing to local variations in the time of the spring spawning.

Large catches of queens (Chlamys opercularis) were obtained off the north-east coast of Arran and in Skipness Bay. 17 baskets, estimated to contain some 20,000 queens, were obtained in one 5 minute haul off the Cock of Arran.

J. MASON  
18.6.64



IN THE  
 OFFICE OF THE  
 SECRETARY OF STATE  
 FOR THE ENVIRONMENT

The formal Programme for this trip is

the same as before's 1<sup>st</sup> June - June 1964

Kenneth M. Luke.

1

HAUL No. M64 51 DATE 1/6/64 AREA Shute Hole ~~LARGE/SMALL~~ MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whitkup

Haddock

10			10			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
20			20			0
1		1	1			1
2		5	2		1	2
3		15	3		3	3
4		28	4		3	4
5		31	5		1	5
6		5	6		9	6
7		4	7		10	7
8		3	8		1	8
9		2	9		1	9
30			30			0
1		1	1		1	1
2		3	2			2
3		1	3			3
4		2	4			4
5		2	5			5
6		1	6			6
7			7			7
8		1	8			8
9			9			9
40			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

107

31

COUNT  
RANGE  
FRACTION SAMPLED

AK

COUNT  
RANGE  
FRACTION SAMPLED

AK

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS C.J.C.

HAUL No. M 64/51

LARGE/SMALL MESH 1

*S. loati*

14 13  
15 20  
16 4

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

38

COUNT  
RANGE  
FRACTION SAMPLED All

SPECIES  
Cod  $\frac{1}{90} = 1$   
~~Gog~~  $\frac{1}{15} \frac{1}{20} \frac{1}{22} \frac{1}{25} = 4$   
~~Witch~~  
 Hake  $\frac{1}{43} = 1$   
*S. loati*  
 L. R. Dub.  $\frac{1}{2} \frac{1}{28}$   
 Witch  $\frac{1}{21}$   
 Herring  $\frac{1}{23}$

Nephrops = 13

Total 1 basket

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/52 DATE 2/6/54 AREA Plate Hob LARGE/SMALL MESH

DURATION OF HAUL 1 hour No. of SHEETS 1

WHITING

HADDOCK

10			10			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
20			20			0
1			1	1		1
2	2		2			2
3	6		3			3
4	6		4	1		4
5	1		5	1		5
6			6	2		6
7			7	6		7
8			8			8
9			9			9
30	2		30			0
1			1			1
2			2			2
3			3			3
4	1		4			4
5			5			5
6			6			6
7			7			7
8			8			8
9			9			9
40	1		40			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
	19			10		

COUNT  
RANGE  
FRACTION SAMPLED

*all*

COUNT  
RANGE  
FRACTION SAMPLED

*all*

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS JM

HAUL No. M64/59 DATE 2/6/59 AREA Plate Hob LARGE/SMALL MESH

DURATION OF HAUL 1 hour No. of SHEETS 1

WHITING

HADDOCK

10  
1  
2  
3  
4  
5  
6  
7  
8  
9  
20  
1  
2  
3  
4  
5  
6  
7  
8  
9  
30  
1  
2  
3  
4  
5  
6  
7  
8  
9  
40  
1  
2  
3  
4  
5  
6  
7  
8  
9

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

2

6

6

1

2

1

1

19

1

1

1

2

6

10

COUNT

RANGE

FRACTION SAMPLED

*all*

COUNT

RANGE

FRACTION SAMPLED

*all*

COUNT

RANGE

FRACTION SAMPLED

INITIALS

*JM*

HAUL No. ② S. 6/1/52

LARGE/SMALL MESH 1

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

5	<i>G. kumataki</i>	Count	10	10
6	<i>T. kumataki</i>	Mean	$\frac{1}{14}$	1
7	RT. Bats	"	$\frac{1}{20}$	1
8	Herring	"	$\frac{1}{24}$	1
9	<i>Nephtalops</i>	Count	1	1

Total  $\frac{1}{2}$  basket

COUNT  
RANGE  
FRACTION SAMPLED

3

HAUL No. M6453 DATE 2/6/64 AREA Shore LARGE/SMALL MESH

DURATION OF HAUL 1hr No. of SHEETS 1

Whitup

Haddock

10  
1  
2  
3  
4  
5  
6  
7  
8  
9  
20  
1  
2  
3  
4  
5  
6  
7  
8  
9  
30  
1  
2  
3  
4  
5  
6  
7  
8  
9  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9

3  
4  
3  
9  
1  
1

21

COUNT —  
RANGE —  
FRACTION SAMPLED

all

10  
1  
2  
3  
4  
5  
6  
7  
8  
9  
20  
1  
2  
3  
4  
5  
6  
7  
8  
9  
30  
1  
2  
3  
4  
5  
6  
7  
8  
9  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9

1  
1  
1  
1  
1  
1

6

COUNT —  
RANGE —  
FRACTION SAMPLED

all

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

INITIALS J M



HAUL No. M6H/53

(3)

LARGE/SMALL MESH 1

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

1 COUNT  
2 RANGE  
3 FRACTION SAMPLED  
4 SPECIES

5	Angler	$\frac{1}{50}$		1
6	Smooth Dogfish	$\frac{1}{32} \times \frac{1}{41} = 3$		3
7	Hake	$\frac{1}{36} \times \frac{1}{41} = 2$		2
8	L. Sole	$\frac{1}{30}$		1
9	C. Esmarki		100	100
0	Poutan	$\frac{1}{16} \times \frac{1}{17} = 4$		4
1	L.R. Dab	$\frac{1}{13} \times \frac{1}{15} = 2$		2

