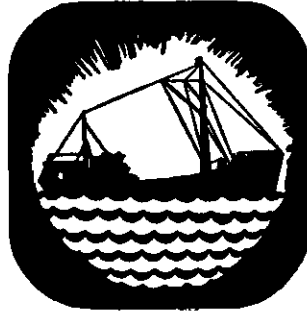


**INTERNATIONAL COMMISSION
FOR THE
NORTHWEST ATLANTIC FISHERIES**



SAMPLING YEARBOOK

VOLUME 14

for the year 1969

**PREPARED BY Mrs V. C. Kerr, Miss J.S. Maclellan,
and Miss G.F. Schrader**

**Issued from the Headquarters of the Commission
Dartmouth, N. S., Canada**

1971

PREFACE

This volume of the Sampling Yearbook summarizes length, age and weight data for cod, haddock, redfish, silver hake, herring, American plaice, Greenland halibut, witch, yellowtail flounder, pollock, red hake, white hake, wolffish, Arctic char, and polar cod collected during the calendar year 1969 in the ICNAF Area. These data have been contributed by Canada, Denmark, France, Fed. Rep. Germany, Norway, Poland, Portugal, Spain, USSR, UK and USA.

Presentation of the length and age data for all species, except herring, follows the 1964 recommendation of the Sampling Subcommittee (Redbook 1964, Pt. I, p. 36-37):

- a) that countries be requested to continue to report length composition data as numbers per mille on the same time (month), area (statistical division), gear and vessel category basis as in previous years, and that for redfish and species of flounder and halibut (but not other species) they should also be broken down by sex, and for redfish by 50-fathom depth zones also. Other items of relevant information should also be reported and published in accordance with earlier recommendations (see "Report of Working Group on Sampling Yearbook"; Redbook 1962, Part I, p. 39-41). The importance of continuing to supply information on the number and weight of fish measured and the number and weight of fish caught or landed in the sampled fishery is particularly stressed.
- b) that age data for cod and haddock should, in future, be reported and published in the form of age-length keys on actual numbers basis, grouped by quarters, statistical division, gear and vessel category. For all other species, countries should continue to report age compositions as numbers per mille as in the past.
- c) that when both length and age data are available for cod and haddock for the same fishery, they should be reported and published in a composite, tabular form called the age-length table which consists of:
 - (i) The age-length key, in actual numbers, of the composite quarterly age samples,
 - (ii) The length composition, in "per mille" of the composite monthly length samples,
 - (iii) The age composition of landings in each month of the quarter by using the age-length key to calculate the proportion of ages in each length group in the composite length compositions.

Presentation of the length and age data for herring follows the 1969 recommendation of the Statistics and Sampling Subcommittee (Redbook 1969, Pt. 1, p. 50):

- a) that herring length and age/length key data from 1961 to 1968 be published in a special issue of the ICNAF Sampling Yearbook with data for subsequent years included in the Sampling Yearbook on a routine basis;
- b) that the herring length data be published by country and by month for all ICNAF divisions, except Div. 5Y for which the length data should be presented separately for a northern subdivision (from the border between Maine and New Brunswick to the border between Maine and New Hampshire) and for a southern subdivision (from the border between Maine and New Hampshire to Cape Cod);
- c) that herring lengths be published in cm to the cm below;
- d) that the herring sampling data should not be reported by type of gear or by vessel size;
- e) that the herring age/length keys be published by quarters for Div. 4X, 4Y and 5Z only, on a trial basis, with frequent review.

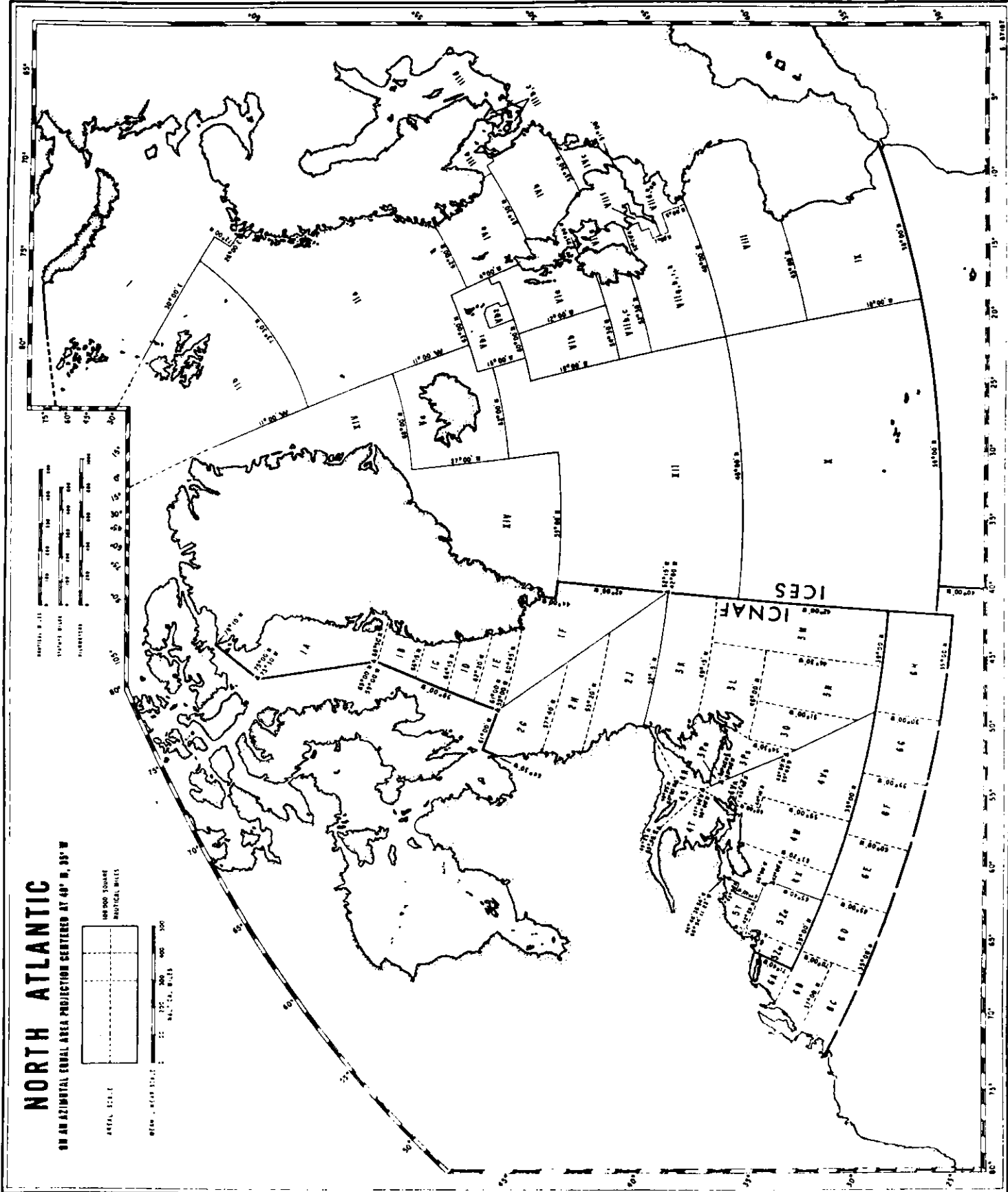
Information on length and age data collected by countries and not previously reported on ICNAF sampling forms is presented in tabular form in the section on "Notes on Sampling Data", (p. xiii - xxi) in accordance with the requirements of the 1968 meeting of the Subcommittee on Statistics and Sampling (Redbook 1968, Pt. I, p. 69-70).

A temporary shortage of staff in the ICNAF Secretariat has made it impossible to include a table in the Sampling Yearbook, Volume 14, for the year 1969, showing for each species, division, country and gear, the numbers of fish sampled for length and age in relation to total catch (Redbook 1970, Pt. I, p. 71). Tables for the year 1969 and 1970 will be prepared and presented in Sampling Yearbook, Volume 15, for the year 1970.

The Secretariat is grateful to the personnel of those laboratories who have continued to support the Commission's need for more and adequate sampling of the ICNAF fisheries with a view to providing better assessments of the state of the stocks and the effects of the fisheries and regulatory measures upon them.

L. R. Day
Executive Secretary

April 1971



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NOTES ON THE SAMPLING DATA

The "Notes on the Sampling Data" are contributed by the reporting countries. The "Notes" contain information relating to the methods of collection and presentation of the length and age data by each reporting country. The "Notes" also contain tabular information on the length and age data which were collected by some countries but were not reported on the ICNAF sampling forms.

CANADA (Maritimes and Quebec)

Reported by: A.C. Kohler
D.N. Fitzgerald

Commercial landings of groundfish in the provinces of Nova Scotia, New Brunswick and Prince Edward Island have been continuously sampled for size and age composition since 1945. Sampling emphasis has been placed on landings by offshore vessels at the largest groundfish ports, but has also included sampling from the inshore fleets. Length frequencies from routine sampling of the commercial landings are reported to the Commission. Age-frequency data are collected for all of the species sampled, except redfish, but are not reported.

Length frequencies of haddock and cod landings from Division 4X have been summarized for two regions as follows: (1) the area north of latitude 44°00'N; and (2) the area south of latitude 44°00'N.

Fork length measurements are recorded to the nearest centimetre for all species. These measurements are reported by 3-cm groups for cod and pollock, 2-cm groups for haddock, and 1-cm groups for redfish and flounders. Mesh size is recorded in inches as the approximate inside measurement of an average codend mesh. Hook size is given by number.

A. CANADA (Newfoundland)

Reported by: A.T. Pinhorn
R. Wells
T. Collier

Length frequencies are based on samples obtained from landings of the commercial groundfish fishery. Research samples from Labrador are taken on commercial gears operated from a small research boat.

Measurements are recorded to the nearest centimetre for fork lengths of cod, haddock and redfish, and for total length of flounders (American plaice, witch and yellowtail). Measurements are made on shore before appreciable culling has occurred in processing plants. Samples of landing after discard indicate that some of the catch was thrown away at sea prior to landing, whereas samples of landing before discard indicate that no fish were thrown away before landing.

The sample frequencies are converted to numbers per mille, but are otherwise unadjusted.

The mesh sizes are difficult to sort since manila, nylon, etc., can be used on the same trip and frequencies cannot be separated according to type of twine and size of mesh. Also, the mesh size given is often of the size dry as bought, before use - the only size that the fishermen generally know.

In a few cases, no information was available. In these cases the space for the information was completed with a dash.

The following tables present the number of otoliths from sampling not previously reported on ICNAF sampling forms (Circular Letter 70/6, dated 15 January 1970). These data are all from the commercial fishery in the Newfoundland area. Lengths and ages from research sampling have never been submitted to ICNAF; submissions have been confined to data from commercial sampling.

Year and Div	Gear	Month	No. of Otoliths	
			Ages Read	Ages Not Read
COD (COMMERCIAL)				
<u>1969</u>				
2H	Tr	Aug	192	-
	NJi	Aug	33	-
2J	Tr	Jul	283	-
	Gn	Aug	428	-
3K	OT	Mar	102	-
	Tr	Jun	141	-
	Gn	Jun	424	-
	Gn	Jul	15	-
	Gn	Aug	150	-
3L	OT	Feb	299	-
	OT	Apr	202	-
	Gn	May	254	-
	Tr	Jun	181	-
	Gn	Jun	259	-
	Tr	Jul	330	-
	Hl	Jul	185	-
	Ll	Jul	340	-
	Gn	Jul	221	-
	OT	Aug	208	-
3N	OT	Feb	184	-
	OT	Nov	200	-
3Ps	Gn	Apr	216	-
	Tr	Jun	343	-
	Gn	Jun	258	-
	Tr	Jul	306	-
	Gn	Jul	81	-
3Pn	Ll	Mar	389	-
4R	Tr	Jun	211	-
	Tr	Jul	55	-
	Gn	Jul	259	-

Year and Div	Gear	Month	No. of Otoliths	
			Ages Read	Ages Not Read
HADDOCK (COMMERCIAL)				
<u>1969</u>				
3Ps	OT	Feb	242	-
	Tr	Jun	6	-
	Tr	Jul	91	-
AMERICAN PLAICE (COMMERCIAL)				
<u>1969</u>				
3L	OT	Feb	395	-
	OT	Apr	202	-
	OT	Aug	192	-
3N	OT	Nov	205	-
YELLOWTAIL (COMMERCIAL)				
<u>1969</u>				
3L	OT	Aug	146	-
3N	OT	Nov	206	-

Year and Div	Gear	Month	Lengths and Scales	Year and Div	Gear	Month	Lengths	Otoliths
SALMON (COMMERCIAL)				GREENLAND HALIBUT (COMMERCIAL)				
<u>1968</u>				<u>1969</u>				
1D	SGn	Sep	442	3K	Gn	Jun	206	20
2J	SGn	Jul	20		(mn)	Jul	710	82
						Aug	198	24
<u>1969</u>				3L	Gn	Mar	199	22
3L	SN & Tr	Jun	344		(mn)	Apr	604	82
						May	39	39
3K	SN & Tr	Jun	443			Jun	403	45
						Jul	1,040	122
						Aug	202	-
	SN & Tr	Jul	3	<u>Note:</u> These lengths and ages were published as an FRB Technical Report.				
2J	SN & Tr	Jun	354	DN = Drift Net mn = monofilament				
				Gn = Gillnet OT = Otter Trawl				
	SN & Tr	Jul	13	Hl = Handline SN = Shore Net				
				HW = Herring Weir SGn = Shore Gillnet				
4T	DN	Jun	109	NJi = Norwegian Jigger Tr = Trap				
	Tr	Jun	160	Ll = Longline				
4X	DN	Jul	71					
	HW	Jul	114					

B. CANADA (Newfoundland)

Reported by: V.M. Hodder

The commercial herring fishery in the Province of Newfoundland has been sampled for size and age composition since 1965. Sampling emphasis has been placed on the catches of purse seiners at the major ports on the south coast of Newfoundland where most of the herring are caught. The herring fishery takes place mostly inshore and on a seasonal basis, i.e., from November of one year to April or May of the next; however, the length composition data are reported on a calendar year basis. Purse seine catches are not culled and consequently, there are no discards of small fish. The catches are sampled just prior to or during the unloading of the vessels while the herring are in a relatively fresh condition.

Measurements are total lengths tabulated to the 1/2 cm below; e.g., all fish whose actual total lengths fall within the range 30.0 to 30.9 cm are tabulated as 30 cm. Mean lengths were calculated directly from the length frequencies without the 0.5 cm adjustment. Mean weights were calculated by applying a length-weight curve to the length frequencies. Ages are estimated from otoliths.

In the Newfoundland area two or more distinct herring stocks may be exploited within the same ICNAF Division and the combining of data from these stocks is not very meaningful. In Division 3Ps there are at least two distinct stocks and the length compositions are reported as follows: 3Ps (1) is the inshore area between Burgeo and Pass Island, Newfoundland; 3Ps (2) is Fortune Bay. For Division 4R the length frequencies reported are from the northern part of the division (Hawke's Bay, Newfoundland) and this should appear as a footnote to the table.

The following is a list of otolith samples for age determination:

Year	Division	Gear	Month	No. of Samples	No. of Ages	
1969	3Pn	PS	Jan	42	2,100	
			Feb	26	1,300	
			Mar	19	950	
			Dec	12	600	
	3Ps (1)	PS	Jan	10	500	
			Nov	5	250	
			Dec	22	1,100	
	3Ps (2)	PS	Jan	12	650	
			Feb	1	100	
	4R (Hawke's Bay)	PS	Dec	9	450	
	4T (Magdalen Islands)	PS	Nov	15	800	
	Totals				173	8,800

PS = Purse Seine

DENMARK (Faroes and Greenland)

Reported by: Sv. Aa. Horsted

Length measurements are made of the total length (end of tail lobes) and recorded to the centimetre below.

The following tables present data on measurements of capelin, Atlantic salmon and shrimp in Subarea 1 in 1969:

Number of measured capelin, *Mallotus villosus*, in 1969, West and East Greenland.

Month \ Gear	Div 1B	Div 1D			Subarea 1 Total	East Greenland 65°55'N-37°10'W
	LN	PT	LN	BS		LN
January		237			237	
April		60			60	
May			648		648	
June	647			315	962	300 ^x
July			300 ^x 274		300 ^x 274	
Totals	647	297	1,222	315	2,481	300 ^x

^x Figures are provisional.

PT = Prawn Trawl
LN = Landing Net
BS = Beach Seine

Number of measured Atlantic salmon, in 1969, West Greenland.

Month \ Gear	Div 1A		Div 1B			Div 1C			Div 1D		Div 1E	Total
	Ho	Gn	Ho	Gn	DN	Ho	Gn	DN	Ho	Gn	DN	
August	8	1							1	10		20
September		38			101		1	6		67	101	314
October		63	25	96	56	10				64		314
November			21	153	369	1				5		549
Total	8	102	46	249	526	11	1	6	1	146	101	1,197

DN = Drift Net
 Gn = Gillnet
 Ho = Hooks

Samples of *Pandalus borealis* for measurements, West Greenland, 1969.
 Gear used: Prawl trawl with mesh sizes of 36 mm.

Month	Division	No. of Samples
January	1C	1
	1D	6
February	1D	1
March	1D	1
April	1C	1
	1D	3
May	1D	1
June	1B	1
July	1B	4
	1D	3
August	1D	2
September	1B	1
November	1D	3

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FRANCE (St. Pierre et Miquelon)

Reported by: J. Morice

All species are measured as total length and recorded to the centimetre below for species greater than 20 centimetres.

GERMANY, FEDERAL REPUBLIC

Reported by: D. Messtorff
A. Meyer
F. Mombeck

Length measurements are made of the total length (end of tail lobes) and recorded to the centimetre below.

ICELAND

No data submitted.

NORWAY

Reported by: E. Bratberg

Measurements are made of the total length to the nearest centimetre.

POLAND

Reported by: B. Draganik
A. Kosier
E. Stanek

Measurements are made of the total length to the nearest centimetre. The measuring board is offset 0.5 cm to permit measuring to the nearest centimetre.

PORTUGAL

Reported by: R. Monteiro

Length measurements are now made of the total length and recorded to the nearest centimetre.

ROMANIA

No data submitted.

SPAIN

Reported by: A. Figueras
M. Gomez
M. G. Larrañeta
J. Rucabado

Length measurements are made of the total length (end of tail lobes) and recorded to the centimetre below.

UNION OF SOVIET SOCIALIST REPUBLICS

Reported by: K. G. Konstantinov
A. S. Noskov
V. A. Richter
A. P. Senina

Length measurements are made of the total length and recorded to the nearest centimetre.

UNITED KINGDOM

Reported by: D. J. Garrod
C. Whiting

Measurements are made of the total length to the centimetre below.

UNITED STATES

Reported by: V. Anthony
H. C. Boyar
Wm. H. Callahan
F. A. Dreyer

The length frequency sample measurements were made of the fork length to the nearest centimetre for haddock and to the nearest millimetre for redfish. For scale and otolith samples, measurements are made of the fork length to the nearest millimetre for both haddock and redfish.

TABLE 1 LENGTH FREQUENCIES - COD - 1C - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)	Pound Net (Commercial)
CATCHES/LANDINGS	Landings	Landings
MONTH	May	July
COUNTRY	United Kingdom	Denmark (Greenland)
TONNAGE	901-1800	50-150
42	7	3
45	49	28
48	144	183
51	107	307
54	84	204
57	67	96
60	83	43
63	76	31
66	95	25
69	67	34
72	70	25
75	56	12
78	43	6
81	19	-
84	11	3
87	10	-
90	3	-
93	4	-
96	2	-
99	0	-
102	0	-
105	-	-
108	0	-
Total ‰	997	1000
Serial Numbers	-	-
Number of Samples	1	-
Number of Fish Measured	1699	323
Mean Length (cm)	61.9	55.3
Mean Weight (kg)	-	-
Total Weight Landed (tons)	238.2	19.2
Estimated Number Landed	122884	-
Mesh(mm) or Hook(no.) Size	-	-
Range of Depths (fm)	-	-

TABLE 2 LENGTH FREQUENCIES - COD - 1D - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)	Beach Seine (Research)
CATCHES/LANDINGS	Landings	NK
MONTH	October	July
COUNTRY	Denmark (Greenland)	
TONNAGE	433	< 50
18	-	11
21	-	81
24	-	132
27	-	276
30	-	289
33	-	137
36	-	46
39	1	12
42	8	9
45	23	5
48	70	3
51	89	-
54	110	-
57	107	-
60	107	-
63	108	-
66	125	-
69	95	-
72	47	-
75	30	-
78	26	-
81	23	-
84	10	-
87	10	-
90	4	-
93	3	-
96	1	-
99	-	-
102	-	-
105	1	-
108	3	-
Total ‰	1001	1001
Serial Numbers	-	-
Number of Samples	-	-
Number of Fish Measured	919	1095
Mean Length (cm)	62.8	29.5
Mean Weight (kg)	-	-
Total Weight Landed (tons)	65.8	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	-	-
Range of Depths (fm)	-	-

TABLE 3

LENGTH FREQUENCIES - COD - 2H - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)	Trap (Commercial)	Norwegian Jigger (Research)
CATCHES/LANDINGS	Landings	Landings before discards	Catches
MONTH	January	August	August
COUNTRY	United Kingdom	Canada (Newfoundland)	Canada (Newfoundland)
TONNAGE	901-1800	< 50	< 50
33	-	8	61
36	-	131	61
39	1	292	30
42	13	191	61
45	107	140	30
48	249	105	61
51	217	52	121
54	173	38	152
57	99	23	212
60	64	9	-
63	26	7	152
66	22	3	30
69	8	3	-
72	6	1	30
75	7	-	-
78	2	-	-
81	2	-	-
84	1	-	-
87	1	-	-
90	1	-	-
93	1	-	-
96	1	-	-
99	0	-	-
102	0	-	-
105	0	-	-
108	0	-	-
Total ‰	1001	1003	1001
Serial Numbers	-	-	-
Number of Samples	1	2	2
Number of Fish Measured	1182	774	33
Mean Length (cm)	53.5	44.05	53.36
Mean Weight (kg)	-	0.758	1.372
Total Weight Landed (tons)	283.7	-	-
Estimated Number Landed	224781	-	-
Mesh(mm) or Hook(no.) Size	-	3 1/2-4 ¹	-
Range of Depths (fm)	-	9-11	8-30

¹ Inches

TABLE 4 LENGTH FREQUENCIES - COD - 2J - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl	Trap	Gill Net
	(Research)	(Commercial)	(Commercial)
CATCHES/LANDINGS	Catches	Landings before discards	Landings before discards
MONTH	May	July	August
COUNTRY	USSR	Canada (Newfoundland)	Canada (Newfoundland)
TONNAGE	2800	< 50	< 50
27	1	-	-
30	5	-	-
33	14	-	-
36	33	8	-
39	33	29	-
42	43	78	-
45	98	116	-
48	90	134	2
51	102	126	2
54	115	125	-
57	94	105	2
60	95	82	4
63	73	67	16
66	58	46	31
69	37	37	76
72	36	23	109
75	22	17	150
78	18	5	157
81	9	3	123
84	7	-	83
87	4	1	86
90	4	-	38
93	2	-	26
96	2	-	29
99	1	-	23
102	1	-	17
105	1	-	10
108	1	-	12
111	-	-	4
114	-	-	-
117	-	-	2
Total ‰	1000	1002	1002
Serial Numbers	-	-	-
Number of Samples	-	5	8
Number of Fish Measured	10123	2272	579
Mean Length (cm)	56.78	54.80	81.13
Mean Weight (kg)	-	1.501	4.872
Total Weight Landed (tons)	8156	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	110	3 1/2-4 ¹	6-7 ¹
Range of Depths (fm)	151-224	6-10	15-35