Total  $\frac{1}{2}$  basket

COUNT  
RANGE  
FRACTION SAMPLED

4  
HAUL No. MA 54 DATE 2/6/64 AREA East South BK LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 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
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	COUNT	COUNT
RANGE	RANGE	RANGE
FRACTION SAMPLED	FRACTION SAMPLED	FRACTION SAMPLED

4

HAUL No. M64/54

LARGE/SMALL MESH. 1

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

1 COUNT  
 2 RANGE  
 3 FRACTION SAMPLED

4	SPECIES			
5	WHITING	Meas	$\frac{1}{21}, \frac{1}{24}$	2
6	GURNARD	Meas	$\frac{1}{26}$	1
7	ANGLER	Meas	$\frac{1}{18}$	1
8	HADDOCK	"	$\frac{1}{28}$	1
9	C Dabs	"	$\frac{1}{13}, \frac{2}{17}, \frac{1}{19}, \frac{1}{22}$	5

Total  $\frac{4}{10}$  basket

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL NO. M46/55 DATE 3/6/64 AREA East Smith Bl. LARGE/SMALL MESH  
 DURATION OF HAUL 1 hour No. of SHEETS 1

WHITING

HADDOCK

Mears

Mears

10				10				0
1				1				1
2				2				2
3				3				3
4				4				4
5				5				5
6				6				6
7			1	7				7
8			1	8				8
9			3	9				9
20			4	20				0
1	HH		20	1				1
2	HH H		32	2				2
3	HHHH I		49	3		6		3
4	HH		22	4		3		4
5	H		13	5	H	12		5
6			6	6	HH	20		6
7				7	H	10		7
8			1	8	HI	15		8
9			1	9		8		9
30			1	30		5		0
1				1		2		1
2				2		1		2
3				3		1		3
4			1	4				4
5				5				5
6				6				6
7				7				7
8				8				8
9				9				9
40				40				0
1				1		1		1
2				2		1		2
3				3				3
4				4				4
5				5				5
6				6				6
7				7				7
8				8				8
9				9				9

155 363

85 168

COUNT  $66 + 142 = 208$   
 RANGE 17-29 cm  
 FRACTION SAMPLED all

COUNT  $28 + 55 = 83$   
 RANGE 23-31 cm  
 FRACTION SAMPLED all

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. M67/55

LARGE/SMALL MESH 1

CDAB

L SOLE

PLAICE

				1/3	1	15'	1
10		6		16		16	
1		7		7	1	7	
2	2	8		8	1	8	
3	3	9		9	2	9	1
4	1	0		20	3	20	
5	4	1		1		1	1
6		2		2		2	
7	1	3		3	1	3	1
8		4		4		4	1
9		5		5		25	3
20		6		6		6	
1	1	7		7		7	
2		8		8		8	1
3		9		9		9	
4		0		30		30	
5		1		1		1	
6		2		2		2	
7		3		3		3	
8		4		4		4	
9		5		5		5	
0					9		9

COUNT

RANGE

FRACTION SAMPLED

SPECIES

5	Gonard	Meas	2/20	2
7	Angler		1/36	1
8	Callinectes		1/23, 1/26	2

Total 2 1/2 baskets

13

COUNT

RANGE

FRACTION SAMPLED *all*

6

HAUL No. M64-156 DATE 3/6/64 AREA East Smith Bk. LARGE/SMALL-MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Halibut

10	
1	
2	
3	
4	
5	
6	
7	
8	1
9	3
20	9
1	N 14
2	N 16
3	N 20
4	N 16
5	N 10
6	1
7	5
8	1
9	1
30	
1	
2	
3	
4	
5	
6	
7	
8	
9	1
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	
2	
3	
4	
5	1 8
6	1 7
7	1 7
8	
9	3
30	
1	2
2	
3	
4	1
5	
6	
7	1
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	

98

29

COUNT  
RANGE  
FRACTION SAMPLED

*all*

COUNT  
RANGE  
FRACTION SAMPLED

*all*

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS *MS*

HAUL No. M64/5B

LARGE/SMALL MESH 1

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

Angler  $\frac{1}{21}$  = 1  
 Solemelle  $\frac{2}{13}, \frac{1}{14}, \frac{2}{16}$  5  
 Callogymna  $\frac{1}{27}$  = 1  
 Placis  $\frac{1}{27}$  1  
 L. Sole  $\frac{2}{17}$   $\frac{1}{25}$   
 C. Dub  $\frac{3}{15}, \frac{1}{12}, \frac{2}{13}, \frac{1}{14}, \frac{1}{15}, \frac{2}{16}, \frac{1}{20}$  11  
 Inverte  
 Porcupine 6  
 sea squirts 12  
 Starfish 2

Total  $\frac{3}{4}$  basket.

COUNT  
RANGE  
FRACTION SAMPLED

Dorach Firth

HAUL No. M64/57 DATE 2/6/64 AREA ..... LARGE/SMALL MESH

DURATION OF HAUL ..... No. of SHEETS 1

Shrimp

Headrocks

10		10		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
20		20		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
30		30		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

16

84

COUNT RANGE FRACTION SAMPLED RU      COUNT RANGE FRACTION SAMPLED RU      COUNT RANGE FRACTION SAMPLED



HAUL No. 164/57

LARGE/SMALL MESH 1

*Herring*

0	6	15	7
1	7	6	21
2	8	7	16
3	9	8	7
4	0	9	11
5	1	20	5
6	2	1	
7	3	2	3
8	4	3	
9	5	4	
0	6	5	
1	7	6	
2	8	7	
3	9	8	
4	0	9	
5	1	30	
6	2	1	
7	3	2	
8	4	3	
9	5	4	
0		5	

70

1 COUNT  
2 RANGE  
3 FRACTION SAMPLED  
4 SPECIES

*AU*

*Amurhites*  $\frac{1}{32} = 1$   
*Plaice*  $\frac{2}{15} \cdot \frac{1}{22} = 3$

Total  $\frac{3}{4}$  basket.

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/57 DATE 3/6/64 AREA Dorset LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whitrip

Haddock

Cod

10	
1	
2	
3	
4	
5	
6	
7	1
8	1
9	2
20	2
1	2
2	8
3	N: 13
4	NI: 18
5	NI: 20
6	I: 8
7	I: 5
8	I: 5
9	I: 1
30	I: 1
1	
2	1
3	
4	
5	
6	
7	
8	
9	
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	I: 1
2	
3	I: 5
4	I: 8
5	H: 9
6	HHH: 30
7	HHI: 28
8	HHI: 25
9	HHI: 24
30	H: 11
1	I: 6
2	I: 1
3	I: 1
4	
5	
6	
7	
8	
9	
40	
1	
2	
3	
4	I: 1
5	
6	
7	
8	
9	

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	
2	
3	
4	
5	I: 1
6	
7	
8	
9	
30	I: 1
1	I: 1
2	I: 1
3	I: 1
4	I: 2
5	I: 3
6	I: 1
7	I: 1
8	I: 2
9	I: 1
40	I: 1
1	
2	I: 2
3	
4	
5	
6	
7	
8	
9	

88

129

150

233

18

COUNT 41  
 RANGE  
 FRACTION SAMPLED

*KU*

COUNT 81 + 2 = 83  
 RANGE  
 FRACTION SAMPLED

*KU*

COUNT  
 RANGE  
 FRACTION SAMPLED

*all*

HAUL No. M 64/58

LARGE/SMALL MESH 1

Herring

Plaice

C.M.B.

0	15	5	15	1	6	
1	16	5	6		6	
2	7	8	7		7	
3	8	9	8		8	
4	9	7	9		9	
5	20	13	20		0	
6	1	12	1	1	1	1
7	2	15	2		2	1
8	3	4	3		3	1
9	4	2	4	1	4	1
0	5		5	1	5	1
1	6		6		6	
2	7		7		7	1
3	8		8		8	
4	9		9		9	
5	30		30		0	
6	1		1		1	
7	2		2		2	
8	3		3	1	3	
9	4		4		4	
0	5		5		5	

80      124      5      6

COUNT 44

RANGE

FRACTION SAMPLED M

Au

SPECIES

250g

Meas 1/4

= 1

Total catch 3 baskets

COUNT

RANGE

FRACTION SAMPLED

HAUL No. M 64/59 DATE 8/6/64 AREA Douglas Fork LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

Plaice

10	
1	
2	
3	
4	
5	
6	1
7	
8	5
9	8
20	5
1	7
2	N <sup>i</sup> 12
3	NI <sup>i</sup> 17
4	NI <sup>i</sup> 19
5	NI <sup>i</sup> 19
6	N 10
7	5
8	2
9	
30	1
1	
2	
3	
4	
5	
6	
7	
8	
9	

112 (533)

COUNT  
RANGE  
FRACTION SAMPLED  
2/9 1/2

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	
2	
3	2
4	I <sup>i</sup> 6
5	I <sup>i</sup> 9
6	HHI <sup>i</sup> 26
7	HHH <sup>i</sup> 33
8	HHH <sup>i</sup> 32
9	HI 15
30	H <sup>i</sup> 13
1	I <sup>i</sup> 7
2	I <sup>i</sup> 3
3	I <sup>i</sup> 2
4	I <sup>i</sup> 2
5	I <sup>i</sup> 1
6	
7	
8	
9	

161 + 81 = 242  
(1150)

COUNT 81  
RANGE 23 - 35 cm  
FRACTION SAMPLED  
2/9 1/2

10	
1	
2	
3	1
4	3
5	1
6	5
7	
8	1
9	1
20	
1	I <sup>i</sup> 3
2	I <sup>i</sup> 6
3	I <sup>i</sup> 3
4	I <sup>i</sup> 1
5	I <sup>i</sup> 4
6	I <sup>i</sup> 2
7	I <sup>i</sup> 1
8	
9	1
30	
1	
2	
3	
4	
5	
6	
7	
8	
9	

33 (57)

COUNT  
RANGE  
FRACTION SAMPLED  
5 1/2 / 9 1/2

HAUL No. M64/59

LARGE/SMALL MESH 1

C. Dat.

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

COUNT  
RANGE  
FRACTION SAMPLED

SPECIES	Sample							
Halibut	$5\frac{2}{9\frac{1}{2}}$	$\frac{1}{21}$	$\frac{1}{32}$	$\frac{1}{35}$	= 3	$\times 9\frac{1}{2}$ = 5 = 10 = 15 = 2		
L. Sole	"	$\frac{2}{17}$	$\frac{2}{18}$	$\frac{1}{21}$	$\frac{1}{25}$		= 6	
Herring	"	$\frac{1}{17}$	$\frac{1}{18}$	$\frac{2}{19}$	$\frac{4}{20}$		$\frac{1}{22}$	= 9
Smelt	"	$\frac{1}{13}$					= 1	

Total  $9\frac{1}{2}$  Baskets

41

(72)

COUNT

RANGE

FRACTION SAMPLED

$5\frac{2}{9\frac{1}{2}}$

HAUL No. M64/6000 DATE 4/6/64 AREA Dorset Pool LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