¹ Inches

TABLE 5 LENGTH FREQUENCIES - COD - 3K - 1969 (FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl	Otter Trawl	Trap	Gill Net		
	(Commercial)		(Commercial)			
CATCHES/LANDINGS	Landings	Ldgs. after discards		Landings before discards		
MONTH	January	March	June	June	July	August
COUNTRY	UK		Canada (Newfoundland)			
TONNAGE	901-1800	501-900	< 50	< 50		
30	-	-	2	-	-	-
33	-	-	20	-	-	-
36	-	-	61	-	-	2
39	1	10	78	-	-	6
42	10	48	101	1	-	6
45	86	75	91	1	-	21
48	201	109	107	-	-	30
51	177	117	118	1	-	69
54	144	137	102	2	-	65
57	89	119	82	1	-	54
60	74	95	73	4	-	52
63	48	58	57	11	-	45
66	54	48	38	33	86	32
69	30	54	29	83	74	35
72	25	26	15	146	173	41
75	23	34	8	158	111	45
78	7	24	8	146	235	50
81	9	18	4	112	111	47
84	6	8	2	82	49	52
87	3	12	2	57	37	45
90	5	2	3	43	49	52
93	2	-	-	37	12	45
96	2	4	-	30	25	49
99	1	2	-	23	12	30
102	2	-	-	11	25	22
105	1	-	-	9	-	34
108	1	2	-	4	-	24
111	-	-	-	4	-	13
114	-	-	-	2	-	11
117	-	-	-	1	-	11
120	-	-	-	-	-	8
123	-	-	-	-	-	2
126	-	-	-	-	-	2
129	-	-	-	-	-	2
Total ‰	1001	1002	1001	1002	999	1002
Serial Numbers	-	-	-	-	-	-
Number of Samples	1	1	5	50	3	9
Number of Fish Measured	1182	504	1328	4578	81	536
Mean Length (cm)	56.8	58.708	52.28	80.45	78.96	77.35
Mean Weight (kg)	-	2.034	1.434	4.887	4.512	5.052
Total Weight Landed (tons)	166.6	57.2	-	-	-	-
Estimated Number Landed	105901	28122	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	Large	4	6-8 ¹	6-7 ¹	6 1/2-8 ¹
Range of Depths (fm)	-	-	17-18	30-130	35-60	130-220

¹ Inches

TABLE 6 LENGTH FREQUENCIES - OOD - 3L - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)				Gill Net (Commercial)		
	Landings after discards				Landings before discards		
CATCHES/LANDINGS	February	April	July	August	May	June	July
MONTH	Canada (Newfoundland)				Canada (Newfoundland)		
COUNTRY	501-900				< 50		
TONNAGE							
33	1	-	-	-	-	-	-
36	-	-	-	-	-	-	-
39	5	1	-	8	-	1	-
42	24	9	2	8	-	-	-
45	53	40	6	35	4	1	1
48	97	76	28	70	-	1	3
51	135	143	107	107	-	1	3
54	160	163	125	110	4	4	11
57	145	128	135	120	8	10	8
60	86	97	143	109	28	30	24
63	71	67	107	87	87	61	64
66	41	36	81	56	134	119	127
69	35	53	93	52	201	132	202
72	29	24	61	43	165	143	210
75	28	27	16	31	154	133	144
78	21	25	14	45	122	117	96
81	20	15	12	21	51	88	41
84	9	12	14	2	12	46	18
87	14	10	-	14	16	34	8
90	6	12	8	4	8	19	8
93	3	8	-	4	4	9	9
96	7	9	4	8	-	10	6
99	3	6	2	17	-	10	6
102	1	9	8	4	-	6	4
105	1	6	6	12	4	8	3
108	3	6	10	4	-	4	1
111	2	3	8	6	-	4	2
114	-	3	4	10	-	5	-
117	-	8	-	6	-	-	-
120	-	2	4	2	-	2	-
123	1	1	-	-	-	1	1
126	-	2	-	6	-	-	-
129	-	1	-	-	-	1	-
132	-	1	-	2	-	-	-
Total ‰	1001	1003	998	1003	1002	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	2	2	2	1	4	6	10
Number of Fish Measured	1499	1038	495	516	254	1563	1465
Mean Length (cm)	59.835	62.780	64.309	64.930	72.575	75.754	73.008
Mean Weight (kg)	2.383	2.541	2.681	3.123	3.545	4.158	3.646
Total Weight Landed (tons)	980.5	2222.3	1169.9	998.6	-	-	-
Estimated Number Landed	411456	874577	436367	319757	-	-	-
Mesh(mm) or Hook(no.) Size	Large	Large	Large	Large	6 1/2-7 ¹	6 1/2-7 ¹	6 1/2-7 ¹
Range of Depths (fm)	100-160	45-50	35-100	65-95	7-70	14-30	10-95

¹ Inches

TABLE 6
(continued)

LENGTH FREQUENCIES - COD - 3L - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Trap		Longline	Handline
	(Commercial)			
CATCHES/LANDINGS	Landings before discards			
MONTH	June	July	July	July
COUNTRY	Canada (Newfoundland)			
TONNAGE	< 50			
33	1	3	-	-
36	12	16	-	3
39	33	51	1	25
42	53	99	6	69
45	107	151	13	98
48	132	167	32	151
51	136	170	63	170
54	144	145	72	169
57	118	91	74	121
60	118	53	84	71
63	71	28	86	40
66	34	13	102	35
69	15	7	84	21
72	10	2	66	12
75	6	1	55	7
78	6	-	49	3
81	1	-	37	2
84	1	-	32	-
87	1	-	23	1
90	1	-	18	-
93	-	-	25	-
96	-	-	12	-
99	-	-	17	-
102	-	-	11	-
105	-	-	8	-
108	-	-	5	-
111	-	-	10	-
114	-	-	1	-
117	-	-	5	-
120	-	-	3	-
123	-	-	1	-
126	-	-	1	-
129	-	-	1	-
132	-	-	3	-
135	-	-	-	-
138	-	-	-	-
141	-	-	1	-
Total ‰	1000	997	1001	998
Serial Numbers	-	-	-	-
Number of Samples	5	23	11	9
Number of Fish Measured	1715	5200	1520	2199
Mean Length (cm)	54.388	51.002	70.360	53.880
Mean Weight (kg)	1.548	1.260	3.604	1.497
Total Weight Landed (tons)	-	-	-	-
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no.) Size	3 1/2-10 ¹	3 1/2-10 ¹	6/0	#3020 & #3021
Range of Depths (fm)	9-11	7-17	108-165	5-12

¹ Inches

TABLE 7

LENGTH FREQUENCIES - COD - 3N - 1969

(FREQUENCIES IN $\circ/\circ\circ$ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)	
	Landings after discards	
CATCHES/LANDINGS	February	November
MONTH	Canada (Newfoundland)	
COUNTRY	501-900	
TONNAGE		
39	-	12
42	1	37
45	20	89
48	122	123
51	187	102
54	207	92
57	177	88
60	110	103
63	51	84
66	32	61
69	26	30
72	17	26
75	14	16
78	12	13
81	7	12
84	4	5
87	4	6
90	3	10
93	2	2
96	1	3
99	-	8
102	1	6
105	-	13
108	-	4
111	-	5
114	-	5
117	-	5
120	-	13
123	-	12
126	-	3
129	-	10
132	-	-
135	-	2
138	-	-
141	-	-
144	-	-
147	-	1
Total $\circ/\circ\circ$	998	1001
Serial Numbers	-	-
Number of Samples	2	2
Number of Fish Measured	915	1001
Mean Length (cm)	57.600	63.029
Mean Weight (kg)	1.686	2.938
Total Weight Landed (tons)	90.8	172.0
Estimated Number Landed	53855	58543
Mesh(mm) or Hook(no.) Size	Large	Large
Range of Depths (fm)	36-150	30-110

TABLE 8

LENGTH FREQUENCIES - COD - 3 Pn - 1969

(FREQUENCIES IN $\circ/\circ\circ$ - 3 CM GROUPS)

GEAR	Longline (Commercial)
CATCHES/LANDINGS	Landings before discards
MONTH	March
COUNTRY	Canada (Newfoundland)
TONNAGE	< 50
33	-
36	9
39	24
42	35
45	52
48	76
51	74
54	77
57	74
60	77
63	81
66	85
69	79
72	63
75	56
78	41
81	33
84	23
87	11
90	10
93	6
96	4
99	2
102	1
105	1
108	1
111	1
114	1
117	-
120	-
123	1
126	-
129	-
132	-
135	-
138	-
Total $\circ/\circ\circ$	998
Serial Numbers	-
Number of Samples	13
Number of Fish Measured	4287
Mean Length (cm)	62.92
Mean Weight (kg)	2.723
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	6/0
Range of Depths (fm)	50-90

TABLE 9 LENGTH FREQUENCIES - COD - 3 Ps - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl				Hand Line
	(Commercial)				
CATCHES/LANDINGS	Landings after discards				Catches August
MONTH	January	February	March	April	
COUNTRY	France (St. Pierre et Miquelon)				
TONNAGE	151-500				0-50
33	-	1	1	-	2
36	1	9	21	1	9
39	22	36	154	12	40
42	80	126	243	63	77
45	135	187	211	138	107
48	157	172	128	141	112
51	172	167	86	138	135
54	163	124	57	126	115
57	103	93	39	120	115
60	73	50	23	88	94
63	38	21	16	65	66
66	25	7	9	37	39
69	11	4	4	18	24
72	8	1	4	14	18
75	5	1	1	5	14
78	3	1	1	8	5
81	2	1	1	6	5
84	1	-	-	6	3
87	-	-	-	1	2
90	-	-	-	-	4
93	-	-	-	2	2
96	-	-	-	1	1
99	-	-	-	2	1
102	-	-	-	-	1
105	-	-	-	2	1
108	-	-	-	-	-
111	-	-	-	1	-
114	-	-	-	2	-
117	-	-	-	1	1
120	-	-	-	-	1
123	-	-	-	1	-
Total ‰	999	1001	999	999	994
Serial Numbers	-	-	-	-	-
Number of Samples	3	3	2	1	10
Number of Fish Measured	4965	3390	2570	1337	2741
Mean Length (cm)	53.01	50.59	47.20	55.33	55.08
Mean Weight (kg) ¹	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size ²	100	100	100	100	15-4/0
Range of Depths (fm)	100-120	85-100	90-120	40-90	15-40

¹ Gutted weight² Stretch mesh

TABLE 9 LENGTH FREQUENCIES - COD - 3 Ps - 1969
(continued)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Gill Net			Trap	
	(Commercial)				
CATCHES/LANDINGS	Landings before discards				
MONTH	April	June	July	June	July
COUNTRY	Canada (Newfoundland)				
TONNAGE	< 50				
27	-	-	-	1	7
30	-	-	-	10	38
33	-	-	-	39	92
36	-	1	1	79	158
39	7	-	1	130	169
42	16	-	3	153	145
45	21	3	4	138	125
48	29	4	5	146	96
51	38	7	4	116	62
54	26	28	12	94	52
57	33	67	32	51	26
60	55	120	75	26	16
63	83	163	143	10	7
66	113	159	176	5	4
69	127	133	165	1	2
72	136	108	145	1	1
75	120	72	107	-	-
78	62	52	57	-	-
81	35	26	32	-	-
84	34	19	14	-	-
87	16	11	11	-	-
90	13	12	4	-	-
93	10	6	3	-	-
96	7	2	3	-	-
99	5	4	1	-	-
102	3	1	1	-	-
105	3	1	1	-	-
108	5	-	1	-	-
111	-	1	-	-	-
114	1	3	-	-	-
117	-	-	-	-	-
120	1	-	-	-	-
Total ‰	999	1003	1001	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	5	4	4	9	7
Number of Fish Measured	858	1124	1568	3384	2950
Mean Length (cm)	69.727	68.740	69.703	46.742	43.291
Mean Weight (kg)	3.205	3.024	3.157	1.024	0.824
Total Weight Landed (tons)	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	6 1/2-7 ¹	6-7 ¹	6-7 ¹	4-10 ¹	4-10 ¹
Range of Depths (fm)	30-60	10-70	10-70	8-13	10-25

¹ Inches

TABLE 10 LENGTH FREQUENCIES - COD - 4R - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl	Otter Trawl (side)			
	(Commercial)	(Commercial)			
CATCHES/LANDINGS	Landings after discards	Landings			
MONTH	April	May	June	September	November
COUNTRY	France (St. Pierre et Miquelon)	Canada (Maritimes)			
TONNAGE	151-500	151-500			
33	-	-	-	-	-
36	3	-	-	-	-
39	22	9	25	-	13
42	59	29	46	23	29
45	78	41	151	109	75
48	120	72	209	161	86
51	141	155	130	145	142
54	131	134	156	160	144
57	112	114	87	112	174
60	90	102	67	93	87
63	68	84	49	71	84
66	58	64	36	64	66
69	45	53	21	45	52
72	27	57	8	7	21
75	18	15	5	-	10
78	11	15	-	4	7
81	6	27	-	-	1
84	4	9	3	4	4
87	1	5	-	-	-
90	1	1	2	1	1
93	1	1	3	1	1
96	1	6	-	-	1
99	1	2	1	1	-
102	-	-	-	-	1
105	-	1	-	-	-
108	-	2	-	-	-
111	-	1	-	-	-
114	-	-	-	-	-
117	-	-	1	-	-
120	-	1	2	-	-
Total ‰	998	1000	1002	1001	999
Serial Numbers	-	60	61	63	64
Number of Samples	3	1	1	1	1
Number of Fish Measured	3558	300	327	307	349
Mean Length (cm)	56.60	60.1	53.6	55.7	57.3
Mean Weight (kg) ¹	-	2.06	1.36	1.51	1.78
Total Weight Landed (tons)	-	1248	310	482	305
Estimated Number Landed	-	6058 ³	2279 ³	3192 ³	1713 ³
Mesh(mm) or Hook(no-)	100 ²	4 1/2 ⁴	4 1/2 ⁴	4 1/2 ⁴	4 1/2 ⁴
Range of Depths (fm)	90-140	85-90	-	60-120	95-125

¹ Gutted weight² Stretch mesh³ Numbers in 100's⁴ Inches

TABLE 10 LENGTH FREQUENCIES - COD - 4R - 1969
(continued)

(FREQUENCIES IN % - 3 CM GROUPS)

GEAR	Otter Trawl (stern)	Trap (Commercial)		Gill Net
	Landings	Landings before discards		
CATCHES/LANDINGS	August	June	July	July
MONTH	August	June	July	July
COUNTRY	Canada (Maritimes)	Canada (Newfoundland)		
TONNAGE	501-900	< 50		
30	-	27	1	-
33	-	111	15	-
36	-	155	48	1
39	-	165	94	3
42	-	114	135	5
45	3	107	115	7
48	32	70	146	7
51	147	80	131	11
54	204	68	111	12
57	201	31	69	13
60	92	29	49	15
63	124	12	33	21
66	68	16	24	38
69	52	6	13	66
72	32	6	11	109
75	40	2	4	132
78	4	2	2	143
81	1	2	1	112
84	-	-	-	85
87	-	-	-	61
90	-	-	-	41
93	-	-	-	28
96	-	-	-	24
99	-	-	-	21
102	-	-	-	12
105	-	-	-	12
108	-	-	-	6
111	-	-	-	6
114	-	-	-	3
117	-	-	-	3
120	-	-	-	1
123	-	-	-	1
126	-	-	-	-
129	-	-	-	1
132	-	-	-	-
135	-	-	-	-
138	-	-	-	-
Total %	1000	1003	1002	1000
Serial Numbers	62	-	-	-
Number of Samples	1	2	4	29
Number of Fish Measured	338	516	1650	3795
Mean Length (cm)	59.7	44.67	50.12	79.32
Mean Weight (kg)	1.86	0.945	1.298	5.019
Total Weight Landed (tons)	820	-	-	-
Estimated Number Landed	4409 ¹	-	-	-
Mesh(mm) or Hook(no.) Size	4 1/2 ²	3 1/2-4 ²	3 1/2-4 ²	6-8 ²
Range of Depths (fm)	45-95	8-9	8-9.5	20-120

¹ Numbers in 100's² Inches

TABLE 11 LENGTH FREQUENCIES - COD - 4T - 1969

(FREQUENCIES IN % - 3 CM GROUPS)

GEAR	Otter Trawl (side)							
	(Commercial)							
CATCHES/LANDINGS	Landings							
MONTH	April	June	July	August	September	October	November	December
COUNTRY	Canada (Maritimes)							
TONNAGE	151-500	51-150						151-500
30	-	-	-	-	-	-	-	4
33	47	-	-	-	-	-	-	22
36	109	-	-	-	-	-	-	32
39	179	2	6	43	70	21	51	72
42	164	8	82	153	234	117	116	122
45	134	75	152	240	225	186	167	120
48	114	188	203	228	178	179	181	134
51	91	186	171	158	118	178	177	129
54	69	136	130	114	101	136	126	115
57	32	117	133	24	34	86	102	89
60	23	88	39	8	14	41	56	53
63	12	61	2	12	11	24	5	37
66	9	45	10	8	3	7	9	27
69	6	30	8	-	6	8	-	13
72	4	19	11	4	-	7	9	13
75	3	11	9	-	6	-	-	5
78	2	13	11	-	-	-	-	7
81	1	6	10	-	-	6	-	3
84	1	3	2	-	-	-	-	2
87	1	-	4	-	-	-	-	1
90	-	2	3	-	-	-	-	-
93	-	2	3	-	-	-	-	-
96	-	2	2	-	-	-	-	-
99	-	2	3	-	-	-	-	-
102	-	-	3	-	-	-	-	1
105	-	2	1	4	-	-	-	-
108	-	-	1	-	-	-	-	-
111	-	-	-	-	-	-	-	-
114	-	2	-	-	-	-	-	-
117	-	-	-	-	-	-	-	-
120	-	-	-	-	-	-	-	-
123	-	-	1	-	-	-	-	-
126	-	-	-	-	-	-	-	-
129	-	-	-	-	-	3	-	-
Total %	1001	1000	1000	1000	1000	999	999	1001
Serial Numbers	13	1-3	4-6	9	10	14-15	16	17-19
Number of Samples	1	3	3	1	1	2	1	3
Number of Fish Measured	450	623	512	254	355	473	215	939
Mean Length (cm)	46.0	56.5	53.5	49.0	48.2	51.5	50.7	51.2
Mean Weight (kg)	1.07	1.50	1.48	1.07	0.99	1.24	1.15	1.40
Total Weight Landed (tons)	549	807	837	510	376	406	801	638
Estimated Number Landed	5131 ¹	5380 ¹	5655 ¹	4766 ¹	3798 ¹	3274 ¹	6965 ¹	4557 ¹
Mash(mm) or Hook(no.) Size	4 1/2 ²	4 1/2 ²	4 1/2 ²	4 1/2 ²	4 1/2 ²	4 1/2 ²	4 1/2 ²	4 1/2 ²
Range of Depths (fm)	100-120	50-180	40-50	46-51	42	40-42	40-50	28-50

¹ Numbers in 100's² Inches

TABLE 11 LENGTH FREQUENCIES - COD - 4T - 1969
(continued)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Danish Seine		Gill Net	
	(Commercial)			
CATCHES/LANDINGS	Landings			
MONTH	July	August	September	August
COUNTRY	Canada (Maritimes)			
TONNAGE	26-50			
42	86	118	40	-
45	232	267	217	-
48	182	210	89	-
51	199	187	168	-
54	189	130	168	-
57	76	27	99	34
60	20	27	89	17
63	13	19	30	121
66	3	12	50	-
69	-	-	-	35
72	-	4	20	52
75	-	-	11	69
78	-	-	12	69
81	-	-	2	138
84	-	-	3	121
87	-	-	2	86
90	-	-	-	52
93	-	-	1	103
96	-	-	-	17
99	-	-	-	52
102	-	-	-	17
105	-	-	-	-
108	-	-	-	-
111	-	-	-	-
114	-	-	-	-
117	-	-	-	-
120	-	-	-	-
123	-	-	-	17
Total ‰	1000	1001	1001	1000
Serial Numbers	7	11	12	8
Number of Samples	1	1	1	1
Number of Fish Measured	302	262	153	58
Mean Length (cm)	50.7	50.0	54.4	82.0
Mean Weight (kg)	1.08	1.26	1.51	4.92
Total Weight Landed (tons)	109	175	141	427
Estimated Number Landed	1009 ¹	1389 ¹	934 ¹	868 ¹
Mesh(mm) or Hook(no.) Size	4 1/2 ²	4 1/2 ²	4 1/2 ²	-
Range of Depths (fm)	14-16	31	34	22-24

¹ Numbers in 100's² Inches

TABLE 12

LENGTH FREQUENCIES - COD - 4 Vn - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)		Longline				
	(Commercial)						
CATCHES/LANDINGS	Landings						
MONTH	February	September	June	July	August	October	November
COUNTRY	Canada (Maritimes)						
TONNAGE	151-500		26-50				
33	-	-	-	-	4	-	-
36	12	-	-	-	4	-	6
39	59	-	2	-	33	-	-
42	144	-	21	1	82	6	13
45	222	23	17	9	50	6	42
48	255	158	59	49	64	92	119
51	100	249	113	90	113	124	173
54	80	218	117	101	66	217	186
57	49	158	115	158	153	128	122
60	29	84	104	144	96	159	83
63	17	57	130	129	86	83	58
66	14	22	97	70	76	29	35
69	10	22	78	63	80	38	29
72	4	-	36	66	36	13	32
75	1	3	30	30	30	22	26
78	1	3	16	15	15	22	16
81	1	1	26	21	5	13	6
84	-	-	9	10	2	3	16
87	1	1	9	17	2	3	-
90	-	-	5	7	2	6	2
93	-	-	5	10	-	3	7
96	-	1	2	10	-	9	11
99	-	-	5	-	-	3	7
102	-	-	2	-	-	3	5
105	-	-	2	-	1	13	4
108	-	-	-	-	-	3	-
111	-	-	-	-	-	-	2
Total ‰	999	1000	1000	1000	1000	998	1000
Serial Numbers	30-31-33	34	35	36	37	38	43
Number of Samples	3	1	1	1	1	1	1
Number of Fish Measured	1100	357	320	310	304	314	317
Mean Length (cm)	49.3	55.4	62.1	63.3	58.1	60.5	59.2
Mean Weight (kg)	1.05	1.41	2.24	2.21	1.77	2.16	2.06
Total Weight Landed (tons)	1496	575	235	29	25	114	317
Estimated Number Landed	14238 ¹	4078 ¹	1049 ¹	131 ¹	141 ¹	528 ¹	1539 ¹
Mesh(mm) or Hook(no.) Size	-	4 1/2 ²	6/0	6/0	6/0	6/0	6/0
Range of Depths (fm)	70-125	60-80	18-30	14-30	14-28	25-42	25-42

¹ Numbers in 100's² Inches

TABLE 13 LENGTH FREQUENCIES - COD - 4 Vs - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)	
CATCHES/LANDINGS	Landings after discards	
MONTH	January	March
COUNTRY	France (St. Pierre et Miquelon)	
TONNAGE	151-500	
36	5	2
39	30	28
42	103	101
45	167	179
48	182	209
51	180	149
54	124	112
57	94	86
60	49	54
63	25	33
66	11	17
69	7	13
72	8	10
75	5	3
78	4	1
81	3	1
84	2	2
87	-	-
90	-	-
93	-	1
Total ‰	999	1001
Serial Numbers	-	-
Number of Samples	1	2
Number of Fish Measured	1843	2421
Mean Length (cm)	51.62	51.65
Mean Weight (kg) ¹	-	-
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size ²	100	100
Range of Depths (fm)	120	75-130