10		10		0
1		1		1
2		2		2
3		3		3
4		4		4
5		5		5
6	2	6		6
7	2	7		7
8		8		8
9	5	9		9
20	1	20		0
1 N	11	1		1
2 N	10	2		2
3 NI	18	3	2	3
4 NNN	30	4	5	4
5 NN	20	5	5	5
6 NI	16	6	7	6
7	4	7	14	7
8	3	8	20	8
9		9	19	9
30	1	30	10	0
1		1	5	1
2		2	2	2
3		3	1	3
4		4	1	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  
5  
0  
3  
2

(123)

(91)

COUNT  
RANGE  
FRACTION SAMPLED  
All

COUNT  
RANGE  
FRACTION SAMPLED  
44

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M 64/60

LARGE/SMALL MESH 1

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

Hemip  $\frac{1}{25}$  = 1  
C. Dab.  $\frac{2}{12}$   $\frac{1}{13}$   $\frac{1}{14}$   $\frac{1}{19}$  = 5  
Plaice  $\frac{1}{19}$   $\frac{1}{21}$  = 2

Total  $1 \frac{1}{3}$  baskets

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/67 DATE 4/6/64 AREA Bunghead Bay LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

Cod

10	
1	
2	
3	1
4	1
5	1
6	2
7	2
8	3
9	3
20	3
1	1
2	
3	2
4	4
5	9
6	4
7	10
8	2
9	
30	2
1	
2	1
3	
4	2
5	
6	
7	
8	1
9	
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

(54)

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	
2	1
3	2
4	H:
5	HHI:
6	HHHI
7	HHHH:
8	HHI
9	HI
30	I:
1	1
2	4
3	
4	2
5	
6	
7	
8	
9	1
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

(178)

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

(3)

COUNT RANGE FRACTION SAMPLED  
All

COUNT RANGE FRACTION SAMPLED  
All

COUNT RANGE FRACTION SAMPLED  
All



HAUL No. M64/61

LARGE/SMALL MESH /

C. Dab

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

COUNT  
RANGE  
FRACTION SAMPLED  
SPECIES

Flounder  
 Placcio →  $\frac{1}{29} \frac{1}{32} = 2$   
 L. Sole  $\frac{1}{33} = 1$   
 Herring  $\frac{1}{16} \frac{1}{24} = 2$   
 Hake  $\frac{1}{15} = 1$   
 Squid. (Loligo)  $\frac{4}{5} \frac{4}{7} = 5$

$\frac{12}{13}$  baskets

12

COUNT  
RANGE  
FRACTION SAMPLED AM

HAUL No. M64/62 DATE 4/6/64 AREA Bungles Bay LARGE/SMALL MESH

DURATION OF HAUL 1h No. of SHEETS 1

Whiting

Haddock

Plaice

10		0		10	
1		1		1	
2		2		2	
3	1	3		3	
4	1	4		4	
5	3	5		5	
6	11	6		6	
7	7	7		7	2
8	3	8		8	2
9	1	9	1	9	1
20	2	20		20	5
1	3	1		1	5
2	4	2	1	2	2
3	2	3	3	3	3
4	8	4	15	4	2
5	3	5	24	5	3
6	2	6	27	6	6
7	3	7	27	7	5
8	1	8	23	8	1
9		9	12	9	1
30	1	30	3	0	
1	1	1	5	1	
2		2	1	2	
3		3	1	3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
40		0		0	
1	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	

(58)

(143)

(38)

COUNT  
RANGE  
FRACTION SAMPLED  
2/5

COUNT  
RANGE  
FRACTION SAMPLED  
2/5

COUNT  
RANGE  
FRACTION SAMPLED  
2/5

HAUL No. M64/62

LARGE/SMALL MESH 1

L.R. Dab

C Dabs.

10		6		6		6
1	1	7		7		7
2	3	8		8		8
3	18	9		9		9
4	11	10		0		0
5	20	1		1		1
6	8	2		2		2
7	2	3	1	3		3
8	2	4	3	4		4
9		5	3	5		5
20		6	1	6		6
1		7	3	7		7
2		8	1	8		8
3		9	2	9		9
4		20	1	0		0
5		1		1		1
6		2	1	2		2
7		3		3		3
8		4		4		4
9		5		5		5

(16)

COUNT

RANGE

FRACTION SAMPLED 2/5

SPECIES

5	Hake	1/14	1/15	1/16	1/60 = 4				
6	Cod			1/57	1/55 = 2				
7	L. Sole	1/19	1/23		= 2				
8	Flounder	1/25	1/27	1/32	= 3				
9	Angler		1/44		= 1				
0	Herring	1/20	1/21		= 2				
1	Sprats (small)			= 6					
2	C.D.		1/27		= 1				
3	Callinectes	1/16	1/17	1/19	1/20	1/21	1/24	1/25	= 8

(2/5 Sample)

Total 2 1/2 baskets

(65)

COUNT

RANGE

FRACTION SAMPLED 2/5

HAUL No. M64/630 DATE 4/6/64 AREA Bung Lead Bay LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

*Whiting*

*Haddock*

10		10		0
1		1		1
2		2		2
3		3		3
4	1	4		4
5	1	5		5
6	3	6		6
7	3	7		7
8	5	8		8
9		9		9
20	2	20		0
1	2	1		1
2	3	2		2
3		3	3	3
4	3	4	6	4
5	4	5	10	5
6	1	6	12	6
7	1	7	17	7
8		8	13	8
9	1	9	2	9
0		30	3	0
1		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

30

67

COUNT -  
RANGE -  
FRACTION SAMPLED

*All*

COUNT -  
RANGE -  
FRACTION SAMPLED

*All*

COUNT -  
RANGE -  
FRACTION SAMPLED

INITIALS CJC

HAUL No. M64/63

LARGE/SMALL MESH 1

L.R. Dab

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

14

COUNT  
RANGE  
FRACTION SAMPLED AU

SPECIES			
Hake		$\frac{1}{44}$	= 1
Plaice	$\frac{1}{18} \frac{1}{21}$	$\frac{1}{24} \frac{1}{26} \frac{1}{29} \frac{1}{30}$	= 6
Witch		$\frac{1}{27}$	= 1
L. Sole		$\frac{1}{28}$	= 1
(Skate) R. batis ♀		$\frac{1}{22}$	= 1
Plounder		$\frac{1}{21} \frac{1}{37}$	= 2
Herring		$\frac{2}{20}$	= 2
Nephrops			= 12

Total  $\frac{1}{2}$  Gasket.

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/64 DATE 4/6/64 AREA Burhead Bay LARGE/SMALL MESH

DURATION OF HAUL 1hr. No. of SHEETS 1

Whiting

Haddock

0	
1	
2	
3	
4	
5	1
6	6
7	6
8	1
9	1
20	1
1	1
2	
3	1
4	1
5	
6	3
7	
8	
9	1
30	1
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	
20	
1	
2	
3	1
4	4
5	1
6	8
7	12
8	10
9	6
30	6
1	7
2	3
3	3
4	
5	1
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	

24

62

COUNT RANGE FRACTION SAMPLED

AU

COUNT RANGE FRACTION SAMPLED

AU

COUNT RANGE FRACTION SAMPLED

INITIALS gc

HAUL No.

M 64/64

LARGE/SMALL MESH

1

CR. Dab.

0	6		6	6
1	7		7	7
2	8		8	8
3	9		9	9
4	10		0	0
5	1		1	1
6	2	1	2	2
7	3		3	3
8	4	1	4	4
9	5	12	5	5
0	6	1	6	6
1	7	2	7	7
2	8	1	8	8
3	9		9	9
4	20		0	0
5	1		1	1
6	2		2	2
7	3		3	3
8	4		4	4
9	5		5	5

(8)

COUNT

RANGE

FRACTION SAMPLED KU

SPECIES

5	Hake	$\frac{1}{13}$	= 1
6	Herring	$\frac{1}{22}$	= 1
7	Plounder	$\frac{1}{33}$	= 1
8	Plaice	$\frac{1}{18}$ $\frac{2}{28}$	= 3
0	Luach		
1	Whigo	$\frac{1}{5}$ $\frac{1}{12}$	= 2
2	Nephrops.	31	31

Catch  $\frac{1}{2}$  basket

COUNT

RANGE

FRACTION SAMPLED

HAUL No. M64/6500 DATE..... AREA..... LARGE/SMALL MESH

DURATION OF HAUL..... No. of SHEETS.....

*Whiting*

*Hard dock*

*Plaice*

10		0		0
1		1		1
2		2		2
3		3		3
4		4		4
5		5		5
6	7	6		6
7	5	7		7
8	3	8		8
9	2	9		9
20	2	20	1	20
1	1	1		1
2	1	2		2
3		3	1	3
4	1	4	3	4
5	3	5	2	5
6	1	6	8	6
7		7	4	7
8		8	4	8
9		9	1	9
0		30		0
1		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

(26)

(28)

(14)

COUNT RANGE FRACTION SAMPLED  
*AU*

COUNT RANGE FRACTION SAMPLED  
*AU*

COUNT RANGE FRACTION SAMPLED  
*AU*



HAUL No. M 64/65

LARGE/SMALL MESH //

C. Dab / LR Dab.

0	6	6	6
1	7	7	7
2	8	8	8
3	9	9	9
4	10	2	0
5	1	4	1
6	2	20	2
7	3	16	3
8	4	10	4
9	5	8	5
0	6	6	6
1	7	3	7
2	8	1	8
3	9		9
4	20		0
5	1		1
6	2		2
7	3		3
8	4		4
9	5		5

70

1	COUNT		
2	RANGE		
3	FRACTION SAMPLED	All	
4	SPECIES		
5	Leopardsucker	1/27	= 1
6	Angler	1/31	= 1
7	Hake	1/15	= 1
8	L. Sole	1/32	= 1
9	Gurhard	1/19	= 1
0			
1			
2	Nephrops	9	
3			
4			
5			
6			
7			
8			
9			

Total 1/2 basket

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/66 DATE 5/6/64 AREA Bunghead Bay LARGE/SMALL MESH  
 DURATION OF HAUL 1hr No. of SHEETS 1

Whiting

Haddock

Plaice

10		10		10	
1		1		1	
2	1	2		2	
3		3		3	
4	2	4		4	
5	1	5		5	
6	4	6		6	
7	5	7	1	7	2
8	1	8		8	2
9		9		9	6
20		20		20	3
1	1	1	1	1	3
2	1	2		2	2
3	1	3	2	3	5
4		4	6	4	7
5	3	5	8	5	2
6	2	6	8	6	1
7		7	7	7	1
8	2	8	6	8	2
9	1	9	6	9	
30	1	30	2	30	
1		1	3	1	
2		2	1	2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
0		40		0	
1		1		1	
2		2		2	
3		3	1	3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	

(26)

(52)

(36)

COUNT RANGE FRACTION SAMPLED  $\frac{1}{2}$       COUNT RANGE FRACTION SAMPLED  $\frac{1}{2}$       COUNT RANGE FRACTION SAMPLED  $\frac{1}{2}$