¹ Gutted weight² Stretch mesh

TABLE 14 LENGTH FREQUENCIES - COD - 4W - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)		Otter Trawl (Stern)	Longline	
	(Commercial)				
CATCHES/LANDINGS	Landings				
MONTH	January	December	February	October	November
COUNTRY	Canada (Maritimes)				
TONNAGE	151-500		501-900	51-150	26-50
36	-	-	-	3	-
39	-	55	-	23	65
42	31	187	6	57	150
45	100	182	29	100	136
48	107	156	172	130	162
51	138	96	211	167	109
54	61	79	160	123	91
57	109	70	141	127	86
60	86	29	106	113	62
63	69	39	62	67	38
66	86	22	44	43	24
69	47	25	22	10	35
72	64	12	31	13	21
75	13	4	13	7	3
78	13	16	-	3	8
81	24	8	-	-	6
84	36	10	-	-	-
87	4	2	2	3	3
90	6	4	1	7	-
93	2	4	-	3	-
96	2	-	-	-	-
99	-	-	1	-	-
102	-	-	-	-	-
105	2	-	-	-	-
108	-	-	-	-	-
Total ‰	1000	1000	1001	999	999
Serial Numbers	55	54	32	39	53
Number of Samples	1	1	1	1	1
Number of Fish Measured	344	306	310	300	339
Mean Length (cm)	59.9	52.0	56.5	55.0	52.4
Mean Weight (kg)	2.49	1.51	1.68	1.65	1.42
Total Weight Landed (tons)	617	271	323	61	44
Estimated Number Landed	2478 ¹	1795 ¹	1923 ¹	370 ¹	310 ¹
Mesh(mm) or Hook(no.) Size	4 1/2 ²	4 1/2 ²	4 1/2 ²	6/0	6/0
Range of Depths (fms)	-	27-80	30-110	52-60	45-60

¹ Numbers in 100's² Inches

TABLE 15 LENGTH FREQUENCIES - COD - 4X (NORTH)¹ - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	August	September	October
COUNTRY	Canada (Maritimes)		
TONNAGE	51-150		
36	14	6	-
39	54	34	-
42	70	74	13
45	67	65	77
48	57	71	64
51	51	40	45
54	81	68	65
57	108	90	129
60	102	87	187
63	89	62	97
66	65	43	52
69	30	37	7
72	30	56	39
75	62	65	45
78	48	84	58
81	27	50	52
84	14	22	26
87	16	25	19
90	5	3	13
93	8	6	-
96	-	-	-
99	-	3	6
102	3	3	-
105	-	-	-
108	-	-	-
111	-	-	-
114	-	6	6
Total ‰	1001	1000	1000
Serial Numbers	46-47	48-49	50
Number of Samples	2	2	1
Number of Fish Measured	371	323	155
Mean Length (cm)	60.3	63.0	63.7
Mean Weight (kg)	2.27	2.62	2.93
Total Weight Landed (tons)	116	99	59
Estimated Number Landed	511 ²	378 ²	201 ²
Mesh(mm) or Hook(no.) Size	4 1/2 ³	4 1/2 ³	4 1/2 ³
Range of Depths (fm)	22-75	100-112	100-106

¹ North of latitude 44°00'N² Numbers in 100's³ Inches

TABLE 16 LENGTH FREQUENCIES - COD - 4X (SOUTH)¹ - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	May	June	December
COUNTRY	Canada (Maritimes)		
TONNAGE	151-500		
36	2	3	3
39	15	41	18
42	11	76	31
45	15	79	37
48	25	83	41
51	44	114	38
54	30	108	32
57	19	114	55
60	36	75	65
63	43	92	74
66	73	72	81
69	60	48	83
72	60	49	72
75	87	12	47
78	73	14	76
81	88	15	65
84	57	-	38
87	34	2	46
90	77	-	24
93	19	1	20
96	34	1	11
99	30	-	11
102	34	-	7
105	-	-	2
108	10	-	2
111	10	-	9
114	10	-	2
117	-	-	-
120	-	1	2
123	5	-	-
126	-	-	4
129	-	-	4
Total ‰	1001	1000	1000
Serial Numbers	44	45	51-52
Number of Samples	1	1	2
Number of Fish Measured	260	439	491
Mean Length (cm)	76.4	57.2	70.2
Mean Weight (kg)	5.16	2.21	4.34
Total Weight Landed (tons)	387	434	204
Estimated Number Landed	750 ²	1964 ²	470 ²
Mesh(mm) or Hook(no.) Size	4 1/2 ³	4 1/2 ³	4 1/2 ³
Range of Depths (fm)	37-66	40-75	40-95

¹ South of latitude 44°00'N² Numbers in 100's³ Inches

TABLE 17 LENGTH FREQUENCIES - COD - 5Z - 1969

(FREQUENCIES IN % - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	January	February	March	April	May	June
MONTH	United States					
COUNTRY	0-458					
TONNAGE						
36	6	-	59	-	-	-
39	44	-	199	-	-	-
42	112	9	289	7	-	2
45	173	43	163	46	23	18
48	192	139	76	162	77	50
51	179	166	55	237	139	57
54	133	194	47	210	116	152
57	67	129	36	96	248	202
60	34	58	17	77	238	185
63	24	29	3	60	39	150
66	17	25	8	29	54	51
69	6	40	3	51	7	30
72	6	34	2	14	7	38
75	7	16	3	9	7	15
78	-	10	1	-	15	7
81	-	10	8	-	15	20
84	-	18	1	1	-	8
87	-	18	6	-	-	10
90	-	11	9	1	15	3
93	-	6	3	-	-	2
96	-	11	3	-	-	-
99	-	17	7	-	-	-
102	-	3	2	-	-	-
105	-	8	-	-	-	-
108	-	6	-	-	-	-
Total %/oo	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	4	2	2	1	3
Number of Fish Measured	302	456	297	247	130	350
Mean Length (cm)	50.81	60.39	47.32	55.73	58.77	60.93
Mean Weight (kg)	1.55	2.77	1.42	2.01	3.22	2.59
Total Weight Landed (tons)	870	647	1135	1549	1781	1832
Estimated Number Landed	5616 ¹	2331 ¹	7995 ¹	7718 ¹	7640 ¹	7067 ¹
Mesh(mm) or Hook(no.) Size	114	114	114	114	114	114
Range of Depths (fm)	18-33	13-59	9-59	11-51	16-49	55-101

¹ Numbers in 100's

TABLE 17
(continued)

LENGTH FREQUENCIES - COD - 5Z - 1969

(FREQUENCIES IN % - 3 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	July	August	September	October	November	December
MONTH	United States					
COUNTRY	0-458					
TONNAGE						
39	-	-	-	-	-	12
42	8	30	-	-	7	48
45	19	18	5	4	22	60
48	19	48	49	9	80	12
51	96	102	60	30	131	48
54	189	192	109	56	65	36
57	191	238	159	117	94	84
60	165	150	137	145	101	144
63	98	72	109	178	94	97
66	51	42	93	145	94	97
69	44	18	38	74	51	73
72	32	24	49	39	36	73
75	7	24	22	52	51	36
78	5	18	33	48	22	24
81	18	6	11	26	22	-
84	18	6	22	17	29	12
87	9	12	33	26	29	-
90	15	-	22	4	36	-
93	5	-	11	13	22	-
96	1	-	11	9	7	36
99	3	-	11	-	-	60
102	1	-	-	4	-	24
105	1	-	-	-	7	24
108	5	-	11	-	-	-
111	-	-	5	4	-	-
Total %/oo	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	3	2	3	4	3	1
Number of Fish Measured	457	167	183	576	386	101
Mean Length (cm)	61.50	59.03	65.67	66.96	64.94	67.34
Mean Weight (kg)	2.73	2.35	3.54	3.35	3.19	3.84
Total Weight Landed (tons)	1588	1597	1973	1660	807	656
Estimated Number Landed	5825 ¹	6790 ¹	5575 ¹	4961 ¹	2527 ¹	1711 ¹
Mesh(mm) or Hook(no.) Size	114	114	114	114	114	114
Range of Depths (fm)	37-55	42-48	37-55	33-64	27-48	33-37

¹ Numbers in 100's

TABLE 18 LENGTH FREQUENCIES - COD - 5 Ze - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Stern)	Otter Trawl (Side)
	(Commercial)	
CATCHES/LANDINGS	Landings	
MONTH	June	August
COUNTRY	Canada (Maritimes)	
TONNAGE	501-900	151-500
36	6	3
39	20	2
42	26	6
45	38	18
48	31	62
51	25	72
54	55	157
57	89	214
60	92	229
63	137	98
66	88	49
69	107	34
72	88	10
75	62	6
78	49	25
81	24	8
84	29	1
87	12	2
90	12	1
93	8	1
96	1	-
99	-	2
102	2	1
Total ‰	1001	1001
Serial Numbers	40-41	42
Number of Samples	2	1
Number of Fish Measured	587	316
Mean Length (cm)	65.3	59.5
Mean Weight (kg)	2.91	2.25
Total Weight Landed (tons)	808	284
Estimated Number Landed	2777 ¹	1262 ¹
Mesh(mm) or Hook(no.) Size	4 3/8 ²	4 1/2 ²
Range of Depths (fm)	-	45-55

¹ Numbers in 100's² Inches

TABLE 19

AGE/LENGTH KEY - OOD - 1B - 1969 (2nd QUARTER)

GEAR		Greenlanders (Commercial)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings												Months Within Quarter		
COUNTRY		Denmark (Greenland)														
TONNAGE		< 50														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	Total No. of Ages Read	PER MILLE			
													Apr	May	Jun	
45	1	-	-	-	-	-	-	-	-	-	-	1				
48	2	-	-	-	-	-	-	-	-	-	-	2				
51	3	-	-	-	1	-	-	-	-	-	-	4				
54	3	3	-	-	-	-	-	-	-	-	-	6				
57	1	1	-	-	1	-	-	-	-	-	-	3				
60	-	-	2	-	2	-	-	-	-	-	-	4				
63	-	5	3	-	-	-	1	-	1	-	-	10				
66	-	-	1	1	-	-	-	-	-	-	-	2				
69	-	-	-	2	5	5	1	-	-	-	-	13				
72	-	-	-	2	1	2	-	-	-	-	-	5				
75	-	-	-	1	3	1	-	-	-	-	-	5				
78	-	-	2	2	1	7	3	2	1	-	-	18				
81	-	-	-	-	-	-	2	-	-	-	-	2				
84	-	-	-	1	3	-	2	-	1	-	-	7				
87	-	-	-	2	-	2	3	1	-	-	-	8				
90	-	-	-	-	-	3	1	-	2	-	-	6				
93	-	-	-	-	-	2	-	-	-	-	-	2				
96	-	-	-	-	-	1	-	-	-	-	-	1				
99	-	-	-	-	-	-	-	-	-	1	-	1				
Total No. of Ages Read		10	9	8	13	15	24	12	4	4	1	100	X			
Serial Numbers		No. of Age Samples														
X		Number of fish measured each month											-	-	100	
		Mean length of fish (cm) each month											-	-	73.5	
		Mean weight of fish (kg) each month											-	-	-	
		Total weight caught or landed (tons) each month											-	-	-	
		Estimated number caught or landed (whole numbers) each month											-	-	-	
		Range of depths (m) each month											-	-	-	
Mesh size (mm)													not trawled			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 19
(continued)

AGE/LENGTH KEY - COD - 1B - 1969 (3rd QUARTER)

GEAR		Greenlanders (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES OR LANDINGS		NK														Months Within Quarter	Jul	Aug	Sep
COUNTRY		Denmark (Greenland)																	
TONNAGE		0-50																	
STRUCTURES USED IN AGE DETERMINATION		Otoliths																	
Length Group (3 cm)	Age	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total No. of Ages Read	MONTHS WITHIN QUARTER		
																		Jul	Aug
60		1	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
63		-	-	1	-	-	-	-	-	-	-	-	-	-	-	1			
66		-	-	4	-	-	-	-	-	-	-	-	-	-	-	4			
69		1	-	10	2	-	-	-	-	-	-	-	-	-	-	13			
72		-	3	16	7	1	-	-	-	-	-	-	-	-	-	27			
75		-	1	18	10	1	-	-	-	-	-	-	-	-	-	30			
78		2	6	23	24	1	-	1	-	-	-	-	-	-	-	57			
81		-	2	15	26	1	-	1	-	-	-	-	-	-	-	45			
84		-	2	6	20	2	-	7	-	-	-	-	-	-	-	37			
87		-	2	4	13	4	-	5	-	-	-	-	-	-	-	28			
90		-	-	3	7	1	-	5	1	-	-	1	-	-	-	18			
93		-	-	-	-	2	-	4	-	-	-	-	-	-	1	7			
96		-	-	-	1	-	-	4	-	-	-	-	-	-	-	5			
99		-	-	-	-	-	-	2	1	-	-	-	-	-	-	3			
102		-	-	-	-	-	-	1	-	-	-	1	-	-	-	2			
105		-	-	-	-	-	-	1	-	-	-	-	-	-	-	1			
Total No. of Ages Read		4	16	100	110	13	-	31	2	-	-	2	-	-	1	279	X		
Serial Numbers		No. of Age Samples																	
X		Number of fish measured each month													279				
		Mean length of fish (cm) each month													81.6				
		Mean weight of fish (kg) each month																	
		Total weight caught or landed (tons) each month																	
		Estimated number caught or landed (whole numbers) each month																	
		Range of depths (m) each month																	
Mesh size (mm)															not trawled				

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 19
(continued)

AGE/LENGTH KEY - COD - 1B - 1969 (4th QUARTER)

GEAR		Greenlanders (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES OR LANDINGS		NK														Months	Within	Quarter	
COUNTRY		Denmark (Greenland)																	
TONNAGE		0-50																	
STRUCTURES USED IN AGE DETERMINATION		Otoliths																	
Length Group (.3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Total No. of Ages Read	PER MILLE		
															Oct		Nov	Dec	
48		1	1	-	-	-	-	-	-	-	-	-	-	-	2				
51		-	2	-	-	-	-	-	-	-	-	-	-	-	2				
54		-	5	-	-	-	-	-	-	-	-	-	-	-	5				
57		-	4	-	-	-	-	-	-	-	-	-	-	-	4				
60		-	1	-	-	-	-	-	-	-	-	-	-	-	1				
63		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
66		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
69		-	-	-	1	-	2	-	-	-	-	-	-	-	3				
72		-	-	-	-	2	-	1	-	-	-	-	-	-	3				
75		-	-	-	1	3	7	3	-	-	-	-	-	-	14				
78		-	-	-	3	7	15	3	-	-	-	-	-	-	28				
81		-	-	-	1	4	10	5	-	-	-	-	-	-	20				
84		-	-	-	1	4	3	7	1	1	-	-	-	-	17				
87		-	-	-	1	-	2	7	1	1	-	1	-	-	13				
90		-	-	-	-	-	3	3	3	-	4	-	-	-	13				
93		-	-	-	-	-	1	5	-	-	-	-	-	1	7				
96		-	-	-	-	-	-	-	-	1	-	-	-	-	1				
99		-	-	-	-	-	1	-	-	1	-	-	-	-	2				
102		-	-	-	-	-	-	-	-	1	-	-	-	-	1				
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-				
108		-	-	-	-	-	-	-	-	-	-	1	-	-	1				
Total No. of Ages Read		1	13	-	8	20	44	34	5	2	7	1	1	-	1	137	X		
Serial Numbers		No. of Age Samples																	
X	Number of fish measured each month														137				
	Mean length of fish (cm) each month														80.8				
	Mean weight of fish (kg) each month																		
	Total weight caught or landed (tong) each month																		
	Estimated number caught or landed (whole numbers) each month																		
	Range of depths (m) each month																		
Mesh size (mm)																not trawled			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 20

AGE/LENGTH KEY - COD - 1C - 1969 (2nd QUARTER)

GEAR		Bottom Long Line (Research)																			
CATCHES OR LANDINGS		Catches																			
COUNTRY		Norway																			
TONNAGE		NK																			
STRUCTURES USED IN AGE DETERMINATION		Otoliths																			
Length Group (3cm)	Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		Months Within Quarter			Apr	May	Jun														
39		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
42		6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	7				
45		13	6	-	-	-	-	-	-	-	-	-	-	-	-	-	19				
48		30	21	-	-	-	-	-	-	-	-	-	-	-	-	-	51				
51		32	24	3	-	-	-	-	-	-	-	-	-	-	-	-	59				
54		17	25	8	2	-	-	-	-	-	-	-	-	-	-	-	52				
57		3	19	5	-	-	1	-	-	-	-	-	-	-	-	-	28				
60		1	4	12	3	-	-	-	-	-	-	-	-	-	-	-	20				
63		-	3	16	6	2	-	-	-	-	-	-	-	-	-	-	27				
66		-	1	12	14	15	1	-	-	-	-	-	-	-	-	-	43				
69		-	1	20	31	25	8	-	-	-	-	-	-	-	-	-	85				
72		-	-	11	25	48	10	-	-	-	-	-	-	-	-	-	94				
75		-	-	1	21	67	22	4	1	-	-	-	-	-	-	-	116				
78		-	-	-	3	71	31	2	1	1	-	-	-	-	-	-	109				
81		-	-	-	3	46	41	5	3	2	1	-	-	-	-	-	101				
84		-	-	-	3	16	38	8	1	1	-	-	-	-	-	-	67				
87		-	-	-	-	6	12	2	6	3	1	-	-	-	-	-	30				
90		-	-	-	-	2	12	6	1	2	1	-	-	-	-	-	24				
93		-	-	-	-	-	-	2	3	-	1	1	-	-	-	-	7				
96		-	-	-	-	-	1	5	1	4	-	1	-	1	-	-	13				
99		-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	3				
102		-	-	-	-	-	1	-	-	3	-	-	-	-	-	-	4				
105		-	-	-	-	-	-	-	1	-	2	-	-	1	-	-	4				
108		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
111		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1				
114		-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	2				
117		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
120		-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1				
123		-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2				
126		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1				
Total No. of Ages Read		103	105	88	111	298	178	35	18	18	8	6	-	2	-	-	1	971	X		
Serial Numbers																	No. of Age Samples 4				
X	Number of fish measured each month																-	971	-		
	Mean length of fish (cm) each month																-	72.25	-		
	Mean weight of fish (kg) each month																-	-	-		
	Total weight caught or landed (tons) each month																-	-	-		
	Estimated number caught or landed (whole numbers) each month																-	-	-		
	Range of depths (m) each month																-	-	-		
	Mesh size (mm)																-	2,4,6	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 20
(continued)

AGE/LENGTH KEY - COD - 1C - 1969 (3rd QUARTER)

GEAR		Greenlanders (Commercial)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings												Months Within Quarter		
COUNTRY		Denmark (Greenland)														
TONNAGE		< 50														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	Total No. of Ages Read	Jul	Aug	Sep	
	39	3	1	-	-	-	-	-	-	-	-		4			
42	7	-	-	-	-	-	-	-	-	-	7					
45	9	-	-	-	-	-	-	-	-	-	9					
48	37	2	-	-	-	-	-	-	-	-	39					
51	32	2	1	-	-	-	-	-	-	-	35					
54	15	4	-	1	-	1	-	-	-	-	21					
57	8	5	4	-	-	-	-	-	-	-	17					
60	4	9	7	2	-	-	-	-	-	-	22					
63	1	2	7	-	3	1	-	-	-	-	14					
66	-	2	7	1	-	-	-	-	-	-	10					
69	-	-	12	4	2	-	-	-	-	-	18					
72	-	-	8	3	3	-	-	-	-	-	14					
75	-	-	3	1	1	-	-	-	2	-	7					
78	-	-	2	2	2	-	1	-	-	-	7					
81	-	-	-	2	2	1	-	-	-	-	5					
84	-	-	-	-	3	-	-	-	-	-	3					
87	-	-	-	-	-	-	-	-	-	-	-					
90	-	-	-	-	-	-	-	-	-	1	-					
93	-	-	-	-	-	-	-	-	2	-	2					
96	-	-	-	-	1	-	-	-	1	1	3					
99	-	-	-	-	1	-	-	-	-	-	1					
Total No. of Ages Read		116	27	51	16	18	3	1	-	5	2	239	X			
Serial Numbers		No. of Age Samples														
X		Number of fish measured each month											-	239	-	
		Mean length of fish (cm) each month											-	60.1	-	
		Mean weight of fish (kg) each month											-	-	-	
		Total weight caught or landed (tons) each month											-	-	-	
		Estimated number caught or landed (whole numbers) each month											-	-	-	
		Range of depths (m) each month											-	-	-	
Mesh size (mm)											not trawled					

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 21

AGE/LENGTH KEY - COD - 1D - 1969 (2nd QUARTER)

GEAR		Bottom Long Line (Research)															Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches																Months Within Quarter	Apr	May
COUNTRY		Norway																		
TONNAGE		NK																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Length Group (3cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total No. of Ages Read	PER MILLE		
																		Apr	May	Jun
36	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
39	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
42	-	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	11			
45	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12			
48	-	15	7	-	-	-	-	-	-	-	-	-	-	-	-	-	22			
51	-	13	13	1	-	-	-	-	-	-	-	-	-	-	-	-	27			
54	-	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-	14			
57	-	1	1	5	1	-	-	-	-	-	-	-	-	-	-	-	8			
60	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	3			
63	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	4			
66	-	-	1	8	1	-	-	-	-	-	-	-	-	-	-	-	10			
69	-	-	1	5	4	-	2	-	-	-	-	-	-	-	-	-	12			
72	-	-	-	1	12	4	2	-	-	-	-	-	-	-	-	-	19			
75	-	-	-	-	8	10	3	1	-	-	-	-	-	-	-	-	22			
78	-	-	-	-	7	23	6	-	-	1	-	-	-	-	-	-	37			
81	-	-	-	-	3	14	8	1	1	-	-	-	-	-	-	-	27			
84	-	-	-	-	1	9	2	1	1	-	-	-	-	-	-	-	14			
87	-	-	-	-	-	4	2	4	1	1	1	-	1	-	-	-	14			
90	-	-	-	-	-	1	6	-	-	1	-	-	-	-	-	-	8			
93	-	-	-	-	-	1	-	1	1	2	-	-	-	-	-	-	5			
96	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	2			
99	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	2			
102	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1			
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
111	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1			
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
126	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1			
Total No. of Ages Read		2	57	34	23	39	66	31	9	6	5	3	-	2	-	1	278	X		
Serial Numbers		No. of Age Samples 3																		
X		Number of fish measured each month															200	78	-	
		Mean length of fish (cm) each month															73.7	58.7	-	
		Mean weight of fish (kg) each month															-	-	-	
		Total weight caught or landed (tons) each month															-	-	-	
		Estimated number caught or landed (whole numbers) each month															-	-	-	
		Range of depths (m) each month															-	-	-	
		Mesh size (mm)															2,4,6	2,4,6	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 21
(continued)

AGE/LENGTH KEY - COD - 1D - 1969 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILE		
CATCHES OR LANDINGS		Landings														Months Within Quarter		
COUNTRY		United Kingdom																
TONNAGE		NK																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	15	16	Total No. of Ages Read	Jul	Aug	Sep
	42	2	-	-	-	-	-	-	-	-	-	-	-	-		-	2	
45	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2			
48	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3			
51	1	-	2	-	-	-	-	-	-	-	-	-	-	-	3			
54	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1			
57	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2			
60	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2			
63	-	-	1	2	-	-	-	-	-	-	-	-	-	-	3			
66	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2			
69	-	-	-	2	1	-	-	-	-	-	-	-	-	-	3			
72	-	-	2	-	-	-	-	-	-	-	-	-	-	-	2			
75	-	-	-	-	2	1	-	-	-	-	-	-	-	-	3			
78	-	-	-	-	2	-	-	-	-	-	-	-	-	-	2			
81	-	-	-	1	1	-	-	-	-	-	-	-	-	-	2			
84	-	-	-	-	3	-	-	-	-	-	-	-	-	-	3			
87	-	-	-	-	1	-	1	-	-	-	-	-	-	-	2			
90	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2			
93	-	-	-	-	-	-	1	1	-	1	-	-	-	-	3			
96	-	-	-	-	-	-	-	-	1	-	1	-	1	-	3			
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
102	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1			
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
108	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1			
111	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1			
114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Total No. of Ages Read		8	4	8	5	10	3	2	1	4	1	1	-	1	48	X		
Serial Numbers	No. of Age Samples																	
X		Number of fish measured each month																
		Mean length of fish (cm) each month																
		Mean weight of fish (kg) each month																
		Total weight caught or landed (tons) each month																
		Estimated number caught or landed (whole numbers) each month																
		Range of depths (m) each month																
		Mesh size (mm)																

AGE COMPOSITIONS OF LANDINGS (PER MILE)

Month	Total

TABLE 22

AGE/LENGTH KEY - GOD - 1E - 1969 (2nd QUARTER)