HAUL No. M64/66

LARGE/SMALL MESH 1

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

1 COUNT  
2 RANGE  
3 FRACTION SAMPLED

4	SPECIES	
5	Flounder	2/35
6	L. Sole	1/26 1/35
7	Turbot	1/34
8	Gurnard	2/19 1/20 1/22
9	G. esmarkii	2/15 2/16
0	Herring	1/23
1	Witch	1/22 1/23 1/24

2 Dabs Count 102  
3 (1/2 Sample)

Total 2 Baskets

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M 34/67 DATE 8/6/64 AREA Bungford Bay LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

Herring

10			10			10		
1			1			1		1
2			2			2		1
3			3			3	H:	12
4			4			4	HH:	22
5			5			5	HHH	30
6			6			6	HHH:	27
7			7			7	HH:	22
8			8			8	!:	8
9			9			9	H:	11
20			20			20	H:	11
1	1		1			1	!:	8
2	1		2			2	:	2
3			3			3		
4			4			4		
5	1		5	1		5		
6	1		6	:	3	6		
7			7	:	2	7		
8	1		8	:	1	8		
9	1		9	:	2	9		
30	1		30	:		30		
1	1		1	:	2	1		
2			2			2		
3			3			3		
4			4	:	2	4		
5	1		5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
0			0			40		
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		

9

13

159 + 459  
718

COUNT  
RANGE  
FRACTION SAMPLED  
AU

COUNT  
RANGE  
FRACTION SAMPLED  
AU

COUNT 549  
RANGE 9-22 cm  
FRACTION SAMPLED 1/2

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

Total 2 baskets  
 (mostly hump.)

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. M64/68 DATE 8/6/64 AREA Buzzards Bay LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

Herring

10			10			10		
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		2
8			8			8		
9			9			9		1
20			20			20		5
1			1			1		1
2			2			2		1
3		1	3			3		
4		2	4		4	4		
5		1	5		2	5		
6			6		2	6		
7			7		3	7		
8			8		3	8		
9		3	9			9		
30			30		1	0		
1		2	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		
40			0			0		
1			1			1		
2			2			2		
3			3			3		
4		1	4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9		10	9		15	9		10

COUNT	<u>10</u>	COUNT	<u>15</u>	COUNT	<u>10</u>
RANGE		RANGE		RANGE	
FRACTION SAMPLED	<u>AN</u>	FRACTION SAMPLED	<u>AN</u>	FRACTION SAMPLED	<u>AN</u>

HAUL No. M 64/68

LARGE/SMALL MESH 1

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

*Invertebrates*  
*Nephele*  
*Jalhis unmen*

*1/4 basket*

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. M64/70

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

Angler *Meas.*  $\frac{1}{56}$  = 1  
 Halibut  $\frac{1}{26}$   $\frac{1}{28}$  = 2  
 Whiting  $\frac{1}{15}$   $\frac{1}{18}$   $\frac{2}{23}$   $\frac{1}{25}$   $\frac{1}{30}$  = 6  
 L. Sole  $\frac{1}{20}$   $\frac{1}{32}$  = 2  
 C. Dab  $\frac{1}{11}$   $\frac{1}{3}$   $\frac{1}{15}$   $\frac{2}{16}$  = 5

Total  $\frac{1}{10}$  basket

COUNT  
RANGE  
FRACTION SAMPLED



HAUL No. M64/71 DATE 9/6/64 AREA Bungland Bay LARGE/SMALL MESH

DURATION OF HAUL 1hr No. of SHEETS 1

Whitwip

Hardrock

Hemp

10		10		10	
1		1		1	
2		2		2	
3		3		3	2
4		4		4	1
5		5		5	1
6		6		6	1
7	1	7		7	1
8	1	8		8	
9		9		9	1
20	2	20		20	2
1	1	1		1	1
2	1	2		2	1
3	2	3		3	
4	5	4	2	4	
5	2	5	7	5	
6		6	7	6	
7	2	7	7	7	
8	2	8	8	8	
9		9	1	9	
30		30	4	0	
1	2	1		1	
2		2	1	2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
40		0		0	
1		1		1	
2	1	2		2	
3		3		3	
4		4		4	
5		5		5	
6		6		6	
7		7		7	
8		8		8	
9		9		9	
	(22)		(37)		(11)

COUNT		COUNT		COUNT	
RANGE		RANGE		RANGE	
FRACTION SAMPLED	AM	FRACTION SAMPLED	AM	FRACTION SAMPLED	AM

INITIALS CDC

HAUL No. M64/71

LARGE/SMALL MESH 1

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

Cod  $\frac{1}{58}$  = 1  
 wtd  $\frac{1}{22}$   $\frac{1}{24}$   $\frac{1}{32}$  = 3

Total  $\frac{1}{2}$  basket

---

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. M64/1000 DATE 9/6/64 AREA Longland Bay LARGE/SMALL MESH  
 DURATION OF HAUL 1 hr. No. of SHEETS 1

Whiting

Haddock

10	
1	
2	
3	
4	
5	
6	
7	1
8	1
9	1
20	2
1	3
2	4
3	7
4	6
5	7
6 N	14
7 N	10
8	5
9	
30	1
1	3
2	
3	
4	
5	
6	
7	
8	
9	
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20	
1	
2	
3	
4	3
5	3
6	5
7	7
8	8
9	2
30	
1	1
2	2
3	1
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	