GEAR		Greenlanders (Commercial)												
CATCHES OR LANDINGS		Landings												
COUNTRY		Denmark (Greenland)												
TONNAGE		< 50												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Length Group (3 cm)	Age							Total No. of Ages Read	LENGTH COMPOSITION PER MILE					
		4	5	6	7	8	9		Months Within Quarter					
								Apr			May	Jun		
42		1	-	-	-	-	-	1						
45		-	-	-	-	-	-	-						
48		1	-	1	-	-	-	2						
51		-	-	3	2	-	-	5						
54		-	-	15	1	-	-	16						
57		-	-	12	2	-	-	14						
60		-	-	9	3	1	-	13						
63		-	-	9	5	1	1	16						
66		-	-	6	9	-	-	15						
69		-	-	3	7	2	-	12						
72		-	-	1	3	2	-	6						
75		-	-	-	2	2	-	4						
78		-	-	-	-	2	-	2						
81		-	-	-	-	2	1	3						
84		-	-	-	-	2	-	2						
Total No. of Ages Read		2	-	59	34	14	2	111	X					
Serial Numbers		No. of Age Samples												
X		Number of fish measured each month										-	-	111
		Mean length of fish (cm) each month										-	-	63.1
		Mean weight of fish (kg) each month										-	-	-
		Total weight caught or landed (tons) each month										-	-	-
		Estimated number caught or landed (whole numbers) each month										-	-	-
		Range of depths (m) each month										-	-	-
Mesh size (mm)												not trawled		

AGE COMPOSITIONS OF LANDINGS (PER MILE)

Month	Total

TABLE 22
(continued)

AGE/LENGTH KEY - COD - IE - 1969 (3rd QUARTER)

GEAR		Long Line (Research)																		
CATCHES OR LANDINGS		Catches																		
COUNTRY		Denmark (Greenland)																		
TONNAGE		167																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Length Group (3 cm)	Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
																		Months	Within	Quarter
																	Jul	Aug	Sep	
51	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3			
54	-	6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	7			
57	1	11	4	-	-	-	-	-	-	-	-	-	-	-	-	-	16			
60	-	5	8	2	-	-	-	-	-	-	-	-	-	-	-	-	15			
63	-	4	10	4	1	-	-	-	-	-	-	-	-	-	-	-	19			
66	-	1	7	10	-	-	-	-	-	-	-	-	-	-	-	-	18			
69	-	3	10	19	4	-	-	3	-	-	-	-	-	-	-	-	39			
72	-	-	3	19	6	-	2	1	-	-	-	-	-	-	-	-	31			
75	-	-	4	25	5	3	-	8	-	-	-	-	-	-	-	-	45			
78	-	-	4	17	6	1	-	13	4	1	1	-	-	-	-	-	47			
81	-	-	2	8	6	1	1	12	1	-	1	-	-	-	-	-	32			
84	-	-	1	8	1	2	3	10	-	-	-	-	-	-	-	1	26			
87	-	-	-	4	6	-	-	7	-	-	-	1	-	-	-	-	18			
90	-	-	-	1	5	-	-	4	1	1	-	-	-	-	-	1	13			
93	-	-	-	1	4	-	1	1	-	-	-	-	-	-	-	-	7			
96	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-	-	3			
99	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1			
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
105	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1			
Total No. of Ages Read		1	33	54	118	45	7	8	60	8	2	2	1	-	-	2	341	X		
Serial Numbers		No. of Age Samples																		
X	Number of fish measured each month																-	-	341	
	Mean length of fish (cm) each month																-	-	75.3	
	Mean weight of fish (kg) each month																-	-	-	
	Total weight caught or landed (tons) each month																-	-	-	
	Estimated number caught or landed (whole numbers) each month																-	-	-	
	Range of depths (m) each month																-	-	60-110	
Mesh size (mm)																-	-	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 22
(continued)

AGE/LENGTH KEY - COD - 1E - 1969 (3rd QUARTER)

GEAR		Greenlanders (Commercial)										
CATCHES OR LANDINGS		Landings										
COUNTRY		Denmark (Greenland)										
TONNAGE		< 50										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age	4	5	6	7	8	9	10	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
										Months Within Quarter		
										Jul	Aug	Sep
48		1	-	-	-	-	-	-	1			
51		-	-	3	1	-	-	-	4			
54		-	-	10	3	-	-	-	13			
57		-	1	11	3	1	-	-	16			
60		-	-	10	8	3	-	-	21			
63		-	-	5	7	3	-	-	15			
66		-	-	1	5	4	-	-	10			
69		-	-	-	5	6	-	1	12			
72		-	-	-	1	-	-	-	1			
75		-	-	-	-	7	-	-	7			
Total No. of Ages Read		1	1	40	33	24	-	1	100	X		
Serial Numbers		No. of Age Samples										
X		Number of fish measured each month								100	-	-
		Mean length of fish (cm) each month								62.6	-	-
		Mean weight of fish (kg) each month								-	-	-
		Total weight caught or landed (tons) each month								-	-	-
		Estimated number caught or landed (whole numbers) each month								-	-	-
		Range of depths (m) each month								-	-	-
Mesh size (mm)								not trawled				

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		NK														
COUNTRY		Portugal														
TONNAGE		2056														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
														Months Within Quarter		
											Jan	Feb	Mar			
27		1	-	-	-	-	-	-	-	-	-	1				
30		2	2	-	-	-	-	-	-	-	-	4				
33		2	4	-	-	-	-	-	-	-	-	6				
36		2	2	-	-	-	-	-	-	-	-	4				
39		1	4	7	-	-	-	-	-	-	-	12				
42		-	5	16	1	-	-	-	-	-	-	22				
45		-	3	15	3	-	-	-	-	-	-	21				
48		-	3	26	9	-	-	-	-	-	-	38				
51		-	-	14	15	3	-	-	-	-	-	32				
54		-	-	14	13	1	-	-	-	-	-	28				
57		-	-	6	13	6	-	-	-	-	-	25				
60		-	-	2	7	5	1	1	-	-	-	16				
63		-	-	1	4	6	2	-	-	-	-	13				
66		-	-	-	4	2	1	1	1	-	-	9				
69		-	-	-	1	2	-	2	2	-	1	8				
72		-	-	-	-	-	1	1	-	-	-	2				
75		-	-	-	-	-	-	1	1	-	-	2				
78		-	-	-	-	-	-	-	1	-	-	1				
81		-	-	-	-	-	-	-	-	-	-	-				
84		-	-	-	-	-	-	1	-	-	-	1				
87		-	-	-	-	-	-	-	-	-	-	-				
90		-	-	-	-	-	-	-	-	-	-	-				
93		-	-	-	-	-	-	-	-	-	-	-				
96		-	-	-	-	-	-	-	-	-	-	-				
99		-	-	-	-	-	-	-	-	-	1	1				
Total No. of Ages Read		8	23	101	70	25	5	7	5	-	1	1	246	X		
Serial Numbers		i-2 with lengths										No. of Age Samples				
X		Number of fish measured each month											-	-	246	
		Mean length of fish (cm) each month											-	-	52.6	
		Mean weight of fish (kg) each month											-	-	-	
		Total weight caught or landed (tons) each month											-	-	10544	
		Estimated number caught or landed (whole numbers) each month											-	-	-	
		Range of depths (m) each month											-	-	360-430	
		Mesh size (mm)											-	-	114	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 23
(continued)

AGE/LENGTH KEY - COD - 2J - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)											
CATCHES OR LANDINGS		Landings											
COUNTRY		United Kingdom											
TONNAGE		901-1800											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Length Group (3 cm)	Age									Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		5	6	7	8	9	10	11	12		Months Within Quarter	Apr	May
42		1	2	-	-	-	-	-	-	3			
45		-	2	-	-	-	-	-	-	2			
48		1	2	-	-	-	-	-	-	3			
51		1	-	1	-	-	-	-	-	2			
54		-	1	1	-	-	-	-	-	2			
57		-	3	-	-	-	-	-	-	3			
60		-	1	1	-	-	-	-	-	2			
63		-	-	3	-	-	-	-	-	3			
66		-	-	1	1	-	-	-	-	2			
69		-	-	1	1	-	1	-	-	3			
72		-	-	1	1	-	-	-	-	2			
75		-	-	1	-	1	-	-	-	2			
78		-	-	3	1	-	-	-	-	4			
81		-	-	1	1	-	-	1	-	3			
84		-	-	1	-	-	-	1	-	2			
87		-	-	1	-	-	-	2	-	3			
90		-	-	-	-	-	1	2	-	3			
93		-	-	-	-	-	1	-	-	1			
96		-	-	-	-	-	-	-	1	1			
99		-	-	-	-	-	-	2	-	2			
102		-	-	-	-	-	-	-	-	-			
105		-	-	-	-	-	-	-	-	-			
108		-	-	-	-	-	-	-	1	1			
111		-	-	-	-	-	-	1	-	1			
Total No. of Ages Read		3	11	16	5	1	5	7	2	50	X		
Serial Numbers		No. of Age Samples											
X		Number of fish measured each month											
		Mean length of fish (cm) each month											
		Mean weight of fish (kg) each month											
		Total weight caught or landed (tons) each month											
		Estimated number caught or landed (whole numbers) each month											
		Range of depths (m) each month											
		Mesh size (mm)											

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

GEAR		Otter Trawl (Commercial)													
CATCHES OR LANDINGS		Landings													
COUNTRY		United Kingdom													
TONNAGE		901-1800													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
													Months Within Quarter	Apr	May
42		-	1	1	-	-	-	-	-	-	-	2			
45		-	2	1	-	-	-	-	-	-	-	3			
48		1	1	-	-	-	-	-	-	-	-	2			
51		-	1	-	1	-	-	-	-	-	-	2			
54		-	1	-	-	-	-	-	-	-	-	1			
57		-	-	2	-	-	-	-	-	-	-	2			
60		-	-	1	1	-	-	-	-	-	-	2			
63		-	-	-	-	1	-	-	-	-	-	1			
66		-	-	-	-	1	-	-	-	-	1	2			
69		-	-	-	-	2	-	-	1	-	-	3			
72		-	-	-	-	-	-	-	-	-	1	1			
75		-	-	-	2	-	-	-	-	-	-	2			
78		-	-	-	-	-	-	-	1	1	-	2			
81		-	-	-	-	-	-	-	-	1	1	2			
84		-	-	-	-	-	2	-	-	-	-	2			
Total No. of Ages Read		1	6	5	4	4	2	-	2	2	3	29	X		
Serial Numbers		No. of Age Samples													
X		Number of fish measured each month													
		Mean length of fish (cm) each month													
		Mean weight of fish (kg) each month													
		Total weight caught or landed (tons) each month													
		Estimated number caught or landed (whole numbers) each month													
		Range of depths (m) each month													
		Mesh size (mm)													

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	Total

TABLE 26

AGE/LENGTH TABLE - COD - 1C - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)												
CATCHES OR LANDINGS		Catches												
COUNTRY		Germany, Federal Republic												
TONNAGE		2000												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Length Group (3 cm)	Age										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	9	10	11		Jan	Feb	Mar
33		2	-	-	-	-	-	-	-	-	2	-	-	4
36		2	2	-	-	-	-	-	-	-	4	-	-	10
39		-	-	-	-	-	-	-	-	-	-	-	-	26
42		-	13	-	-	-	-	-	-	-	13	-	-	115
45		-	25	-	-	1	-	-	-	-	26	-	-	202
48		-	27	6	2	-	-	-	-	-	35	-	-	227
51		-	15	6	1	-	-	-	-	-	22	-	-	168
54		-	1	6	3	1	-	-	-	-	11	-	-	77
57		-	-	4	1	-	-	-	-	-	5	-	-	37
60		-	-	-	2	-	1	-	-	-	3	-	-	26
63		-	-	1	1	-	-	-	-	1	3	-	-	16
66		-	-	-	4	-	-	-	-	-	4	-	-	8
69		-	-	-	2	1	-	-	-	-	3	-	-	16
72		-	-	-	5	-	-	-	-	-	5	-	-	30
75		-	-	-	2	1	-	-	-	-	3	-	-	24
78		-	-	-	1	1	1	-	-	-	3	-	-	10
81		-	-	-	-	-	1	-	-	-	1	-	-	4
Total No. of Ages Read		4	83	24	23	5	3	-	-	1	143	1000		
Serial Numbers		St. 36									No. of Age Samples			1
X		Number of fish measured each month										-	-	506
		Mean length of fish (cm) each month										-	-	52.0
		Mean weight of fish (kg) each month										-	-	-
		Total weight caught or landed (tons) each month										-	-	0.5
		Estimated number caught or landed (whole numbers) each month										-	-	750
		Range of depths (m) each month										-	-	245
		Mesh size (mm)										-	-	130
AGE COMPOSITIONS OF LANDINGS (PER MILLE)														
Month	3	4	5	6	7	8	9	10	11	Total				
Jan	-	-	-	-	-	-	-	-	-	-				
Feb	-	-	-	-	-	-	-	-	-	-				
Mar	9	637	162	140	31	16	-	-	5	1000				

TABLE 26
(continued)

AGE/LENGTH TABLE - COD - 1C - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)													
CATCHES OR LANDINGS		NK													
COUNTRY		Portugal													
TONNAGE		2056													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Length Group (3 cm)	Age											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	9	10	11	12		Months Within Quarter		
													Apr	May	Jun
33	2	4	-	-	-	-	-	-	-	-	-	6	-	33	-
36	1	3	-	-	-	-	-	-	-	-	-	4	-	22	-
39	1	6	-	-	-	-	-	-	-	-	-	7	-	38	-
42	-	6	2	-	-	-	-	-	-	-	-	8	-	44	-
45	-	12	2	-	-	-	-	-	-	-	-	14	-	77	-
48	-	19	6	-	-	-	-	-	-	-	-	25	-	115	32
51	-	2	4	-	-	-	-	-	-	-	-	6	-	38	-
54	-	3	6	-	-	-	-	-	-	-	-	9	-	38	24
57	-	-	1	4	-	-	-	-	-	-	-	5	-	28	8
60	-	-	2	4	1	-	-	-	-	-	-	7	-	17	40
63	-	-	-	2	3	-	-	1	-	-	-	6	-	33	40
66	-	-	1	5	5	1	1	-	-	-	-	13	-	38	80
69	-	-	-	4	3	7	3	-	-	-	-	17	-	99	104
72	-	-	-	4	8	16	4	-	-	-	-	32	-	126	192
75	-	-	-	1	4	8	5	2	-	-	-	20	-	121	136
78	-	-	-	-	1	8	5	1	-	-	-	15	-	82	96
81	-	-	-	-	3	2	6	-	-	-	-	11	-	33	88
84	-	-	-	-	-	5	2	2	-	2	-	11	-	17	88
87	-	-	-	-	-	1	4	-	-	-	-	5	-	-	40
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	-	-	-	-	-	-	2	-	-	-	-	2	-	-	16
96	-	-	-	-	-	-	-	1	-	-	1	2	-	-	16
													-	999	1000
Total No. of Ages Read		4	55	24	24	28	48	34	5	-	3	225			
Serial Numbers		18-25-27 with lengths					No. of Age Samples					13 lengths only			
		Number of fish measured each month											-	182	125
		Mean length of fish (cm) each month											-	52.0	74.2
		Mean weight of fish (kg) each month											-	-	-
		Total weight caught or landed (tons) each month											-	1394	579
		Estimated number caught or landed (whole numbers) each month											-	-	-
		Range of depths (m) each month											-	170-450	350-450
Mesh size (mm)													-	114	114
AGE COMPOSITIONS OF LANDINGS (PER MILLE)															
Month	3	4	5	6	7	8	9	10	11	12	Total				
Apr	-	-	-	-	-	-	-	-	-	-	-				
May	22	283	114	103	121	218	115	21	-	3	1000				
Jun	-	32	43	129	180	315	241	36	-	24	1000				

TABLE 28

AGE/LENGTH TABLE - COD - 1D¹ - 1969 (1st QUARTER)

GEAR		Long Line (Research)																									
CATCHES OR LANDINGS		Catches																									
COUNTRY		Denmark (Greenland)																									
TONNAGE		167																									
STRUCTURES USED IN AGE DETERMINATION		Otoliths																									
Length Group (3 cm)	Age																					Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
		3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		Months Within Quarter				
																									Jan	Feb	Mar
30	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	5		
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
39	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
42	-	7	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	42		
45	-	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	56		
48	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	65		
51	-	11	3	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	-	-	75		
54	-	-	3	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	28		
57	-	-	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	23		
60	-	-	-	2	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	28		
63	-	-	-	2	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	42		
66	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	14		
69	-	-	-	1	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	23		
72	-	-	-	-	2	5	5	1	1	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	75		
75	-	-	-	-	-	8	5	-	-	-	-	-	-	1	-	-	-	-	-	-	-	14	-	-	70		
78	-	-	-	-	1	3	5	-	-	2	1	2	-	-	-	-	-	-	-	-	-	14	-	-	70		
81	-	-	-	-	1	5	4	1	2	1	-	1	-	-	-	-	-	-	-	-	-	15	-	-	70		
84	-	-	-	-	-	2	1	-	1	2	-	2	1	2	-	-	-	-	-	-	-	11	-	-	65		
87	-	-	-	-	-	-	1	-	-	3	-	-	1	1	-	-	-	-	-	1	-	7	-	-	61		
90	-	-	-	-	-	-	-	-	-	2	1	-	2	2	-	-	-	-	-	-	-	7	-	-	33		
93	-	-	-	-	-	-	2	-	2	1	-	1	-	2	-	-	2	-	-	-	1	11	-	-	51		
96	-	-	-	-	-	1	-	-	-	1	1	-	1	-	1	-	-	-	-	-	1	5	-	-	23		
99	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	5	-	-	23		
102	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	3	-	-	14		
105	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	3	-	-	14		
108	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	3	-	-	14		
111	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	5		
114	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	5		
117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
126	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
129	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	5	-		
Total No. of Ages Read		1	44	10	9	12	34	27	2	6	14	6	8	7	15	-	-	3	1	-	2	201	999				
Serial Numbers		No. of Age Samples																									
X		Number of fish measured each month																				-			214		
		Mean length of fish (cm) each month																				-			73.0		
		Mean weight of fish (kg) each month																				-			-		
		Total weight caught or landed (tons) each month																				-			-		
		Estimated number caught or landed (whole numbers) each month																				-			-		
		Range of depths (m) each month																				-			60-250		
Mesh size (mm)																				-			-				

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	Total	
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	5	205	47	43	58	169	138	10	30	81	29	40	39	76	-	-	18	5	-	9	1002	

1 Godthåb Fjord

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		NK												Months Within Quarter		
COUNTRY		Denmark (Greenland)														
TONNAGE		167														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	Jan	Feb	Mar		
		21	1	-	-	-	-	-	-	-	-				-	1
24	17	-	-	-	-	-	-	-	-	-	17	10	3	5		
27	50	-	-	-	-	-	-	-	-	-	50	28	28	27		
30	58	1	-	-	-	-	-	-	-	-	59	44	86	70		
33	48	12	-	-	-	-	-	-	-	-	60	89	104	64		
36	13	46	1	-	-	-	-	-	-	-	60	103	119	50		
39	2	57	1	-	-	-	-	-	-	-	60	168	137	111		
42	-	58	4	-	-	-	-	-	-	-	62	155	134	91		
45	-	44	15	-	-	-	-	-	-	-	59	126	81	117		
48	-	23	35	2	-	-	-	-	-	-	60	85	76	93		
51	-	9	46	5	-	-	-	-	-	-	60	47	73	90		
54	-	-	40	13	-	-	-	-	-	-	53	27	43	54		
57	-	-	29	26	1	-	-	-	-	-	56	24	46	68		
60	-	-	10	32	2	-	-	-	-	-	44	19	15	44		
63	-	-	3	29	6	1	-	-	-	-	39	13	20	40		
66	-	-	-	25	2	3	1	-	-	-	31	12	8	28		
69	-	-	-	14	11	1	-	-	-	-	26	11	5	15		
72	-	-	-	7	10	4	-	-	-	-	21	8	10	11		
75	-	-	-	2	7	3	3	-	-	-	15	7	5	7		
78	-	-	-	2	3	4	5	-	-	1	15	4	8	9		
81	-	-	-	2	1	2	1	1	-	-	7	5	-	1		
84	-	-	-	-	-	3	3	-	1	-	7	6	-	-		
87	-	-	-	-	-	3	2	-	-	-	5	3	-	1		
90	-	-	-	-	-	3	2	-	-	-	5	3	-	3		
93	-	-	-	-	-	-	1	-	-	-	1	1	-	-		
96	-	-	-	-	-	-	2	-	-	-	2	2	-	-		
99	-	-	-	-	-	-	1	-	-	-	1	1	-	-		
Total No. of Ages Read		189	250	184	159	43	27	21	1	1	1	876				
Serial Numbers		No. of Age Samples														
X		Number of fish measured each month											1199	395	745	
		Mean length of fish (cm) each month											44.6	43.8	47.7	
		Mean weight of fish (kg) each month											-	-	-	
		Total weight caught or landed (tons) each month											-	-	-	
		Estimated number caught or landed (whole numbers) each month											-	-	-	
		Range of depths (m) each month											300	290-300	290-300	
Mesh size (mm)													18	18	18	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	Total
Jan	181	536	170	69	17	14	13	1	1	-	1002
Feb	229	470	195	81	16	7	4	-	-	1	1003
Mar	167	379	251	154	28	13	7	-	-	1	1000

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)												
CATCHES OR LANDINGS		Catches												
COUNTRY		Germany, Federal Republic												
TONNAGE		2000												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
												Months Within Quarter		
												Jan	Feb	Mar
36	-	1	-	-	-	-	-	-	-	-	1	-	-	11
39	1	-	-	-	-	-	-	-	-	-	1	-	-	13
42	3	-	-	-	-	-	-	-	-	-	3	-	-	30
45	13	2	-	-	-	-	-	-	-	-	15	-	-	127
48	10	2	-	-	-	-	-	-	-	-	12	-	-	209
51	9	5	-	-	-	-	-	-	-	-	14	-	-	130
54	3	8	3	-	-	-	-	-	-	-	14	-	-	127
57	2	6	3	-	-	-	-	-	-	-	11	-	-	98
60	-	2	2	-	-	-	-	-	-	-	4	-	-	60
63	-	-	4	2	-	-	-	-	-	-	6	-	-	49
66	-	-	2	-	-	-	-	-	-	-	2	-	-	35
69	-	-	5	-	-	-	-	-	-	-	5	-	-	27
72	-	-	3	2	1	-	-	-	-	-	6	-	-	27
75	-	-	-	2	-	-	-	-	-	-	2	-	-	27
78	-	-	-	2	1	-	-	-	-	-	3	-	-	11
81	-	-	-	-	-	-	-	-	-	1	-	-	-	13
84	-	-	-	-	-	-	-	-	-	-	-	-	-	3
87	-	-	-	-	1	-	-	-	-	-	1	-	-	3
												1000		
Total No. of Ages Read											101	X		
Serial Numbers	St. 52, 53, 54										No. of Age Samples 3			
X	Number of fish measured each month											-	-	369
	Mean length of fish (cm) each month											-	-	55.7
	Mean weight of fish (kg) each month											-	-	-
	Total weight caught or landed (tons) each month											-	-	0.5
	Estimated number caught or landed (whole numbers) each month											-	-	369
	Range of depths (m) each month											-	-	230-250
Mesh size (mm)											-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	Total
Jan	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-
Mar	459	262	192	60	14	-	-	-	13	1000

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (2nd QUARTER)