65

32

COUNT  
RANGE  
FRACTION SAMPLED

COUNT  
RANGE  
FRACTION SAMPLED

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. 1764/72

LARGE/SMALL MESH 1

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

1 COUNT  
 2 RANGE  
 3 FRACTION SAMPLED

4	SPECIES				
5	Gizzard	$\frac{1}{22}$			= 1
6	Herring	$\frac{2}{21}$			= 2
7	C. Dab	$\frac{2}{13}$	$\frac{1}{14}$	$\frac{1}{15}$ $\frac{1}{16}$ $\frac{1}{17}$	= 6
8	Witch	$\frac{1}{22}$			= 1
9	Plaice	$\frac{1}{25}$	$\frac{1}{26}$		= 2

3 Trout      Sea mackerel  
 4 Starfish  
 5 ~~Worm~~

8 Total  $\frac{3}{14}$  basket

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. 124/74 DATE 10/8/64 AREA Bungled Bay LARGE/SMALL MESH

DURATION OF HAUL 1hr No. of SHEETS 1

Whitup

Wattode

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

2

2

COUNT  
RANGE  
FRACTION SAMPLED

COUNT  
RANGE  
FRACTION SAMPLED

COUNT  
RANGE  
FRACTION SAMPLED

AU

AU

HAUL No. M 64/74

LARGE/SMALL MESH 1

L.R Dab

C. Dab

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

1	COUNT			
2	RANGE			
3	FRACTION SAMPLED	M	M	
4	SPECIES			
5	Agonus		1/11	= 1
6	Callionymus		1/17	= 1
7	G. swinhonis		1/16	= 1
8				
9				
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				

Total  $\times \frac{1}{10}$  total

COUNT  
RANGE  
FRACTION SAMPLED

HAUL No. M64/75 DATE 11/6/64 AREA Bayland Bay LARGE/SMALL MESH

DURATION OF HAUL 1/2 hr No. of SHEETS 1

Wierby

Hardhook

Plance

10	10	10	:	2
1	1	1	:	2
2	2	2	:	2
3	3	3	:	5
4	4	4	:	2
5	5	5	:	6
6	6	6	:	6
7	7	7	:	10
8	8	8	:	12
9	9	9	:	9
20	20	20	:	3
1	1	1	:	1
2	2	2	:	3
3	3	3	:	
4	4	4	:	3
5	5	5	:	3
6	6	6	:	6
7	7	7	:	2
8	8	8	:	4
9	9	9	:	3
0	30	30	:	2
1	1	1	:	1
2	2	2	:	
3	3	3	:	
4	4	4	:	2
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	:	

2

3

89

COUNT RANGE FRACTION SAMPLED

AM

COUNT RANGE FRACTION SAMPLED

AM

COUNT RANGE FRACTION SAMPLED

AM

HAUL No. M64/75

LARGE/SMALL MESH 1

C. Dab

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

30

1  
2  
3

COUNT  
RANGE  
FRACTION SAMPLED

4 SPECIES

5 Gurnard  $\frac{1}{15}$   $\frac{1}{19}$   $\frac{1}{20}$  = 3

6 Weaver  $\frac{1}{12}$   $\frac{3}{13}$  = 4

7 R. batis ♀  $\frac{1}{16}$  = 1

8 Flounder  $\frac{1}{21}$   $\frac{1}{29}$   $\frac{1}{34}$  = 3

9 L. Sole  $\frac{1}{27}$  = 1

0 C.R. Dab  $\frac{2}{13}$  = 2

3  
4

Lobjo  $\frac{1}{7}$  = 1

Nephrops 1

33

COUNT  
RANGE  
FRACTION SAMPLED



HAUL No. M64/76 DATE 11/6/64 AREA Namin. LARGE/SMALL MESH  
 DURATION OF HAUL 1/2 hr No. of SHEETS 1

Whiting

Haddock

10		10		0
1		1		1
2		2		2
3		3		3
4		4		4
5	1	5		5
6		6		6
7	2	7		7
8		8		8
9	1	9		9
20	1	20		0
1		1		1
2		2	1	2
3		3	2	3
4		4	6	4
5	1	5	2	5
6		6	7	6
7		7	3	7
8		8	2	8
9		9	1	9
0		30	1	0
1		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	6	9	26	9

COUNT  
RANGE  
FRACTION SAMPLED

Au

COUNT  
RANGE  
FRACTION SAMPLED

Au

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS CJC

HAUL No. M64/76

LARGE/SMALL MESH 1

	C Dabs	Plowie			
8	1				
9					
10	3	6		6	6
1	2	7		7	7
2	7	8		8	8
3	4	9		9	9
4	3	10	1	0	0
5	12	1		1	1
6	3	2		2	2
7	5	3		3	3
8	4	4	1	4	4
9	1	5	1	5	5
20	1	6	2	6	6
1	1	7	1	7	7
2		8	1	8	8
3		9	2	9	9
4		20	1	0	0
5		1		1	1
6		2		2	2
7		3		3	3
8		4		4	4
9		5	<u>10</u>	5	5

	COUNT	RANGE	FRACTION SAMPLED	
1				
2				
3				
4				
5				
6	1	Cottus	1/20	= 1
7		Gurnard	1/13	= 2
8		L R Dab	1/12	= 1
9				
40				
1				
2				
3				
4		Invertebrates		
5		Echinoid	} 15	
6		Alcyonium		
7		Anemonia		
8		Starfish		
9		Beetle		
	<u>48</u>	Total	1/2 basket	
			(1/4 fish)	
	COUNT			
	RANGE			
	FRACTION SAMPLED			

HAUL No. M64/77 DATE 11/6/64 AREA Bungled Bay LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