GEAR		Pound Net (Commercial)												
CATCHES OR LANDINGS		Landings												
COUNTRY		Denmark (Greenland)												
TONNAGE		16.19. 25.17. 19.95												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Length Group (3 cm)	Age	3	4	5	6	7	8	9	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
										Months Within Quarter				
										Apr	May	Jun		
39	10	10	-	-	-	-	-	-	20	-	96	12		
42	1	29	-	-	-	-	-	-	30	-	288	94		
45	-	39	2	-	-	-	-	-	41	-	295	208		
48	-	42	11	-	-	-	-	-	53	-	115	242		
51	-	56	16	-	1	-	-	-	73	-	96	230		
54	-	28	36	3	-	-	-	-	67	-	45	134		
57	-	4	49	5	-	-	-	-	58	-	26	52		
60	-	-	14	9	-	1	-	-	24	-	19	12		
63	-	-	3	11	1	-	-	-	15	-	6	8		
66	-	-	-	4	3	-	-	-	7	-	-	4		
69	-	-	-	3	-	1	-	-	4	-	6	2		
72	-	-	-	2	-	-	-	-	2	-	-	1		
75	-	-	-	-	2	-	-	-	2	-	-	1		
78	-	-	-	-	-	-	-	1	1	-	6	-		
										-	998	1000		
Total No. of Ages Read	11	208	131	37	7	2	1		397	X				
Serial Numbers	No. of Age Samples											X		
X										Number of fish measured each month	-	156	1685	
										Mean length of fish (cm) each month	-	47.1	50.1	
										Mean weight of fish (kg) each month	-	-	-	
										Total weight sampled (tons)	-	-	30.5	
										Estimated number caught or landed (whole numbers) each month	-	-	-	
										Range of depths (m) each month	-	-	-	
										Mesh size (mm)	-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	Total
Apr	-	-	-	-	-	-	-	-
May	58	792	118	21	2	2	6	999
Jun	9	723	235	26	6	1	-	1000

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		NK														
COUNTRY		Portugal														
TONNAGE		2056														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
													Months Within Quarter			
													Apr	May	Jun	
27	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	
30	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	
33	-	2	-	-	-	-	-	-	-	-	-	2	-	4	7	
36	1	-	-	-	-	-	-	-	-	-	-	1	-	-	20	
39	1	-	-	-	-	-	-	-	-	-	-	1	4	1	-	
42	-	17	1	-	-	-	-	-	-	-	-	18	54	12	20	
45	-	19	9	-	-	-	-	-	-	-	-	28	50	28	13	
48	-	44	24	1	-	-	-	-	-	-	-	69	124	57	72	
51	-	21	26	7	1	-	-	-	-	-	-	55	124	46	26	
54	-	6	23	14	2	-	-	-	-	-	-	45	91	41	33	
57	-	1	19	38	6	-	-	-	-	-	-	64	132	52	20	
60	-	-	7	31	7	2	-	-	-	-	-	47	83	40	46	
63	-	-	3	26	15	3	-	-	-	-	-	47	87	62	52	
66	-	-	-	19	21	7	1	-	-	-	-	48	70	86	65	
69	-	-	-	16	7	10	3	1	-	-	-	37	54	90	137	
72	-	-	-	9	23	11	4	-	-	-	-	47	62	130	85	
75	-	-	-	7	18	11	10	1	-	-	1	48	45	117	131	
78	-	-	-	-	9	5	6	1	-	-	-	21	21	88	46	
81	-	-	-	-	-	9	8	1	-	-	-	18	-	55	85	
84	-	-	-	-	2	1	4	-	1	-	-	8	-	36	46	
87	-	-	-	-	2	2	3	-	-	-	-	7	-	25	13	
90	-	-	-	-	-	2	-	-	-	-	-	2	-	13	13	
93	-	-	-	-	-	-	-	-	1	1	-	2	-	7	26	
96	-	-	-	-	-	-	-	-	-	-	-	-	-	4	13	
99	-	-	-	-	-	-	-	-	-	-	-	-	-	2	7	
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
Total No. of Ages Read													615			
Serial Numbers 4-10-12-22-23-24 with lengths													No. of Age Samples 19-20-21-26 ¹			
Number of fish measured each month													242	920	153	
Mean length of fish (cm) each month													58.7	68.6	69.5	
Mean weight of fish (kg) each month													-	-	-	
Total weight caught or landed (tons) each month													1974	2470	1641	
Estimated number caught or landed (whole numbers) each month													-	-	-	
Range of depths (m) each month													280-300	270-400	285-450	
Mesh size (mm)													114	114	114	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	Total
Apr	4	225	224	297	156	64	26	3	-	1	1000
May	1	95	98	226	249	173	123	12	8	6	991
Jun	21	99	80	215	217	186	133	14	20	17	1002

¹ lengths only

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (3rd QUARTER)

GEAR		Beach Seine (Research)										
CATCHES OR LANDINGS		Catches										
COUNTRY		Denmark (Greenland)										
TONNAGE		< 50										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
		2	3	4	5	6		Months Within Quarter				
										Jul	Aug	Sep
15		3	-	-	-	-	3	2	-	-	-	-
18		13	-	-	-	-	13	26	-	-	-	-
21		13	2	-	-	-	15	55	-	-	-	-
24		1	14	-	-	-	15	156	-	-	-	-
27		-	15	-	-	-	15	321	-	-	-	-
30		-	15	-	-	-	15	293	-	-	-	-
33		-	13	2	-	-	15	112	-	-	-	-
36		-	8	7	-	-	15	24	-	-	-	-
39		-	-	7	-	-	7	6	-	-	-	-
42		-	-	4	-	-	4	3	-	-	-	-
45		-	-	-	-	-	-	-	-	-	-	-
48		-	-	-	1	1	2	2	-	-	-	-
Total No. of Ages Read		30	67	20	1	1	119	1000			-	-
Serial Numbers		No. of Age Samples										
X		Number of fish measured each month					1147			-	-	-
		Mean length of fish (cm) each month					28.8			-	-	-
		Mean weight of fish (kg) each month					-			-	-	-
		Total weight caught or landed (tons) each month					-			-	-	-
		Estimated number caught or landed (whole numbers) each month					-			-	-	-
		Range of depths (m) each month					-			-	-	-
Mesh size (mm)					-			-	-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	2	3	4	5	6	Total
Jul	86	877	35	1	1	1000
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-

TABLE 28
(continued)

AGE/LENGTH TABLE - COD - 1D - 1969 (3rd QUARTER)

GEAR		Pound Net (Commercial)											
CATCHES OR LANDINGS		Landings											
COUNTRY		Denmark (Greenland)											
TONNAGE		8.20											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Length Group (3 cm)	Age	4	5	6	7	8	9	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
									Months Within Quarter				
								Jul	Aug	Sep			
42		2	-	-	-	-	-	2	4	-	-		
45		11	-	-	-	-	-	11	29	-	-		
48		18	1	1	-	-	-	20	48	-	-		
51		24	5	-	-	-	-	29	72	-	-		
54		19	8	-	1	-	-	28	74	-	-		
57		8	12	8	2	-	-	30	88	-	-		
60		1	9	19	-	1	-	30	114	-	-		
63		-	2	21	5	1	1	30	141	-	-		
66		-	1	24	3	1	-	29	150	-	-		
69		-	-	16	9	5	-	30	124	-	-		
72		-	-	15	10	5	-	30	76	-	-		
75		-	-	8	4	8	1	21	40	-	-		
78		-	-	4	3	8	-	15	29	-	-		
81		-	-	-	1	3	1	5	10	-	-		
84		-	-	-	-	1	-	1	2	-	-		
									1001	-	-		
Total No. of Ages Read		83	38	116	38	33	3	311					
Serial Numbers		No. of Age Samples											
X		Number of fish measured each month							525	-	-		
		Mean length of fish (cm) each month							63.2	-	-		
		Mean weight of fish (kg) each month							-	-	-		
		Total weight caught or landed (tons) each month							-	-	-		
		Estimated number caught or landed (whole numbers) each month							-	-	-		
		Range of depths (m) each month							-	-	-		
		Mesh size (mm)							-	-	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	Total
Jul	213	120	448	125	87	9	1002
Aug	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-

TABLE 29

AGE/LENGTH TABLE - COD - 1E - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Research)													
CATCHES OR LANDINGS		Catches													
COUNTRY		Germany, Federal Republic													
TONNAGE		1564													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Length Group (cm)	Age									Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
		5	6	7	8	9	10	11	12		Months Within Quarter				
											Apr	May	Jun		
36		5	-	1	-	-	-	-	-	6	-	-	2		
39		6	-	-	-	-	-	-	-	6	-	-	9		
42		15	3	-	-	-	-	-	-	18	-	-	26		
45		7	5	1	-	-	-	-	-	13	-	-	66		
48		6	13	2	-	-	-	-	-	21	-	-	104		
51		4	20	1	-	-	-	-	-	25	-	-	151		
54		2	20	9	-	-	-	-	-	31	-	-	130		
57		3	23	6	2	-	-	-	-	34	-	-	108		
60		-	11	13	-	-	-	-	-	24	-	-	88		
63		-	6	7	4	-	-	-	-	17	-	-	60		
66		-	3	13	2	1	-	-	-	19	-	-	53		
69		-	6	4	6	-	-	-	-	16	-	-	44		
72		-	2	4	3	-	-	-	-	9	-	-	37		
75		-	-	5	6	-	-	-	-	11	-	-	24		
78		-	-	1	5	-	-	-	-	6	-	-	27		
81		-	-	1	7	-	-	-	-	8	-	-	24		
84		-	-	-	5	-	-	-	-	5	-	-	18		
87		-	1	1	2	-	-	-	1	5	-	-	14		
90		-	-	-	-	-	-	-	1	1	-	-	5		
93		-	-	-	-	-	-	-	1	1	-	-	5		
96		-	-	-	-	-	-	1	-	1	-	-	3		
99		-	-	-	-	-	-	-	-	-	-	-	1		
102		-	-	-	-	-	-	-	-	-	-	-	-		
105		-	-	-	-	-	-	-	-	-	-	-	-		
108		-	-	-	-	-	-	-	-	-	-	-	1		
111		-	-	-	-	-	-	-	-	-	-	-	0		
													1000		
Total No. of Ages Read		48	113	69	42	1	-	1	3	277					
Serial Numbers		Pr. 8, 9, 11, 12, 15								No. of Age Samples				5	
	Number of fish measured each month												-	-	3160
	Mean length of fish (cm) each month												-	-	60.1
	Mean weight of fish (kg) each month												-	-	-
	Total weight caught or landed (tons) each month												-	-	20
	Estimated number caught or landed (whole numbers) each month												-	-	-
	Range of depths (m) each month												-	-	120-300
	Mesh size (mm)												-	-	130

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	8	9	10	11	12	Total
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	135	475	235	135	3	-	3	14	1000

TABLE 29
(continued)

AGE/LENGTH TABLE - GOD - 1F - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)											
CATCHES OR LANDINGS		Catches											
COUNTRY		Germany, Federal Republic											
TONNAGE		2600											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Length Group (3 cm)	Age									Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	5	6	7	8	Months Within Quarter			Apr	May		Jun		
42	1	-	-	-	-				1	5	-	-	
45	1	-	-	-	-				1	5	-	-	
48	6	2	-	-	-				8	40	-	-	
51	8	11	1	-	-				20	101	-	-	
54	3	24	2	-	-				29	146	-	-	
57	5	33	12	-	-				50	251	-	-	
60	3	35	8	1	-				47	241	-	-	
63	-	17	7	1	-				25	131	-	-	
66	-	4	3	2	-				9	50	-	-	
69	-	1	-	2	-				3	15	-	-	
72	-	-	1	2	-				3	15	-	-	
										1000	-	-	
Total No. of Ages Read	27	127	34	8						196			
Serial Numbers		No. of Age Samples											
X		Number of fish measured each month								199	-	-	
		Mean length of fish (cm) each month								59.3	-	-	
		Mean weight of fish (kg) each month								-	-	-	
		Total weight caught or landed (tons) each month								-	-	-	
		Estimated number caught or landed (whole numbers) each month								-	-	-	
		Range of depths (m) each month								-	-	-	
		Mesh size (mm)								130	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	8	Total
Apr	136	648	175	41	1000
May	-	-	-	-	-
Jun	-	-	-	-	-

TABLE 29
(continued)

AGE/LENGTH TABLE - COD - 1E - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		NK														
COUNTRY		Portugal														
TONNAGE		2056														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		4	5	6	7	8	9	10	11	12	Months Within Quarter		Apr	May	Jun	
36		-	2	-	-	-	-	-	-	-	-	2	1	3	-	
39		1	-	-	-	-	-	-	-	-	-	1	13	3	-	
42		-	3	-	-	-	-	-	-	-	-	3	28	5	-	
45		1	11	6	1	-	-	-	-	-	-	19	55	22	-	
48		-	8	15	1	-	-	-	-	-	-	24	90	57	-	
51		2	11	30	1	-	-	-	-	-	-	44	121	79	-	
54		-	7	54	6	-	-	-	-	-	-	67	134	114	-	
57		-	4	66	19	1	-	-	-	-	-	90	130	146	-	
60		-	1	45	23	2	-	-	-	-	-	71	129	130	-	
63		-	2	44	32	1	-	-	-	-	-	79	105	100	-	
66		-	-	20	17	9	-	-	-	-	-	46	59	81	-	
69		-	-	7	25	13	-	-	-	-	-	45	58	68	-	
72		-	-	5	14	14	3	-	-	-	-	36	27	68	-	
75		-	-	5	9	8	5	-	-	-	1	28	32	54	-	
78		-	-	-	2	5	2	-	-	-	-	9	19	38	-	
81		-	-	-	1	3	1	-	-	-	-	5	5	19	-	
84		-	-	-	-	-	-	-	-	-	-	-	1	-	-	
87		-	-	-	-	-	-	-	-	-	-	-	-	3	-	
90		-	-	-	-	-	-	-	-	-	-	-	1	5	-	
93		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96		-	-	-	-	-	-	-	-	-	-	-	-	3	-	
99		-	-	-	-	-	-	-	-	-	-	-	-	3	-	
Total No. of Ages Read		4	49	297	151	56	11	-	-	1		569				
Serial Numbers	2-5-7-11-17 with lengths											No. of Age Samples	1-3-6-8-9-14-15 ¹			
X	Number of fish measured each month											1250	369	-		
	Mean length of fish (cm) each month											58.4	62.5	-		
	Mean weight of fish (kg) each month											-	-	-		
	Total weight caught or landed (tons) each month											3561	149	-		
	Estimated number caught or landed (whole numbers) each month											-	-	-		
	Range of depths (m) each month											150-360	140-350	-		
	Mesh size (mm)											114	114	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	Total
Apr	21	145	544	213	68	13	-	-	1	1005
May	8	83	505	256	118	28	-	-	2	1000
Jun	-	-	-	-	-	-	-	-	-	-

¹ lengths only

TABLE 29
(continued)

AGE/LENGTH TABLE - COD - 1E - 1969 (3rd QUARTER)

GEAR		Handline (Research)						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches							Months Within Quarter		
COUNTRY		Denmark (Greenland)									
TONNAGE		167									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Length Group (3 cm)	Age	5	6	7	8	9	NK				
									Jul	Aug	Sep
39		1	-	-	-	-	-	1	-	-	3
42		-	-	-	-	-	-	-	-	-	6
45		1	-	-	-	-	-	1	-	-	6
48		-	1	-	-	-	-	1	-	-	20
51		1	7	1	-	-	-	9	-	-	62
54		-	4	2	-	-	-	6	-	-	84
57		-	5	-	-	-	-	5	-	-	109
60		-	6	2	-	-	-	8	-	-	157
63		-	5	2	-	-	-	7	-	-	104
66		-	1	1	2	-	-	4	-	-	84
69		-	2	1	2	-	-	5	-	-	76
72		-	-	-	1	1	-	2	-	-	73
75		-	1	1	3	-	-	5	-	-	92
78		-	-	-	4	-	-	4	-	-	50
81		-	-	-	-	-	-	-	-	-	45
84		-	-	-	1	-	-	1	-	-	20
87		-	-	-	-	-	-	-	-	-	3
90		-	-	-	-	-	-	-	-	-	3
93		-	-	-	-	-	-	-	-	-	-
96		-	-	-	-	-	-	-	-	-	-
99		-	-	-	-	-	-	-	-	-	3
102		-	-	-	-	-	-	-	-	-	3
Total No. of Ages Read		3	32	10	13	1	-	59			
Serial Numbers		No. of Age Samples									
X		Number of fish measured each month						-	-	357	
		Mean length of fish (cm) each month						-	-	65.7	
		Mean weight of fish (kg) each month						-	-	-	
		Total weight caught or landed (tons) each month						-	-	-	
		Estimated number caught or landed (whole numbers) each month						-	-	30-80	
		Range of depths (m) each month						-	-	-	
		Mesh size (mm)						-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	8	9	NK	Total
Jul	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-
Sep	16	495	159	234	37	63	1004

TABLE 30
(continued)

AGE/LENGTH TABLE - COD - 1F - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Research)														
CATCHES OR LANDINGS		Catches														
COUNTRY		Germany, Federal Republic														
TONNAGE		1564														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		4	5	6	7	8	9	10	11	12	13	Months Within Quarter		Apr	May	Jun
36		1	6	1	1	-	-	-	-	-	-	-	9	-	-	1
39		-	9	-	-	-	-	-	-	-	-	-	9	-	-	10
42		-	16	7	-	-	-	-	-	-	-	-	23	-	-	27
45		-	10	12	1	-	-	-	-	-	-	-	23	-	-	50
48		-	6	22	2	-	-	-	-	-	-	-	30	-	-	83
51		-	4	22	1	-	-	-	-	-	-	-	27	-	-	98
54		-	1	23	9	-	-	-	-	-	-	-	33	-	-	100
57		-	3	17	12	-	-	-	-	-	-	-	32	-	-	77
60		-	-	9	10	1	-	-	-	-	-	-	20	-	-	66
63		-	1	11	15	3	-	-	-	-	-	-	30	-	-	55
66		-	-	8	5	9	1	-	-	-	-	-	23	-	-	50
69		-	1	5	6	8	-	-	-	-	-	-	20	-	-	69
72		-	-	3	3	8	-	-	-	-	-	-	14	-	-	70
75		-	-	1	7	9	-	-	-	-	-	-	17	-	-	73
78		-	-	-	4	7	1	-	-	-	-	-	12	-	-	57
81		-	-	1	-	4	2	1	1	-	1	-	10	-	-	43
84		-	-	-	1	3	-	-	-	-	1	-	5	-	-	35
87		-	-	-	-	4	-	-	-	-	-	-	4	-	-	14
90		-	-	-	-	-	2	1	-	-	-	-	3	-	-	13
93		-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
96		-	-	-	-	-	-	-	-	-	1	-	1	-	-	2
99		-	-	-	-	1	-	-	-	-	-	-	1	-	-	1
102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
108		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Total No. of Ages Read		1	57	142	77	57	6	2	1	2	1		346	1000		
Serial Numbers Pr. 5, 6, 7, 10, 13, 14		No. of Age Samples 6														
X		Number of fish measured each month											-	-	4345	
		Mean length of fish (cm) each month											-	-	64.2	
		Mean weight of fish (kg) each month											-	-	-	
		Total weight caught or landed (tons) each month											-	-	17	
		Estimated number caught or landed (whole numbers) each month											-	-	-	
		Range of depths (m) each month											-	-	190-310	
		Mesh size (mm)											-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	Total
Apr	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-
Jun	0	96	394	235	227	21	9	6	11	1	1000

TABLE 31

AGE/LENGTH TABLE - COD - EAST GREENLAND¹ - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)										
CATCHES OR LANDINGS		Catches										
COUNTRY		Germany, Federal Republic										
TONNAGE		2000										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age								Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	9		Months Within Quarter		
									Jan	Feb	Mar	
39	1	-	-	-	-	-	-	1	-	-	5	
42	-	-	-	-	-	-	-	-	-	-	5	
45	-	-	1	-	-	-	-	1	-	-	2	
48	-	1	1	-	-	-	-	2	-	-	7	
51	-	1	-	1	-	-	-	2	-	-	12	
54	-	1	1	-	-	-	-	2	-	-	13	
57	-	-	2	1	-	-	-	3	-	-	25	
60	-	-	-	-	-	-	-	-	-	-	10	
63	-	-	3	-	-	-	-	3	-	-	28	
66	-	-	-	2	1	2	-	5	-	-	33	
69	-	-	-	4	4	5	-	13	-	-	80	
72	-	-	-	3	2	8	-	13	-	-	103	
75	-	-	-	2	3	7	1	13	-	-	113	
78	-	-	-	1	6	12	1	20	-	-	141	
81	-	-	-	-	2	16	-	18	-	-	126	
84	-	-	-	1	1	14	-	16	-	-	101	
87	-	-	-	-	1	12	-	13	-	-	88	
90	-	-	-	-	-	11	-	11	-	-	75	
93	-	-	-	-	-	1	-	1	-	-	23	
96	-	-	-	-	-	2	-	2	-	-	10	
									-	-	1000	
Total No. of Ages Read		1	3	8	15	20	90	2	139			
Serial Numbers		St. 80, 81						No. of Age Samples 2				
		Number of fish measured each month							-	-	398	
		Mean length of fish (cm) each month							-	-	78.2	
		Mean weight of fish (kg) each month							-	-	-	
		Total weight caught or landed (tons) each month							-	-	5	
		Estimated number caught or landed (whole numbers) each month							-	-	-	
		Range of depths (m) each month							-	-	410-520	
		Mesh size (mm)							-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	Total
Jan	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-
Mar	5	18	65	111	143	642	16	1000

¹ Dohrn Bank

TABLE 31
(continued)AGE/LENGTH TABLE - COD - EAST GREENLAND¹ - 1969 (1st QUARTER)

GEAR		Otter Trawl (Commercial)																	
CATCHES OR LANDINGS		Landings																	
COUNTRY		Germany, Federal Republic																	
TONNAGE		976																	
STRUCTURES USED IN AGE DETERMINATION		Otoliths																	
Length Group (3 cm)	Age															Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		4	5	6	7	8	9	10	11	12	13	14	15	16	Months Within Quarter				
																Jan Feb Mar			
48	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	1
51	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	2	4
54	1	6	2	-	-	-	-	-	-	-	-	-	-	-	-	9	2	6	11
57	1	8	6	1	-	-	-	-	-	-	-	-	-	-	-	16	28	28	34
60	-	7	12	1	2	-	-	-	-	-	-	-	-	-	-	22	28	43	62
63	-	8	8	2	4	-	-	-	-	-	-	-	-	-	-	22	67	55	77
66	-	8	13	9	8	1	-	-	-	-	-	-	-	-	-	39	75	88	111
69	-	1	22	15	7	1	1	-	-	-	-	-	-	-	-	47	110	115	92
72	-	-	13	14	21	1	-	-	-	-	-	-	-	-	-	49	126	103	137
75	-	-	16	10	24	-	-	-	-	-	-	-	-	-	-	50	134	115	106
78	-	-	8	4	27	-	-	-	-	-	-	-	-	-	-	39	116	104	74
81	-	-	3	6	42	2	-	-	1	-	-	-	-	-	-	54	87	118	108
84	-	-	-	7	53	4	1	2	-	1	-	-	-	-	-	68	100	92	67
87	-	-	-	5	43	3	-	4	1	-	-	-	-	-	-	56	63	83	52
90	-	-	-	1	26	1	-	5	1	1	-	-	-	-	-	35	34	31	28
93	-	-	-	-	8	1	-	2	1	-	-	-	-	-	-	12	16	5	17
96	-	-	-	-	5	-	-	3	-	1	-	-	-	-	-	9	6	7	9
99	-	-	-	-	2	-	-	3	1	1	-	-	-	-	-	7	7	2	4
102	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	3	-	2	3
105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Total No. of Ages Read		5	41	103	75	272	14	2	21	6	4	-	-	-	1	544	1000	1000	1000
Serial Numbers		2, 5, 12														No. of Age Samples	3		
X	Number of fish measured each month															509	451	525	
	Mean length of fish (cm) each month															76.1	76.4	75.0	
	Mean weight of fish (kg) each month															-	-	-	
	Total weight caught or landed (tons) each month															78	82	151	
	Estimated number caught or landed (whole numbers) each month															22444	25544	48961	
	Range of depths (m) each month															-	-	-	
	Mesh size (mm)															130	130	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Jan	26	34	166	187	521	24	6	20	9	7	-	-	-	1000
Feb	3	105	242	128	461	36	3	14	8	-	-	-	-	1000
Mar	-	91	283	167	427	3	-	21	3	4	-	-	1	1000