10	
1	
2	
3	
4	
5	
6	
7	1
8	1
9	
20 :	3
1 :	2
2 :	6
3 :	5
4 :	10
5 :	7
6 :	9
7 :	6
8 :	6
9 :	1
30 :	
1	
2	
3	
4	
5	
6	
7	
8	
9	
0	
1	
2	
3	
4	
5	
6	
7	
8	
9	

10	
1	
2	
3	
4	
5	
6	
7	
8	
9	
20 :	
1 :	
2 :	
3 :	
4 :	
5 :	
6 :	
7 :	H
8 :	I
9 :	I
30 :	
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	

57

38

COUNT  
RANGE  
FRACTION SAMPLED

AU

COUNT  
RANGE  
FRACTION SAMPLED

AU

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS WJ

HAUL No. M64/2877

LARGE/SMALL MESH 1

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

1 COUNT  
 2 RANGE  
 3 FRACTION SAMPLED

4 SPECIES  
 5 *Witch*  $\frac{1}{26}$   
 6 *Plance*  $\frac{1}{35}$   
 7 *L R Dab*  $\frac{1}{15}$   
 8 *Herring*  $\frac{1}{20}$

Total  $\frac{2}{3}$  basket

COUNT  
 RANGE  
 FRACTION SAMPLED

HAUL No. 1164/78 DATE 11/6/64 AREA Bungled Area LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

Whiting

Haddock

10  
1  
2  
3  
4  
5  
6  
7  
8  
9  
20 :  
1 :  
2 :  
3 :  
4 :  
5 N  
6 :  
7 :  
8 :  
9 :  
30 :  
1 :  
2  
3  
4  
5  
6  
7  
8  
9  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9

3  
2  
6  
8  
7  
10  
5  
4  
1  
1  
1  
3

52

COUNT  
RANGE  
FRACTION SAMPLED

AM

10  
1  
2  
3  
4  
5  
6  
7  
8  
9  
20 :  
1 :  
2 :  
3 :  
4 :  
5 :  
6 :  
7 :  
8 :  
9 :  
30 :  
1 :  
2  
3  
4  
5  
6  
7  
8  
9  
0  
1  
2  
3  
4  
5  
6  
7  
8  
9

2  
3  
14  
19  
16  
10  
7  
5  
3

79

COUNT  
RANGE  
FRACTION SAMPLED

AM

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

HAUL No. M 64/78

LARGE/SMALL MESH 1

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

5	Cod	$\frac{1}{80}$	= 1
6	Hemp	$\frac{2}{21}$	= 2
7	Whit	$\frac{1}{21}, \frac{1}{22}$	= 2
8	C. Dab	$\frac{1}{14}$	= 1
9	Garra	$\frac{1}{18}$	= 1
0	L. file	$\frac{1}{20}$	= 1
1	Plounder	$\frac{1}{28}$	= 1
2	L.R. Dab	$\frac{1}{18}, \frac{1}{18}$	= 2

Total

COUNT

RANGE

FRACTION SAMPLED

HAUL No. M64/79 DATE 11/6/64 AREA Bugland LARGE/SMALL MESH

DURATION OF HAUL 1hr No. of SHEETS 1

Whitings

Halibut

10		10		0
1		1		1
2		2		2
3		3		3
4		4		4
5		5		5
6	1	6		6
7	1	7		7
8		8		8
9		9		9
20		20		0
1	1	1		1
2		2		2
3	1	3		3
4	2	4		4
5	2	5	5	5
6		6	2	6
7	1	7	4	7
8		8	15	8
9	1	9		9
0		30	2	0
1		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

10

29

COUNT  
RANGE  
FRACTION SAMPLED

BU

COUNT  
RANGE  
FRACTION SAMPLED

AM

COUNT  
RANGE  
FRACTION SAMPLED

INITIALS CJC

HAUL No.

LARGE/SMALL MESH

Marie

C Dab

L.R. Dab

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

COUNT

RANGE

FRACTION SAMPLED All

MU

SPECIES

Hemip

1/19 1/21

2

Wtd

1/70

1

Flounder

1/26

1

Agonus

1/10

1

Nephrops

1

Total 1/3 basket

5

COUNT

RANGE

FRACTION SAMPLED All



HAUL No. MUN 780 DATE 12/6/64 AREA Bunglead LARGE/SMALL MESH

DURATION OF HAUL 1 hr No. of SHEETS 1

HADDOCK

WHITING

PLWICE

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

49

13

19

COUNT       
 RANGE       
 FRACTION SAMPLED     

COUNT       
 RANGE       
 FRACTION SAMPLED     

COUNT       
 RANGE       
 FRACTION SAMPLED     

INITIALS JH

HAUL No. M 64/80

LARGE/SMALL MESH

CDABS

Meas  
g Smoke

g

L R Ochs

10	1	6		6		6
1	3	7		7		7
2	1	8		8		8
3	H 11	9		9		9
4	7	10		10		0
15	9	1		1		1
6	9	2		2		2
7	1	3		3		3
8		4	5	4	2	4
9	2	15	H 11	15	1	5
20		6	9	6	2	6
1		7		7	2	7
2		8		8	2	8
3		9		9		9
4		0		20		0
25		1		1		1
6		2		2		2
7		3		3		3
8		4		4		4
9		5		5		5
30			25		9	

COUNT

96

RANGE

FRACTION SAMPLED

all

all

SPECIES

5	Angler	Meas	1/36	-1
6	Skipjack	"	1/9	-1
7	Flounder	"	2/22 1/23	-3
8	Sole	"	1/15 1/19	-2
9	Witch	"	1/22 1/23 1/24	-3
1	Inverts			
2	Porophora	Count	11	-11

Total 1 basket

AL

(83)

COUNT

39

RANGE

10-20

FRACTION SAMPLED

all