¹ Angmagssalik-Dohrn Bank

TABLE 31
(continued)AGE/LENGTH TABLE - COD - EAST GREENLAND¹ - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Research)										
CATCHES OR LANDINGS		Catches										
COUNTRY		Germany, Federal Republic										
TONNAGE		2000										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age							Total No. of Ages Read	LENGTH COMPOSITION PER MILE			
		4	5	6	7	8	9		Months Within Quarter			
								Apr			May	Jun
48	-	-	-	-	-	-	-	-	10	-	-	
51	-	1	-	-	-	-	-	1	14	-	-	
54	-	2	2	-	-	-	-	4	18	-	-	
57	1	2	2	-	1	-	-	6	35	-	-	
60	-	5	1	1	-	-	-	7	42	-	-	
63	-	-	3	2	3	-	-	8	56	-	-	
66	-	2	2	3	1	-	-	8	70	-	-	
69	-	-	2	3	9	-	-	14	112	-	-	
72	-	-	6	5	5	-	-	16	122	-	-	
75	-	-	7	7	13	-	-	27	164	-	-	
78	-	-	5	3	11	-	-	19	143	-	-	
81	-	-	2	-	17	-	-	19	108	-	-	
84	-	-	-	-	4	1	-	5	53	-	-	
87	-	-	-	-	4	-	-	4	32	-	-	
90	-	-	-	-	1	-	-	1	7	-	-	
93	-	-	-	-	1	-	-	1	3	-	-	
96	-	-	-	-	2	-	-	2	11	-	-	
								1000	-	-		
Total No. of Ages Read		1	12	32	24	72	1	142				
Serial Numbers	St. 117, 118, 119						No. of Age Samples 3					
X	Number of fish measured each month							286	-	-		
	Mean length of fish (cm) each month							74.2	-	-		
	Mean weight of fish (kg) each month							-	-	-		
	Total weight caught or landed (tons) each month							2.3	-	-		
	Estimated number caught or landed (whole numbers) each month							-	-	-		
	Range of depths (m) each month							380-390	-	-		
	Mesh size (mm)							130	-	-		

AGE COMPOSITIONS OF LANDINGS (PER MILE)

Month	4	5	6	7	8	9	Total
Apr	6	92	219	171	501	11	1000
May	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-

¹ Angmagassalik

TABLE 31
(continued)AGE/LENGTH TABLE - COD - EAST GREENLAND¹- 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES OR LANDINGS		Landings														Months Within Quarter			
COUNTRY		Germany, Federal Republic																	
TONNAGE		650																	
STRUCTURES USED IN AGE DETERMINATION		Otoliths																	
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	15	16	Total No. of Ages Read	PER MILLE			
																Apr	May	Jun	
42		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
45		-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	6	2
48		-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	8	12
51		-	5	4	-	-	-	-	-	-	-	-	-	-	-	-	9	7	33
54		1	7	5	1	-	-	-	-	-	-	-	-	-	-	-	14	13	16
57		2	3	7	2	1	-	-	-	-	-	-	-	-	-	-	15	58	45
60		-	8	13	4	3	-	-	-	-	-	-	-	-	-	-	28	73	54
63		-	4	10	6	8	-	-	-	-	-	-	-	-	-	-	28	80	67
66		-	1	9	3	10	-	-	-	-	-	-	-	-	-	-	23	91	48
69		-	1	9	16	10	-	-	-	-	-	-	-	-	-	-	36	114	108
72		-	-	9	11	10	1	-	-	-	-	-	-	-	-	-	31	145	114
75		-	-	3	6	15	-	-	1	-	-	-	-	-	-	-	25	104	91
78		-	-	5	4	20	-	-	-	1	-	-	-	-	-	-	30	101	116
81		-	-	-	2	26	1	1	1	1	-	-	-	-	-	-	32	95	87
84		-	-	2	-	15	2	-	1	1	-	-	-	1	-	-	22	32	38
87		-	-	1	1	18	2	-	1	1	-	-	-	-	-	-	24	50	39
90		-	-	-	1	9	2	1	1	1	-	-	-	-	-	-	15	10	33
93		-	-	-	1	7	-	-	1	2	-	-	-	-	-	-	11	7	28
96		-	-	-	-	5	-	-	-	-	-	-	-	1	-	-	6	4	32
99		-	-	-	-	3	-	-	-	1	1	-	-	-	-	-	5	2	26
102		-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	2
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	6
108		-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	2
															-	1000	1000	-	
Total No. of Ages Read		3	32	78	58	161	8	2	7	8	1	-	2	1	361				
Serial Numbers		26, 31											No. of Age Samples		2				
		Number of fish measured each month													512	438	-		
		Mean length of fish (cm) each month													72.8	75.3	-		
		Mean weight of fish (kg) each month													-	-	-		
		Total weight caught or landed (tons) each month													69	31	-		
		Estimated number caught or landed (whole numbers) each month													24858	10531	-		
		Range of depths (m) each month													-	-	-		
		Mesh size (mm)													130	130	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	15	16	Total
Apr	33	66	229	166	458	21	7	5	13	1	-	1	-	1000
May	-	81	198	187	462	8	-	31	23	-	-	4	6	1000
Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-

¹ Angmagasalik-Dohrn Bank

TABLE 32
(continued)AGE/LENGTH TABLE - COD - SOUTH EAST GREENLAND¹ - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Research)															Total No. of Ages Read	LENGTH COMPOSITION PER MILE		
CATCHES OR LANDINGS		Catches																Months Within Quarter		
COUNTRY		Germany, Federal Republic																		
TONNAGE		1564																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Length Group (3cm)	Age	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Apr	May	Jun	
		48	-	1	-	-	-	-	-	-	-	-	-	-	-	-				-
51	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	
54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
57	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	7	
60	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	15	
63	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	23	
66	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	5	-	-	45	
69	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	69	
72	-	2	4	4	1	-	-	-	-	-	-	-	-	-	-	11	-	-	79	
75	-	3	3	12	-	-	-	-	-	-	-	-	-	-	-	18	-	-	108	
78	-	-	2	11	-	-	-	1	-	-	-	-	-	-	-	14	-	-	143	
81	-	-	-	21	1	-	1	1	-	-	-	-	-	1	-	25	-	-	146	
84	-	1	1	17	2	-	-	1	-	-	1	-	-	-	-	23	-	-	126	
87	-	-	1	11	-	-	2	1	-	1	-	-	-	1	-	17	-	-	95	
90	-	-	-	2	-	-	1	-	1	-	-	-	-	-	-	4	-	-	51	
93	-	-	-	1	-	1	2	-	-	-	-	-	-	-	1	5	-	-	33	
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	14	
99	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	4	-	-	13	
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
105	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	11	
Total No. of Ages Read		1	13	16	82	4	1	9	5	2	1	1	-	2	-	2	139	1000		
Serial Numbers		No. of Age Samples																		
X		Number of fish measured each month															-	-	1434	
		Mean length of fish (cm) each month															-	-	50.6	
		Mean weight of fish (kg) each month															-	-	-	
		Total weight caught or landed (tons) each month															-	-	2.5	
		Estimated number caught or landed (whole numbers) each month															-	-	-	
		Range of depths (m) each month															-	-	330-420	
		Mesh size (mm)															-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILE)

Month	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	7	104	150	530	23	7	61	38	16	6	5	-	12	-	21	1000

¹ Tordenskjold Bank

TABLE 34
(continued)

AGE/LENGTH TABLE - COD - 2J - 1969 (1st QUARTER)

GEAR		Otter Trawl (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings														Months Within Quarter		
COUNTRY		United Kingdom																
TONNAGE		901-1800																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	>15	Jan	Feb	Mar		
	39	-	1	-	-	-	-	-	-	-	-	-	-				-	1
42	2	1	1	1	-	-	-	-	-	-	-	-	-	5	-	19	6	
45	-	2	2	1	-	-	-	-	-	-	-	-	-	5	-	107	33	
48	-	-	3	3	-	-	-	-	-	-	-	-	-	6	-	212	65	
51	-	-	1	2	1	-	-	-	-	-	-	-	-	4	-	189	96	
54	-	-	1	3	1	-	-	-	-	-	-	-	-	5	-	177	118	
57	-	1	1	3	-	-	-	-	-	-	-	-	-	5	-	95	158	
60	-	-	-	3	1	-	-	1	-	-	-	-	-	5	-	71	212	
63	-	1	-	3	1	-	1	-	-	-	-	-	-	6	-	62	136	
66	-	1	-	1	1	1	-	-	-	-	-	-	-	4	-	30	85	
69	-	-	-	2	-	1	1	2	-	1	-	-	-	7	-	17	33	
72	-	-	-	-	2	2	1	-	-	-	-	-	-	5	-	8	20	
75	-	-	-	1	1	-	1	-	1	-	-	-	1	5	-	6	11	
78	-	-	-	-	1	1	-	1	-	1	-	-	1	5	-	4	9	
81	-	-	-	-	-	1	-	1	-	-	-	1	-	3	-	1	7	
84	-	-	-	-	2	-	1	2	-	-	-	-	1	6	-	1	2	
87	-	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	2	
90	-	-	-	-	-	-	-	-	-	1	1	3	-	5	-	0	2	
93	-	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	2	
96	-	-	-	-	-	-	-	1	1	-	-	1	-	3	-	-	2	
99	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	
102	-	-	-	-	-	-	-	-	-	1	-	1	-	2	-	-	1	
105	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
108	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	0	
111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Total No. of Ages Read		2	7	9	23	11	5	9	9	3	3	6	7	94	X			
Serial Numbers		No. of Age Samples												2				
X		Number of fish measured each month													-	1880	1861	
		Mean length of fish (cm) each month													-	54.3	59.9	
		Mean weight of fish (kg) each month													-	-	-	
		Total weight caught or landed (tons) each month													-	616.8	302.0	
		Estimated number caught or landed (whole numbers) each month													-	469455	176038	
		Range of depths (m) each month													-	-	-	
		Mesh size (mm)													-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	>15	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	8	83	254	476	120	13	17	20	2	3	0	2	998
Mar	2	90	126	482	147	36	38	58	4	7	5	5	1000

TABLE 34
(continued)

AGE/LENGTH TABLE - COD - 2J - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)																		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches																			Months Within Quarter		
COUNTRY		USSR																					
TONNAGE		3600																					
STRUCTURES USED IN AGE DETERMINATION		Otoliths																					
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Jan	Feb	Mar			
		27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				-	-	-
30	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11			
33	6	27	22	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33			
36	1	26	23	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	40			
39	-	14	36	21	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53			
42	-	8	29	28	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	71			
45	-	2	35	70	28	5	-	-	-	-	-	-	-	-	-	-	-	-	-	113			
48	-	-	13	84	52	7	-	-	-	-	-	-	-	-	-	-	-	-	-	129			
51	-	-	5	62	82	18	-	-	-	-	-	-	-	-	-	-	-	-	-	128			
54	-	-	-	11	55	49	10	3	1	1	-	-	-	-	-	-	-	-	-	120			
57	-	-	-	2	23	56	30	2	-	1	-	-	-	-	-	-	-	-	-	96			
60	-	-	-	-	4	45	14	12	5	-	1	1	-	-	-	-	-	-	-	66			
63	-	-	-	-	3	34	30	12	1	8	-	-	-	-	-	-	-	-	-	53			
66	-	-	-	-	-	8	26	20	6	5	4	1	-	-	-	-	-	-	-	35			
69	-	-	-	-	-	4	10	15	12	8	1	2	1	2	1	1	-	-	-	19			
72	-	-	-	-	-	1	10	11	18	6	7	3	-	-	-	-	-	-	-	14			
75	-	-	-	-	-	-	-	6	13	5	7	1	2	1	-	-	-	-	-	6			
78	-	-	-	-	-	-	-	2	1	1	6	3	1	1	-	-	-	-	-	5			
81	-	-	-	-	-	-	-	1	2	2	2	-	2	-	-	-	-	-	-	3			
84	-	-	-	-	-	-	-	-	-	1	3	1	-	-	-	-	-	-	-	1			
87	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	1			
90	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	1			
Total No. of Ages Read		9	81	163	292	262	229	130	84	59	38	32	13	7	7	1	1	1408	1000	-	1000		
Serial Numbers		No. of Age Samples 4																					
X		Number of fish measured each month																		9694	-	17325	
		Mean length of fish (cm) each month																		51.29	-	52.02	
		Mean weight of fish (kg) each month																		1.602	-	1.676	
		Total weight caught or landed (tons) each month																		335	-	20858	
		Estimated number caught or landed (whole numbers) each month																		209114	-	12445107	
		Range of depths (m) each month																		208-357	-	208-519	
		Mesh size (mm)																		110	-	110	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total
Jan	2	25	115	313	271	169	59	25	10	7	3	2	0	0	0	0	1001
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	8	59	122	235	216	180	83	41	20	18	10	4	2	2	0	0	1000

TABLE 35

AGE/LENGTH TABLE - COD - 3K - 1969 (1st QUARTER)

GEAR		Pair Trawl (Commercial)																				
CATCHES OR LANDINGS		Catches																				
COUNTRY		Spain																				
TONNAGE		1359																				
STRUCTURES USED IN AGE DETERMINATION		Otoliths																				
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE											
											Months Within Quarter											
											Jan	Feb	Mar									
30	-	-	-	-	-	-	-	-	-	-	-	-	-	1								
33	-	-	-	-	-	-	-	-	-	-	-	-	-	6								
36	1	-	-	-	-	-	-	-	-	1	-	-	-	13								
39	-	-	-	-	-	-	-	-	-	-	-	-	-	25								
42	-	-	2	-	-	-	-	-	-	2	-	-	-	36								
45	-	-	3	1	-	-	-	-	-	4	-	-	-	79								
48	-	2	3	2	-	-	-	-	-	7	-	-	-	98								
51	-	4	1	-	-	-	-	-	-	5	-	-	-	108								
54	-	-	3	3	-	-	-	-	-	6	-	-	-	132								
57	-	-	3	3	-	-	-	-	-	6	-	-	-	133								
60	-	-	1	-	2	1	1	-	-	5	-	-	-	150								
63	-	-	1	3	-	-	-	-	-	4	-	-	-	96								
66	-	-	-	1	2	-	1	-	-	4	-	-	-	62								
69	-	-	-	-	2	1	-	1	-	4	-	-	-	40								
72	-	-	-	-	-	-	-	-	-	-	-	-	-	11								
75	-	-	-	-	-	-	-	-	-	-	-	-	-	6								
78	-	-	-	-	-	-	-	-	-	-	-	-	-	3								
Total No. of Ages Read											1	6	17	13	6	2	2	1	48	999		
Serial Numbers											No. of Age Samples			6								
X											Number of fish measured each month			-	-	1590						
											Mean length of fish (cm) each month			-	-	56.06						
											Mean weight of fish (kg) each month			-	-	-						
											Total weight caught or landed (tons) each month			-	-	-						
											Estimated number caught or landed (whole numbers) each month			-	-	-						
											Range of depths (m) each month			-	-	240						
Mesh size (mm)											-	-	-	-	-							
AGE COMPOSITIONS OF LANDINGS (PER MILLE)																						
Month	4	5	6	7	8	9	10	11	Total													
Jan	-	-	-	-	-	-	-	-	-													
Feb	-	-	-	-	-	-	-	-	-													
Mar	14	120	364	283	117	42	49	11	1000													

TABLE 35
(continued)

AGE/LENGTH TABLE - COD - 3K - 1969 (1st QUARTER)

GEAR		Otter Trawl (Research)																		
CATCHES OR LANDINGS		Catches																		
COUNTRY		USSR																		
TONNAGE		2800																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
															Jan		Feb	Mar		
21		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
24		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
27		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3		
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3		
33		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5		
36		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8		
39		1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9		
42		3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28		
45		1	17	12	1	-	-	-	-	-	-	-	-	-	-	-	-	87		
48		-	8	22	5	-	-	-	-	-	-	-	-	-	-	-	-	98		
51		-	4	43	13	-	-	-	-	-	-	-	-	-	-	-	-	157		
54		-	-	6	30	14	-	-	-	-	-	-	-	-	-	-	-	163		
57		-	-	1	25	13	3	-	-	-	-	-	-	-	-	-	-	116		
60		-	-	-	4	10	1	-	1	-	-	-	-	-	-	-	-	65		
63		-	-	-	1	9	4	-	4	-	-	-	-	-	-	-	-	60		
66		-	-	-	-	2	4	2	-	1	-	-	-	-	-	-	-	43		
69		-	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	23		
72		-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	30		
75		-	-	-	-	-	1	2	-	3	1	-	-	-	-	1	-	31		
78		-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	16		
81		-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	12		
84		-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	12		
87		-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	7		
90		-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	8		
93		-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	7		
96		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
99		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
108		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
111		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
114		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
Total No. of Ages Read		5	38	84	79	49	19	8	2	8	2	3	1	1	1		300	1000		
Serial Numbers		No. of Age Samples																		
X		Number of fish measured each month													-	-	2361			
		Mean length of fish (cm) each month													-	-	57.73			
		Mean weight of fish (kg) each month													-	-	1,784			
		Total weight caught or landed (tons) each month													-	-	51			
		Estimated number caught or landed (whole numbers) each month													-	-	28587			
		Range of depths (m) each month													-	-	316-395			
		Mesh size (mm)													-	-	110			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	15	108	237	245	180	88	49	12	33	8	12	4	4	4	999

TABLE 36

AGE/LENGTH TABLE - COD - 3L - 1969 (1st QUARTER)

GEAR		Pair Trawl (Commercial)													
CATCHES OR LANDINGS		Catches													
COUNTRY		Spain													
TONNAGE		1359													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Length Group (3 cm)	Age											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	9	10	11	Months Within Quarter				
												Jan	Feb	Mar	
48		-	1	-	-	-	-	-	-	-	-	1	-	-	11
51		-	-	-	1	1	-	-	-	-	-	2	-	-	46
54		-	-	2	1	-	-	-	-	-	-	3	-	-	60
57		-	-	-	2	2	-	-	-	-	-	4	-	-	114
60		-	-	-	4	2	-	-	-	-	-	6	-	-	159
63		-	-	-	3	-	1	-	1	-	-	5	-	-	151
66		-	-	-	5	1	-	-	-	-	-	6	-	-	148
69		-	-	-	2	1	-	1	-	-	-	4	-	-	109
72		-	-	-	-	3	-	-	-	-	-	3	-	-	85
75		-	-	-	2	-	-	2	-	-	-	4	-	-	45
78		-	-	-	1	2	1	-	-	-	-	4	-	-	40
81		-	-	-	-	2	-	-	-	-	-	4	-	-	40
84		-	-	-	-	-	-	-	-	-	-	2	-	-	14
87		-	-	-	-	-	-	-	-	-	-	-	-	-	8
90		-	-	-	-	-	-	-	-	-	-	-	-	-	1
93		-	-	-	-	-	-	-	-	-	-	-	-	-	6
		-	-	-	-	-	-	-	-	-	-	-	-	-	3
Total No. of Ages Read		-	1	2	21	14	2	3	1	-	-	44	1000		
Serial Numbers		No. of Age Samples													
		3													
X		Number of fish measured each month											-	-	649
		Mean length of fish (cm) each month											-	-	65.28
		Mean weight of fish (kg) each month											-	-	-
		Total weight caught or landed (tons) each month											-	-	-
		Estimated number caught or landed (whole numbers) each month											-	-	-
		Range of depths (m) each month											-	-	430
		Mesh size (mm)											-	-	-

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	Total
Jan	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-
Mar	11	41	516	310	31	61	31	-	-	1001

TABLE 36
(continued)

AGE/LENGTH TABLE - COD - 3L - 1969 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)													LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS															PER MILLE		
COUNTRY													NK				
TONNAGE													Portugal				
STRUCTURES USED IN AGE DETERMINATION													2056				
		Otoliths															
Length Group (3 cm)	Age											Total No. of Ages Read	Months Within Quarter				
		3	4	5	6	7	8	9	10	11	12		Jul	Aug	Sep		
18		1	-	-	-	-	-	-	-	-	-	1	1	-	-		
21		-	-	-	-	-	-	-	-	-	-	-	1	-	-		
24		-	1	-	-	-	-	-	-	-	-	-	4	-	-		
27		-	1	-	-	-	-	-	-	-	-	-	10	-	-		
30		2	3	1	-	-	-	-	-	-	-	6	34	-	-		
33		1	8	1	-	-	-	-	-	-	-	10	39	-	-		
36		3	17	3	-	-	-	-	-	-	-	23	71	-	-		
39		-	13	13	-	-	-	-	-	-	-	26	85	-	-		
42		-	10	22	3	-	-	-	-	-	-	35	86	-	-		
45		-	5	26	5	-	-	-	-	-	-	36	99	-	-		
48		-	3	23	16	-	-	-	-	-	-	42	99	-	-		
51		-	-	13	19	-	-	-	-	-	-	32	115	-	-		
54		-	-	16	41	5	-	-	-	-	-	62	111	-	-		
57		-	-	7	29	6	-	-	-	-	-	42	95	-	-		
60		-	-	4	20	6	-	-	-	-	-	30	67	-	-		
63		-	-	1	9	9	-	-	-	-	-	19	41	-	-		
66		-	-	-	-	7	-	-	-	-	-	7	21	-	-		
69		-	-	-	2	1	1	-	-	-	-	4	12	-	-		
72		-	-	-	-	-	1	-	-	-	-	1	3	-	-		
75		-	-	-	-	2	-	-	-	-	1	3	-	-	-		
78		-	-	-	-	-	-	-	-	-	-	3	3	-	-		
81		-	-	-	-	-	-	-	-	-	-	-	1	-	-		
84		-	-	-	-	-	-	-	-	1	-	-	2	-	-		
87		-	-	-	-	-	-	1	-	-	-	-	-	-	-		
90		-	-	-	-	-	-	-	-	-	-	-	1	-	-		
93		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
96		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
99		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
102		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
108		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
111		-	-	-	-	-	-	-	-	-	-	-	-	-	-		
114		-	-	-	-	-	-	-	1	-	-	1	1	-	-		
Total No. of Ages Read												384	1002				
Serial Numbers 2-6-9-11 with lengths												No. of Age Samples 4-7-8-10 ¹					
Number of fish measured each month												1784	-	-			
Mean length of fish (cm) each month												49.3	-	-			
Mean weight of fish (kg) each month												-	-	-			
Total weight caught or landed (tons) each month												10743	-	-			
Estimated number caught or landed (whole numbers) each month												-	-	-			
Range of depths (m) each month												210-340	-	-			
Mesh size (mm)												114	-	-			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	Total
Jul	26	203	343	336	81	6	1	1	2	1	1000
Aug	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-

¹ lengths only

TABLE 36
(continued)

AGE/LENGTH TABLE - COD - 3L - 1969 (3rd QUARTER)

GEAR		Pair Trawl (Commercial)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches												Months Within Quarter	Jul	Aug
COUNTRY		Spain														
TONNAGE		1359														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	Total No. of Ages Read	PER MILLE		
														Jul	Aug	Sep
30		-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
33		-	-	-	-	-	-	-	-	-	-	-	-	29	-	-
36		-	1	-	-	-	-	-	-	-	-	-	1	73	-	18
39		-	2	1	-	-	-	-	-	-	-	-	3	82	-	34
42		-	2	-	-	-	-	-	-	-	-	-	2	110	-	51
45		-	1	3	1	-	-	-	-	-	-	-	5	131	-	97
48		-	4	4	3	1	-	-	-	-	-	-	12	132	-	91
51		-	-	6	2	1	-	-	-	-	-	-	9	139	-	136
54		-	1	4	4	-	-	-	-	-	-	-	9	128	-	144
57		-	1	1	5	1	1	-	-	-	-	-	9	89	-	150
60		-	-	3	2	-	-	-	-	-	-	-	5	52	-	148
63		-	-	-	2	2	2	-	-	-	-	1	7	16	-	69
66		-	-	-	1	2	-	-	1	-	-	-	4	5	-	32
69		-	-	-	-	1	1	-	-	-	-	-	2	5	-	14
72		-	-	-	-	1	-	-	-	-	-	-	1	3	-	8
75		-	-	-	-	-	-	-	-	-	-	-	-	1	-	2
78		-	-	-	-	-	-	-	-	-	-	-	-	3	-	6
81		-	-	-	-	-	1	-	-	-	-	-	1	1	-	2
													1001	-	1002	
Total No. of Ages Read		-	12	22	20	9	5	-	1	-	-	1	70			
Serial Numbers		No. of Age Samples											8			
X	Number of fish measured each month												1485	-	507	
	Mean length of fish (cm) each month												49.13	-	54.66	
	Mean weight of fish (kg) each month												-	-	-	
	Total weight caught or landed (tons) each month												-	-	-	
	Estimated number caught or landed (whole numbers) each month												-	-	-	
	Range of depths (m) each month												300-350	-	270	
	Mesh size (mm)												-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	Total
Jul	-	344	353	231	51	19	-	1	-	-	2	1001
Aug	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	174	360	307	90	45	-	8	-	-	10	994

TABLE 37

AGE/LENGTH TABLE - COD - 4R - 1969 (3rd QUARTER)

GEAR		Pair Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES OR LANDINGS		Catches													Months Within Quarter			
COUNTRY		Spain																
TONNAGE		1359																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	4	5	6	7	8	9	10	11	12	13	14	15	Total No. of Ages Read	PER MILLE			
															Jul	Aug	Sep	
33		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-
36		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	1
39		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	6
42		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	10
45		1	2	1	1	-	-	-	-	-	-	-	-	-	-	5	105	23
48		1	6	5	1	-	-	-	-	-	-	-	-	-	-	13	105	67
51		-	3	5	-	1	-	-	-	-	-	-	-	-	-	9	143	95
54		-	5	8	2	1	-	-	-	-	-	-	-	-	-	16	144	133
57		1	3	8	-	-	1	-	-	-	-	-	-	-	-	13	149	163
60		-	2	3	3	1	1	-	-	-	-	-	-	-	-	10	131	168
63		-	-	2	5	1	1	-	-	-	-	-	-	-	-	9	44	118
66		-	1	-	6	4	-	2	1	-	-	-	-	-	-	14	23	98
69		-	-	-	4	2	1	-	-	-	-	-	-	-	-	7	11	56
72		-	-	1	2	2	-	1	-	-	-	-	-	-	-	6	16	34
75		-	-	-	1	-	1	2	-	-	-	-	-	-	-	4	6	16
78		-	-	-	1	1	-	-	-	-	-	-	-	-	-	2	2	11
81		-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1
Total No. of Ages Read		3	22	33	26	13	5	5	1	-	-	-	1	109				
Serial Numbers		No. of Age Samples												10				
X		Number of fish measured each month												-	1397	1318		
		Mean length of fish (cm) each month												-	53.90	57.16		
		Mean weight of fish (kg) each month												-	-	-		
		Total weight caught or landed (tons) each month												-	-	-		
		Estimated number caught or landed (whole numbers) each month												-	-	-		
		Range of depths (m) each month												-	180-190	180-190		
Mesh size (mm)														-	-	-		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	15	Total
Jul	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	47	278	405	153	67	38	10	2	-	-	-	1	1001
Sep	21	195	338	241	112	55	28	7	-	-	-	1	998

TABLE 38

LENGTH FREQUENCIES - HADDOCK - 3Ps - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings after Discards					
CATCHES/LANDINGS	January		February		March	April
MONTH	January	February	January	February	March	April
COUNTRY	Canada (Newfoundland)		France (St.-Pierre et Miquelon)			
TONNAGE	501-900		151-500			
26	-	-	-	-	1	-
28	-	-	1	2	2	1
30	-	-	4	10	21	20
32	3	-	15	30	47	47
34	7	2	58	94	90	105
36	23	2	144	117	122	142
38	59	47	184	168	166	159
40	141	127	157	209	215	203
42	180	178	131	197	204	155
44	170	138	81	112	96	74
46	103	113	42	38	27	32
48	55	57	26	13	5	16
50	51	51	21	4	2	10
52	30	21	29	2	1	5
54	31	47	29	2	-	8
56	34	49	23	1	-	6
58	51	51	21	1	-	3
60	32	32	13	-	-	2
62	17	25	6	-	-	3
64	7	28	4	-	-	1
66	1	11	4	-	-	1
68	3	6	1	-	-	1
70	1	2	1	-	-	1
72	-	8	1	-	-	2
74	-	4	-	-	-	1
76	-	-	1	-	-	-
78	-	-	1	-	-	1
80	1	-	-	-	-	-
82	-	-	1	-	-	1
84	-	-	-	-	-	-
86	-	-	-	-	-	-
88	-	-	1	-	-	-
Total ‰	1000	999	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	3	1	2	1	3	1
Number of Fish Measured	745	471	3251	2403	6096	1676
Mean Length (cm)	46.476	48.339	39.4	39.6	39.8	40.2
Mean Weight (kg)	1.142	1.230	0.596	0.597	0.570	0.592
Total Weight Landed (tons)	93.8	280.6	-	-	-	-
Estimated Number Landed	82137	228130	-	-	-	-
Mesh(mm) or Hook(no.) Size	Large	Large	100 ¹	100 ¹	100 ¹	100 ¹
Range of Depths (fm)	100	75-95	-	-	-	-

¹Stretch mesh

TABLE 39 LENGTH FREQUENCIES - HADDOCK - 4Vn - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Longline	
CATCHES/LANDINGS	(Commercial)	
	Landings	
MONTH	October	November
COUNTRY	Canada (Maritimes)	
TONNAGE	26-50	
38	2	-
40	-	5
42	2	-
44	10	15
46	28	40
48	45	55
50	62	70
52	88	80
54	118	115
56	132	90
58	120	100
60	68	90
62	68	90
64	65	85
66	35	45
68	38	15
70	25	30
72	28	20
74	30	30
76	25	5
78	2	15
80	2	-
82	5	5
84	2	-
Total ‰	1000	1000
Serial Numbers	85 & 87	86
Number of Samples	2	1
Number of Fish Measured	400	200
Mean Length (cm)	59.1	58.7
Mean Weight (kg)	2.40	2.27
Total Weight Landed (tons)	3	13
Estimated Number Landed	12 ¹	57 ¹
Mesh(mm) or Hook(no.) Size	6/0	6/0
Range of Depths (fm)	20-40	30-40

¹ Numbers in 100's

TABLE 40

LENGTH FREQUENCIES - HADDOCK - 4W - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)		Otter Trawl (Side)					Longline
	(Commercial)							
CATCHES/LANDINGS	Landings							
MONTH	February	March	January	March	May	September	December	September
COUNTRY	Canada (Maritimes)							
TONNAGE	501-900		151-500					26-50
34	-	-	-	6	-	4	-	-
36	-	-	-	22	-	-	-	-
38	33	4	3	39	9	28	4	-
40	137	49	38	63	60	44	15	5
42	160	65	64	104	93	135	60	5
44	110	77	61	84	97	131	87	5
46	89	138	103	80	110	126	83	25
48	80	132	87	93	100	121	90	30
50	96	66	75	93	79	81	117	55
52	60	84	88	109	92	73	164	110
54	44	68	72	91	73	62	105	149
56	48	68	82	63	69	62	72	129
58	32	77	59	57	69	35	55	149
60	28	63	59	35	29	19	44	119
62	28	39	52	28	33	8	38	90
64	16	19	13	11	25	15	16	45
66	20	19	33	11	29	31	11	50
68	12	10	52	9	10	19	11	15
70	4	14	39	2	13	4	11	10
72	-	5	7	-	4	4	11	5
74	-	5	13	-	4	-	-	5
76	-	-	-	-	2	-	6	-
78	-	-	-	-	-	-	-	-
80	4	-	-	-	-	-	-	-
Total ‰	1001	1002	1000	1000	1000	1002	1000	1001
Serial Numbers	75	78	74	76-77	79-80	83	88	84
Number of Samples	1	1	1	2	2	1	1	1
Number of Fish Measured	231	226	212	461	467	256	212	201
Mean Length (cm)	48.7	52.0	54.2	49.8	51.4	49.6	52.5	57.4
Mean Weight (kg)	1.25	1.49	1.78	1.36	1.29	1.26	1.56	2.01
Total Weight Landed (tons)	402	1947	402	1108	477	40	118	6
Estimated Number Landed	3216 ¹	13067 ¹	2258 ¹	8147 ¹	3698 ¹	317 ¹	756 ¹	30 ¹
Mesh(mm) or Hook(no.) Size	4.5 ²	4.5 ²	4.5 ²	4.5 ²	4.5 ²	4.5 ²	4.5 ²	6/0
Range of Depths (fm)	30-110	50-85	40-50	40-75	30-85	40-75	27-80	52-54

¹ Numbers in 100's² Inches

TABLE 41

LENGTH FREQUENCIES - HADDOCK - 4X - 1969

(FREQUENCIES IN %/OO - 2 CM GROUPS)

GEAR	Otter Trawl
CATCHES/LANDINGS	(Commercial)
MONTH	Landings after Discards
COUNTRY	April
TONNAGE	France (St.-Pierre et Miquelon)
	151-500
36	1
38	13
40	21
42	49
44	72
46	117
48	137
50	133
52	128
54	95
56	80
58	47
60	35
62	18
64	15
66	7
68	13
70	2
72	4
74	1
76	3
78	5
80	1
82	-
84	-
86	3
Total %/oo	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	831
Mean Length (cm)	517
Mean Weight (kg)	1.188
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	100
Range of Depths (fm)	-

1 Stretch mesh

TABLE 42

LENGTH FREQUENCIES - HADDOCK - 4X¹ - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Side)						
	(Commercial)						
CATCHES/LANDINGS	Landings						
	May	June	July	August	September	October	September
MONTH	Canada (Maritimes)						
COUNTRY	51-150						
TONNAGE	26-50						
32	-	-	-	-	-	-	14
34	-	-	-	-	-	-	22
36	-	-	2	-	-	-	42
38	-	8	7	-	-	-	61
40	-	4	6	-	-	-	101
42	-	12	4	-	4	-	114
44	9	8	17	16	-	25	112
46	36	41	47	21	4	-	95
48	18	97	66	25	26	25	109
50	55	97	128	78	52	12	108
52	146	150	167	165	91	37	84
54	164	166	139	165	82	136	58
56	191	154	154	169	117	37	47
58	109	77	124	132	164	161	16
60	100	81	64	103	143	124	6
62	64	49	24	74	126	99	5
64	9	8	21	4	56	111	3
66	27	16	11	8	56	111	2
68	27	12	6	12	22	49	-
70	-	12	9	12	30	12	-
72	27	4	4	16	4	12	-
74	9	-	2	-	13	49	-
76	-	-	-	-	9	-	-
78	9	-	-	-	-	-	-
80	-	-	-	-	-	-	-
82	-	-	-	-	-	-	-
84	-	4	-	-	-	-	-
Total ‰	1000	1000	1002	1000	999	1000	999
Serial Numbers	134	135-136	137-140	144-145	151-152	153	148-150
Number of Samples	1	2	4	2	2	1	3
Number of Fish Measured	110	247	533	243	231	81	622
Mean Length (cm)	57.1	54.8	54.5	56.2	59.2	60.8	46.4
Mean Weight (kg)	2.06	1.82	1.66	2.26	2.36	2.80	1.20
Total Weight Landed (tons)	36	99	95	159	204	96	104
Estimated Number Landed	175 ²	544 ²	572 ²	704 ²	864 ²	343 ²	867 ²
Mesh(mm) or Hook(no.) Size	4.5 ³	4.5 ³	4.5 ³	4.5 ³	4.5 ³	4.5 ³	4.5 ³
Range of Depths (fm)	40-55	21-55	22-90	26-75	100-112	100-106	15-25

¹ North of lat 44°00'N² Numbers in 100's³ Inches

TABLE 43

LENGTH FREQUENCIES - HADDOCK - 4X¹ - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Side)						
	(Commercial)						
CATCHES/LANDINGS	Landings						
MONTH	January	February	March	April	July	August	October
COUNTRY	Canada (Maritimes)						
TONNAGE	151-500						
28	-	-	-	3	-	-	-
30	-	-	-	12	-	-	-
32	-	3	2	8	-	-	-
34	18	8	6	22	4	-	-
36	16	10	7	22	27	-	2
38	16	7	8	21	43	-	4
40	43	25	28	29	51	-	14
42	66	60	49	50	61	-	28
44	86	111	98	82	101	20	68
46	138	132	123	118	169	43	130
48	156	126	142	139	150	48	140
50	165	144	135	154	138	103	179
52	104	113	131	121	87	106	91
54	78	102	114	99	57	99	74
56	52	68	74	50	40	80	69
58	20	45	45	34	31	105	50
60	15	19	21	17	20	74	50
62	9	14	11	11	8	93	41
64	6	8	4	6	6	56	20
66	9	2	2	-	4	68	17
68	4	1	1	1	2	68	10
70	-	1	-	-	-	37	6
72	-	-	-	-	-	-	3
74	-	-	-	-	-	-	2
76	-	-	-	-	-	-	2
78	-	-	-	-	-	-	1
Total ‰	1001	999	1001	999	999	1000	1001
Serial Numbers	100-101	102-105	106-113	114-124	125-127	147	156-159
Number of Samples	2	4	8	11	3	1	4
Number of Fish Measured	482	728	2045	2839	792	259	1209
Mean Length (cm)	49.0	49.9	50.1	48.8	48.3	57.7	52.2
Mean Weight (kg)	1.37	1.41	1.30	1.33	1.28	2.03	1.66
Total Weight Landed (tons)	540	717	2173	3042	220	273	177
Estimated Number Landed	3942 ²	5085 ²	16715 ²	22872 ²	1719 ²	1345 ²	1066 ²
Mesh(mm) or Hook(no.) Size	4.5 ³	4.5 ³	4.375-4.5 ³	4.375-4.5 ³	4.5 ³	4.5 ³	4.375-4.5 ³
Range of Depths (fm)	55-90	50-90	55-95	45-120	52-95	-	50-80

¹ South of lat 44°00'N² Numbers in 100's³ Inches

TABLE 43
(continued)LENGTH FREQUENCIES - HADDOCK - 4X¹ - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Side)				
	(Commercial)				
CATCHES/LANDINGS	Landings				
MONTH	November	December	February	March	April
COUNTRY	Canada (Maritimes)				
TONNAGE	151-500		51-150		
30	-	-	18	3	8
32	-	-	46	10	22
34	11	-	77	41	12
36	14	18	43	22	42
38	29	51	31	35	32
40	100	92	31	64	35
42	103	58	62	38	65
44	85	37	98	76	102
46	120	38	83	118	124
48	127	89	120	137	152
50	110	124	139	89	114
52	116	152	114	140	137
54	77	110	46	80	80
56	30	120	49	54	35
58	36	32	22	41	22
60	12	51	9	16	5
62	6	-	-	10	5
64	12	18	6	6	3
66	6	5	3	3	3
68	-	5	3	6	-
70	6	-	-	6	-
72	-	-	-	-	2
74	-	-	-	3	-
76	-	-	-	-	-
Total ‰	1000	1000	1000	998	1000
Serial Numbers	128	161	104 & 107	110 & 120	130-131
Number of Samples	1	1	2	2	2
Number of Fish Measured	206	236	325	314	402
Mean Length (cm)	48.3	50.3	46.3	48.7	47.7
Mean Weight (kg)	1.35	1.42	0.98	1.44	1.22
Total Weight Landed (tons)	148	157	73	325	386
Estimated Number Landed	1096 ²	1106 ²	745 ²	2257 ²	3164 ²
Mesh(mm) or Hook(no.) Size	4 ¹ 5 ³	4 ¹ 5 ³	4.375-4 ¹ 5 ³	4 ¹ 5 ³	4 ¹ 5 ³
Range of Depths (fm)	42-45	45-57	80-90	55-80	60-80

¹ South of lat 44°00'N² Numbers in 100's³ Inches

TABLE 43
(continued)LENGTH FREQUENCIES - HADDOCK - 4x¹ - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)					
	(Commercial)					
CATCHES/LANDINGS	Landings					
MONTH	March	April	August	October	December	March
COUNTRY	Canada (Maritimes)					
TONNAGE	501-900					151-500
32	2	-	-	-	-	17
34	5	-	-	-	-	21
36	6	4	-	-	-	24
38	7	9	-	-	-	28
40	20	25	-	-	-	34
42	29	38	-	-	14	52
44	76	99	31	22	58	79
46	94	168	62	49	78	114
48	130	142	79	54	120	113
50	185	123	139	114	131	100
52	159	130	127	112	39	110
54	126	116	103	102	87	80
56	76	80	67	91	122	65
58	44	36	67	86	51	79
60	22	19	57	76	56	31
62	11	7	67	81	56	17
64	6	3	52	66	71	14
66	1	1	46	66	41	10
68	1	1	57	36	10	7
70	-	-	36	20	31	3
72	-	-	-	10	20	3
74	-	-	-	5	-	-
76	-	-	10	10	10	-
78	-	-	-	-	5	-
Total ‰	1000	1001	1000	1000	1000	1001
Serial Numbers	89-92	94-96	146	155	160	115
Number of Samples	4	3	1	1	1	1
Number of Fish Measured	1346	826	232	245	258	291
Mean Length (cm)	50.8	50.1	56.4	57.3	55.6	50.0
Mean Weight (kg)	1.39	1.45	1.87	2.10	1.76	1.38
Total Weight Landed (tons)	2384	2558	111	243	36	683
Estimated Number Landed	1715 ²	1764 ²	594 ²	1157 ²	205 ²	4949 ²
Mesh(mm) or Hook(no.) Size	4.375-4.5 ³	4.375 ³	4.625 ³	4.5 ³	4.25 ³	4.5 ³
Range of Depths (fm)	-	59	-	-	-	50-85

¹ South of lat 44°00'N² Numbers in 100's³ Inches

GEAR	Otter Trawl (Side)
CATCHES/LANDINGS	(Commercial)
MONTH	Landings
COUNTRY	May
TONNAGE	Canada (Maritimes)
	51-150
42	8
44	8
46	24
48	63
50	87
52	189
54	197
56	118
58	102
60	47
62	55
64	24
66	32
68	8
70	-
72	8
74	32
Total ‰	1002
Serial Numbers	133
Number of Samples	1
Number of Fish Measured	127
Mean Length (cm)	55.9
Mean Weight (kg)	1.78
Total Weight Landed (tons)	14
Estimated Number Landed	79 ¹
Mesh(mm) or Hook(no.) Size	4.5 ²
Range of Depths (fm)	35-45

¹ Numbers in 100's² Inches

TABLE 45

LENGTH FREQUENCIES - HADDOCK - 52e - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)
CATCHES/LANDINGS	(Commercial)
MONTH	Landings
COUNTRY	June
TONNAGE	Canada (Maritimes)
	501-900
32	4
34	-
36	27
38	44
40	61
42	71
44	77
46	82
48	134
50	95
52	110
54	95
56	87
58	49
60	27
62	20
64	6
66	4
68	5
70	1
Total ‰	999
Serial Numbers	81-82
Number of Samples	2
Number of Fish Measured	602
Mean Length (cm)	49.6
Mean Weight (kg)	1.24
Total Weight Landed (tons)	435
Estimated Number Landed	3669 ¹
Mesh(mm) or Hook(no.) Size	4.375 ²
Range of Depths (fm)	

¹ Numbers in 100's² Inches

TABLE 46

AGE/LENGTH TABLE - HADDOCK - 5Y - 1969 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		Landings														
COUNTRY		United States														
TONNAGE		0-310														
STRUCTURES USED IN AGE DETERMINATION		Scales														
Length Group (2 cm)	Age						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE								
		5	6	7	8	9		Months Within Quarter								
							Jul			Aug			Sep			
40		-	-	-	-	-	-	-	-	17	-	-	-	-	-	-
42		-	-	-	-	-	-	-	-	60	-	-	-	-	-	-
44		-	-	-	-	-	-	-	-	69	-	-	-	-	-	-
46		-	2	-	-	-	2	-	-	103	-	-	-	-	-	6
48		-	-	-	-	-	-	-	-	86	-	-	-	-	-	9
50		-	1	-	-	-	1	-	-	241	-	-	-	-	-	24
52		2	7	-	-	-	9	-	-	112	-	-	-	-	-	35
54		1	11	1	-	-	13	-	-	207	-	-	-	-	-	163
56		2	4	-	-	-	6	-	-	78	-	-	-	-	-	169
58		1	3	2	-	-	6	-	-	26	-	-	-	-	-	167
60		-	1	2	-	-	3	-	-	-	-	-	-	-	-	214
62		-	2	-	-	-	2	-	-	-	-	-	-	-	-	100
64		-	-	3	-	-	3	-	-	-	-	-	-	-	-	87
66		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68		-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Total No. of Ages Read		6	31	8	-	1	46							-	1000	1000
Serial Numbers							No. of Age Samples					3				
X		Number of fish measured each month					-	116	225							
		Mean length of fish (cm) each month					-	50.57	58.49							
		Mean weight of fish (kg) each month					-	1.35	2.07							
		Total weight caught or landed (tons) each month					-	155	144							
		Estimated number caught or landed (whole numbers) each month					-	1148	694 ¹							
		Range of depths (m) each month					-	55-110	46-201							
		Mesh size (mm)					-	114	114							

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	8	9	Total
Jul	-	-	-	-	-	-
Aug	93	875	32	-	-	1000
Sep	107	582	311	-	-	1000

¹ Numbers in 100's

TABLE 46
(continued)

AGE/LENGTH TABLE - HADDOCK - 5Y - 1969 (4th QUARTER)

GEAR		Otter Trawl (Commercial)					
CATCHES OR LANDINGS		Landings					
COUNTRY		United States					
TONNAGE		0-310					
STRUCTURES USED IN AGE DETERMINATION		Scales					
Length Group (2 cm)	Age			Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	5	6	7		Months Within Quarter		
					Oct	Nov	Dec
40	-	-	-	-	-	-	11
42	-	-	-	-	-	-	-
44	-	-	-	-	-	-	33
46	-	1	-	1	-	-	87
48	1	2	1	4	-	-	228
50	1	5	-	6	-	-	250
52	-	2	-	2	-	-	283
54	-	1	-	1	-	-	65
56	-	1	-	1	-	-	43
					-	-	1000
Total No. of Ages Read		2	12	1	15	X	
Serial Numbers		No. of Age Samples			1	X	
X		Number of fish measured each month			-	-	92
		Mean length of fish (cm) each month			-	-	50.48
		Mean weight of fish (kg) each month			-	-	1.31
		Total weight caught or landed (tons) each month			-	-	181
		Estimated number caught or landed (whole numbers) each month			-	-	1330 ¹
		Range of depths (m) each month			-	-	132-137
		Mesh size (mm)			-	-	114

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	Total
Oct	-	-	-	-
Nov	-	-	-	-
Dec	103	837	60	1000

¹ Numbers in 100's

TABLE 47

AGE/LENGTH TABLE - HADDOCK - 5Z - 1969 (1st QUARTER)

GEAR		Otter Trawl (Commercial)											
CATCHES OR LANDINGS		Landings											
COUNTRY		United States											
TONNAGE		0-458											
STRUCTURES USED IN AGE DETERMINATION		Scales											
Length Group (2 cm)	Age								Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	9		Months Within Quarter			
		Jan	Feb	Mar									
36	1	-	-	1	-	-	-	2	-	2	3		
38	2	-	-	3	-	-	-	5	-	8	6		
40	-	-	-	8	1	-	-	9	2	17	11		
42	5	-	-	4	2	-	-	11	4	39	27		
44	9	-	1	4	-	-	-	14	22	75	31		
46	12	2	-	12	2	-	-	28	50	115	51		
48	24	1	5	14	3	-	-	47	89	96	90		
50	19	2	8	26	1	-	-	56	96	93	109		
52	16	4	4	35	4	-	-	63	139	111	121		
54	8	4	5	35	2	-	-	54	110	91	113		
56	1	2	7	40	10	1	-	61	108	85	92		
58	-	1	3	38	8	2	1	53	109	63	80		
60	-	-	1	36	11	1	1	50	91	57	61		
62	-	-	1	26	10	3	-	40	63	39	58		
64	-	-	-	13	8	-	1	22	38	34	49		
66	-	-	-	8	10	1	2	21	30	23	23		
68	-	-	-	2	4	3	6	15	21	20	28		
70	-	-	-	-	1	2	4	7	13	14	10		
72	-	-	-	-	1	-	2	3	5	9	15		
74	-	-	-	-	1	-	1	2	5	5	4		
76	-	-	-	-	-	1	3	4	2	2	10		
78	-	-	-	-	1	1	4	6	-	-	4		
80	-	-	-	-	-	-	-	-	1	2	2		
82	-	-	-	-	-	-	-	-	1	1	1		
84	-	-	-	-	-	-	1	1	-	-	-		
86	-	-	-	-	-	-	1	1	-	-	-		
Total No. of Ages Read		97	16	35	305	80	15	27	575				
Serial Numbers		No. of Age Samples							34				
X		Number of fish measured each month							1383	759	1037		
		Mean length of fish (cm) each month							55.84	53.41	55.34		
		Mean weight of fish (kg) each month							1.92	1.61	1.75		
		Total weight caught or landed (tons) each month							989	909	1617		
		Estimated number caught or landed (whole numbers) each month							5160 ¹	5472 ¹	9229 ¹		
		Range of depths (m) each month							33-196	46-238	27-168		
		Mesh size (mm)							114	114	114		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	Total
Jan	170	32	66	544	134	22	32	1000
Feb	243	32	60	498	118	17	32	1000
Mar	191	30	63	516	131	23	46	1000

¹ Numbers in 100's

TABLE 47
(continued)

AGE/LENGTH TABLE - HADDOCK - 5Z - 1969 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings													Months Within Quarter		
COUNTRY		United States															
TONNAGE		0-458															
STRUCTURES USED IN AGE DETERMINATION		Scales															
Length Group (2 cm)	Age	2	3	4	5	6	7	8	9	10	11	12	Apr	May	Jun		
	38	-	2	-	1	-	-	-	-	-	-	-				3	-
40	-	1	-	-	1	-	-	-	-	-	-	2	2	13	2		
42	1	9	-	2	5	-	-	-	-	-	-	17	21	22	5		
44	-	15	1	3	11	1	-	-	-	-	-	31	42	37	23		
46	-	19	1	3	19	1	-	-	-	-	-	43	65	67	38		
48	-	23	8	5	23	1	-	-	-	-	-	60	89	74	61		
50	-	26	2	7	30	2	-	-	-	-	-	67	137	67	85		
52	-	22	5	5	29	5	-	-	-	-	-	66	100	73	88		
54	-	12	3	5	30	2	-	1	-	-	-	53	79	109	105		
56	-	1	4	4	17	4	1	-	-	-	-	31	59	81	93		
58	-	1	1	4	24	1	-	-	-	-	-	31	52	85	108		
60	-	-	1	1	39	10	-	-	-	-	-	51	68	79	99		
62	-	-	-	1	33	8	-	1	1	-	-	44	63	75	90		
64	-	-	2	-	17	11	-	-	-	-	-	30	66	69	71		
66	-	-	1	1	14	3	2	1	1	-	-	23	54	50	45		
68	-	-	-	1	6	5	2	2	3	-	-	19	34	32	47		
70	-	-	-	-	1	5	1	1	2	-	-	10	26	28	16		
72	-	-	-	-	1	-	3	-	1	-	1	6	19	12	11		
74	-	-	-	-	-	-	-	-	1	4	-	6	13	10	4		
76	-	-	-	-	-	-	-	-	-	-	-	-	5	4	6		
78	-	-	-	-	-	-	-	-	-	-	-	-	3	5	1		
80	-	-	-	-	-	-	-	1	2	-	-	3	1	3	1		
82	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-		
84	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-		
												1000	1000	1000			
Total No. of Ages Read	1	131	29	43	300	59	9	8	14	-	2	596					
Serial Numbers	No. of Age Samples											37					
												Number of fish measured each month	1157	1112	1511		
												Mean length of fish (cm) each month	56.31	56.80	57.56		
												Mean weight of fish (kg) each month	1.83	1.79	1.94		
												Total weight caught or landed (tons) each month	2424	1687	2329		
												Estimated number caught or landed (whole numbers) each month	13284	9428	11969		
												Range of depths (m) each month	37-183	33-95	33-146		
												Mesh size (mm)	114	114	114		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	2	3	4	5	6	7	8	9	10	11	12	Total
Apr	1	206	49	70	499	107	22	14	27	-	5	1000
May	1	178	49	69	525	114	20	13	26	-	5	1000
Jun	-	149	50	71	556	120	19	11	21	-	3	1000

1 Numbers in 100's

TABLE 47
(continued)

AGE/LENGTH TABLE - HADDOCK - 5Z - 1969 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings												Months Within Quarter		
COUNTRY		United States														
TONNAGE		0-458														
STRUCTURES USED IN AGE DETERMINATION		Scales														
Length Group (2 cm)	Age	1	2	3	4	5	6	7	8	9	10	11	Total No. of Ages Read	Jul	Aug	Sep
	34	1	-	-	-	-	-	-	-	-	-	-		-	1	2
36	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
38	-	-	-	-	-	2	-	-	-	-	-	-	2	-	-	-
40	-	1	3	-	-	4	-	-	-	-	-	-	8	4	2	1
42	-	1	3	1	1	4	-	-	-	-	-	-	10	7	3	7
44	-	-	6	-	-	11	1	-	-	-	-	-	18	20	8	9
46	-	-	8	3	1	19	1	-	-	-	-	-	32	28	15	24
48	-	-	19	1	1	19	3	-	-	-	-	-	43	53	32	32
50	-	-	21	3	3	38	-	-	-	-	-	-	65	58	51	46
52	-	-	15	3	1	37	4	-	-	-	-	-	60	79	85	67
54	-	-	8	3	2	24	4	-	-	-	-	-	42	107	75	88
56	-	-	5	4	5	26	6	-	-	-	-	-	46	114	109	87
58	-	-	1	5	2	36	8	1	-	-	-	-	53	109	124	120
60	-	-	1	-	2	35	13	-	2	-	-	-	53	97	130	123
62	-	-	-	1	2	26	9	1	-	1	-	-	40	91	97	123
64	-	-	-	-	1	26	3	2	-	-	1	-	33	79	88	91
66	-	-	-	-	1	12	12	1	-	1	-	-	27	55	71	75
68	-	-	-	-	-	8	4	2	2	1	-	-	17	38	43	56
70	-	-	-	-	-	1	7	-	1	-	-	-	9	19	22	23
72	-	-	-	-	-	-	3	-	1	1	1	-	6	21	20	14
74	-	-	-	-	-	-	3	-	1	2	2	-	8	12	13	8
76	-	-	-	-	-	-	-	-	-	-	1	-	1	-	4	1
78	-	-	-	-	-	-	-	-	1	1	-	-	2	-	6	2
80	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	2
82	-	-	-	-	-	-	-	-	-	1	-	-	1	5	2	2
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
													1000	1000	1000	
Total No. of Ages Read		1	2	90	24	23	328	81	7	8	9	5	578			
Serial Numbers		No. of Age Samples											35			
X		Number of fish measured each month											906	1561	1149	
		Mean length of fish (cm) each month											58.18	59.58	59.57	
		Mean weight of fish (kg) each month											2.05	2.24	2.22	
		Total weight caught or landed (tons) each month											1358	1466	1394	
		Estimated number caught or landed (whole numbers) each month											6626 ¹	6551 ¹	6269 ¹	
		Range of depths (m) each month											37-128	27-256	37-256	
		Mesh size (mm)											114	114	114	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	1	2	3	4	5	6	7	8	9	10	11	Total
Jul	2	1	116	41	43	582	157	16	17	18	7	1000
Aug	-	1	90	38	42	572	188	23	17	19	10	1000
Sep	-	1	88	37	42	581	187	20	20	18	6	1000

¹ Numbers in 100's

TABLE 47
(continued)

AGE/LENGTH TABLE - HADDOCK - 5Z - 1969 (4th QUARTER)

GEAR		Otter Trawl (Commercial)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings												Months Within Quarter		
COUNTRY		United States														
TONNAGE		0-458														
STRUCTURES USED IN AGE DETERMINATION		Scales														
Length Group (2 cm)	Age	2	3	4	5	6	7	8	9	10	11	12	Oct	Nov	Dec	
		36	-	-	-	-	-	-	-	-	-	-				-
38	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
40	3	-	-	-	-	-	-	-	-	-	-	-	1	2	-	
42	-	1	-	-	1	-	-	-	-	-	-	-	3	2	-	
44	-	2	-	-	5	-	-	-	-	-	-	-	7	2	-	
46	-	4	-	1	4	-	-	-	-	-	-	-	9	3	4	
48	-	7	3	-	13	-	-	-	-	-	-	-	23	14	-	
50	-	12	2	-	9	1	-	-	-	-	-	-	24	21	26	
52	-	12	2	6	32	1	-	-	-	-	-	-	53	57	79	
54	-	9	5	1	25	3	-	-	-	-	-	-	43	85	62	
56	-	5	5	2	14	3	-	-	-	-	-	-	29	109	55	
58	-	5	1	2	25	3	1	-	-	-	-	-	37	148	55	
60	-	7	-	4	25	5	1	1	-	-	-	-	43	100	87	
62	-	-	-	2	26	5	-	-	-	-	-	-	33	128	102	
64	-	-	-	2	20	16	3	-	1	-	-	-	42	123	106	
66	-	-	-	-	13	8	1	-	-	-	1	-	23	54	85	
68	-	-	-	-	7	5	-	-	-	-	-	-	12	72	60	
70	-	-	-	1	4	4	1	2	1	-	-	-	13	35	83	
72	-	-	-	-	2	-	1	2	-	-	-	-	5	27	93	
74	-	-	-	-	-	-	-	2	-	1	-	-	3	15	30	
76	-	-	-	-	-	-	-	1	1	-	-	-	2	-	33	
78	-	-	-	-	-	-	-	1	-	-	-	-	1	2	21	
80	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6	
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	
Total No. of Ages Read											407	1000	1000	1000		
Serial Numbers											24					
No. of Age Samples											24					
Number of fish measured each month											1173	733	323			
Mean length of fish (cm) each month											60.76	60.84	64.14			
Mean weight of fish (kg) each month											2.46	2.45	2.92			
Total weight caught or landed (tons) each month											1121	631	538			
Estimated number caught or landed (whole numbers) each month											4556 ¹	2570 ¹	1843 ¹			
Range of depths (m) each month											33-249	33-192	46-73			
Mesh size (mm)											114	114	114			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	2	3	4	5	6	7	8	9	10	11	12	Total
Oct	1	115	38	47	540	178	20	33	20	3	5	1000
Nov	2	103	38	50	557	180	20	26	16	5	3	1000
Dec	-	78	24	45	457	203	22	93	64	10	4	1000

¹ Numbers in 100's

GEAR	Otter Trawl (Research)		
CATCHES/LANDINGS	Catches		
MONTH	June	July	September
COUNTRY	Denmark (Greenland)		
TONNAGE	167		
SPECIES OR TYPE	<i>Sebastes marinus</i>		
SEX	Mixed		
5	-	1	-
6	-	5	-
7	-	30	19
8	-	24	57
9	1	31	19
10	-	45	172
11	1	19	172
12	6	31	77
13	13	39	38
14	33	37	57
15	48	65	57
16	120	116	19
17	185	150	19
18	219	126	-
19	119	114	10
20	119	82	5
21	38	39	24
22	35	17	10
23	29	9	5
24	9	3	5
25	7	2	14
26	2	1	14
27	2	1	10
28	3	1	33
29	1	1	10
30	1	1	33
31	-	-	10
32	1	2	24
33	2	-	10
34	-	-	29
35	-	-	24
36	-	-	5
37	-	-	10
38	-	-	5
40	-	-	5
45	-	1	-
46	-	1	-
47	-	1	-
48	-	1	-
49	1	-	-
53	-	1	-
55	-	1	-
56	-	1	-
57	1	-	-
58	-	1	-
59	2	1	-
60	-	1	-
63	-	1	-
64	1	-	-
Total ‰	999	1002	1001
Serial Numbers	-	-	-
Number of Samples	-	-	-
Number of Fish Measured	892	1558	209
Mean Length (cm)	18.4	16.4	16.6
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	36	36	36
Range of Depths (fm)	239-264	220-264	182

TABLE 49

LENGTH FREQUENCIES - REDFISH - 1C - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)		
CATCHES/LANDINGS	Catches		
MONTH	January	February	April
COUNTRY	Denmark (Greenland)		
TONNAGE	167 BRT		
SPECIES OR TYPE	NK		
SEX	Mixed		
4	1	-	-
5	30	-	-
6	70	-	8
7	14	-	15
8	21	-	13
9	20	-	8
10	6	-	-
11	3	-	-
12	12	-	-
13	14	-	5
14	12	-	5
15	8	-	8
16	9	-	5
17	30	-	31
18	40	-	26
19	27	-	31
20	33	7	13
21	25	-	13
22	17	-	21
23	45	14	41
24	40	21	75
25	53	28	75
26	64	28	77
27	82	56	124
28	71	63	83
29	72	154	75
30	83	168	83
31	35	84	75
32	28	112	41
33	17	70	28
34	7	70	13
35	4	28	5
36	2	14	3
37	1	28	-
38	2	21	-
39	1	-	-
40	1	21	-
41	-	-	-
42	1	-	-
43	-	-	-
44	-	-	-
45	-	7	-
46	-	-	-
47	-	7	-
Total ‰	1001	1001	1000
Serial Numbers	-	-	-
Number of Samples	-	-	-
Number of Fish Measured	2104	143	387
Mean Length (cm)	22.1	30.8	25.5
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	36	-	36
Range of Depths (fm)	256-272	256-272	253-297

TABLE 50

LENGTH FREQUENCIES - REDFISH - 1D - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)						
CATCHES/LANDINGS	Catches						
MONTH	January	February	March	April	May	July	August
COUNTRY	Denmark (Greenland)						
TONNAGE	167 BRT						
5	19	-	47	21	26	82	-
6	32	-	94	21	52	209	14
7	23	-	48	-	51	114	108
8	73	-	77	164	49	49	120
9	85	-	159	204	89	125	37
10	32	-	63	121	153	146	33
11	23	-	16	41	8	34	45
12	37	-	34	112	27	32	31
13	41	-	55	30	57	19	4
14	34	-	52	30	75	11	17
15	32	-	21	41	40	6	17
16	33	-	20	52	29	6	24
17	38	14	24	64	34	11	23
18	42	23	42	10	73	11	39
19	37	41	38	52	56	4	35
20	38	45	30	6	70	4	70
21	24	50	6	1	15	4	71
22	15	109	12	3	16	2	24
23	17	77	14	3	23	2	24
24	18	45	6	3	10	2	21
25	18	18	5	3	5	4	17
26	18	36	3	3	5	6	10
27	17	9	4	4	4	6	6
28	16	23	5	1	5	15	1
29	17	27	4	-	4	4	1
30	18	23	4	4	-	8	2
31	20	27	11	1	4	11	5
32	25	36	9	4	3	11	12
33	25	54	9	1	4	4	22
34	15	90	17	-	-	13	29
35	25	72	17	1	5	13	39
36	16	54	14	-	-	6	25
37	16	41	12	-	-	6	24
38	10	18	9	-	1	2	18
39	11	18	4	-	1	6	10
40	9	14	4	-	-	2	7
41	4	14	1	-	1	2	2
42	3	-	1	-	-	-	6
43	2	-	2	1	-	2	4
44	2	-	-	-	-	-	2
45	1	5	-	-	-	2	-
46	1	-	-	-	-	-	-
47	1	-	-	-	-	-	-
48	-	-	-	-	-	-	1
49	1	-	-	-	-	-	-
50	-	-	-	-	1	-	-
51	1	-	-	-	-	-	-
52	1	-	-	-	-	-	-
53	-	-	-	-	-	-	-
54	1	-	1	-	-	-	-
55	1	-	-	-	-	-	-
56	-	-	-	-	-	-	-
57	-	-	-	-	-	-	-
continued on next page							
Total ‰							
Serial Numbers							
Number of Samples							
Number of Fish Measured							
Mean Length (cm)							
Mean Weight (kg)							
Total Weight Landed (tons)							
Estimated Number Landed							
Mesh(mm) or Hook(no.) Size							
Range of Depths (fm)							

TABLE 50 LENGTH FREQUENCIES - REDFISH - 1D - 1969
(continued)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)						
	Catches						
CATCHES/LANDINGS	January	February	March	April	May	July	August
MONTH	Denmark (Greenland)						
COUNTRY	167 BRT						
TONNAGE							
58	-	5	1	-	-	-	-
59	1	5	-	-	-	-	-
60	2	-	-	-	-	2	-
61	1	5	-	-	-	-	-
62	2	-	-	-	-	-	-
63	1	-	-	-	-	-	-
64	1	-	4	-	-	-	-
65	2	5	1	-	-	-	-
66	1	-	-	-	-	-	-
67	1	-	-	-	-	-	-
68	1	-	2	-	-	-	-
69	-	-	-	-	-	-	-
70	1	-	-	-	-	-	-
Total ‰	1001	1003	1002	1002	996	998	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	-	-	-	-	-	-	-
Number of Fish Measured	3852	221	1114	776	731	473	828
Mean Length (cm)	19.8	29.0	14.9	11.9	14.0	11.7	18.9
Mean Weight (kg)	-	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	36	-	36	36	36	36	36
Range of Depths (fm)	138-182	160-165	160-165	132-143	165	143-176	149-165

TABLE 51

LENGTH FREQUENCIES - REDFISH - 2J - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl					
	(Commercial)			(Research)		
CATCHES/LANDINGS	Catches					
MONTH	February			November		
COUNTRY	Poland			USSR		
TONNAGE	2800 BRT			3600		
SPECIES OR TYPE	<i>S. mentella</i>			Beaked Redfish		
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
24	-	-	-	8	5	13
25	1	-	1	21	21	42
26	8	-	8	33	19	52
27	23	1	24	29	31	60
28	42	1	43	45	36	81
29	48	10	58	46	37	83
30	41	33	74	65	62	127
31	29	63	92	47	39	86
32	24	110	134	49	56	105
33	12	111	123	47	39	86
34	7	108	115	34	42	76
35	22	98	120	20	21	41
36	10	65	75	32	12	44
37	10	35	45	18	15	33
38	12	21	33	11	21	32
39	8	6	14	6	16	22
40	5	3	8	1	11	12
41	1	3	4	1	1	2
42	1	7	8	-	1	1
43	-	1	1	-	-	-
44	-	5	5	-	1	1
45	-	5	5	-	1	1
46	-	2	2	-	-	-
47	-	4	4	-	-	-
48	-	2	2	-	-	-
49	-	1	1	-	-	-
50	-	-	-	-	-	-
51	-	1	1	-	-	-
Total ‰	304	696	1000	513	487	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	2	-	-	-	-
Number of Fish Measured	252	575	827	718	682	1400
Mean Length (cm)	31.2	34.1	34.1	30.99	31.61	31.29
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	91
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	114	-	-	110
Range of Depths (fm)	-	-	241-302	-	-	151-189

TABLE 52

LENGTH FREQUENCIES - REDFISH - 3K - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)											
	Catches											
CATCHES/LANDINGS												
MONTH	May			June/July			May			June/July		
COUNTRY	Poland											
TONNAGE	2800 BRT											
SPECIES OR TYPE	<i>Sebastes mentella</i>						<i>Sebastes marinus</i>					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
21	-	-	-	1	-	1	-	-	-	-	-	-
22	-	-	-	3	3	6	-	-	-	-	-	-
23	-	-	-	4	1	5	-	-	-	-	-	-
24	-	1	1	9	6	15	-	-	-	-	-	-
25	-	-	-	7	10	17	-	-	-	-	-	-
26	-	2	2	6	4	10	-	-	-	-	-	-
27	2	2	4	13	12	25	-	-	-	-	-	-
28	4	3	7	16	10	26	-	-	-	-	-	-
29	8	6	14	21	21	42	-	-	-	-	-	-
30	7	3	10	15	22	37	-	-	-	-	-	-
31	14	7	21	21	28	49	2	-	2	-	-	-
32	14	10	24	29	22	51	6	1	7	-	-	-
33	27	14	41	22	18	40	7	2	9	-	-	-
34	41	8	49	25	12	37	9	1	10	1	-	1
35	37	16	53	22	7	29	12	1	13	2	-	2
36	69	28	97	28	9	37	6	-	6	1	-	1
37	68	20	88	32	21	53	9	5	14	1	-	1
38	91	32	123	32	13	45	13	3	16	2	2	4
39	61	34	95	28	18	46	9	5	14	2	-	2
40	29	26	55	26	16	42	10	4	14	8	-	8
41	14	22	36	13	24	37	15	11	26	10	1	11
42	8	37	45	3	21	24	25	9	34	17	4	21
43	3	39	42	-	29	29	35	15	50	18	4	22
44	4	34	38	3	40	43	35	13	48	29	12	41
45	2	41	43	-	44	44	45	16	61	35	3	38
46	1	33	34	3	38	41	45	21	66	43	8	51
47	1	29	30	-	50	50	60	28	88	53	11	64
48	-	23	23	-	51	51	47	30	77	42	20	62
49	-	13	13	-	35	35	36	23	59	34	17	51
50	-	10	10	-	21	21	33	35	68	23	30	53
51	-	2	2	-	9	9	20	28	48	17	33	50
52	-	-	-	-	3	3	15	32	47	11	46	57
53	-	-	-	-	-	-	13	35	48	3	60	63
54	-	-	-	-	-	-	4	32	36	2	62	64
55	-	-	-	-	-	-	3	34	37	-	61	61
56	-	-	-	-	-	-	2	24	26	-	65	65
57	-	-	-	-	-	-	1	15	16	-	55	55
58	-	-	-	-	-	-	-	17	17	-	45	45
59	-	-	-	-	-	-	2	14	16	-	39	39
60	-	-	-	-	-	-	-	13	13	-	20	20
61	-	-	-	-	-	-	-	2	2	-	14	14
62	-	-	-	-	-	-	-	5	5	-	9	9
63	-	-	-	-	-	-	-	4	4	-	9	9
64	-	-	-	-	-	-	-	2	2	-	10	10
65	-	-	-	-	-	-	-	1	1	-	4	4
66	-	-	-	-	-	-	-	-	-	-	1	1
67	-	-	-	-	-	-	-	-	-	-	-	-
68	-	-	-	-	-	-	-	-	-	-	1	1
Total ‰	505	495	1000	382	618	1000	519	481	1000	354	646	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	2	-	2	-	-	-	2	-	2	-
Number of Fish Measured	634	622	1256	261	419	680	665	613	1278	332	600	932
Mean Length (cm)	36.7	41.1	38.9	33.9	40.4	-	45.2	50.7	47.9	46.3	54.3	51.5
Mean Weight (kg)	-	-	-	-	-	-	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	114	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	208-213	-	-	197-208	-	-	208-213	-	-	197-208

TABLE 52 LENGTH FREQUENCIES - REDFISH - 3K - 1969
(continued)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl		
	(Research)		
CATCHES/LANDINGS	Catches		
MONTH	April		
COUNTRY	USSR		
TONNAGE	2800		
SPECIES OR TYPE	Beaked Redfish		
SEX	♂	♀	Total
31	2	-	2
32	13	2	15
33	6	4	10
34	10	5	15
35	30	8	38
36	34	7	41
37	65	14	79
38	78	17	95
39	59	15	74
40	59	20	79
41	39	20	59
42	30	32	62
43	16	22	38
44	5	22	27
45	10	59	69
46	1	31	32
47	2	50	52
48	1	61	62
49	-	38	38
50	-	41	41
51	1	29	30
52	1	20	21
53	-	8	8
54	-	5	5
55	-	8	8
Total ‰	462	538	1000
Serial Numbers	-	-	-
Number of Samples	-	-	-
Number of Fish Measured	370	430	800
Mean Length (cm)	38.62	45.45	42.29
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	942
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	110
Range of Depths (fm)	-	-	173-216

TABLE 53

LENGTH FREQUENCIES - REDFISH - 3N - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)					
CATCHES/LANDINGS	Catches					
MONTH	June			July		
COUNTRY	USSR					
TONNAGE	3600					
SPECIES OR TYPE	Beaked Redfish					
SEX	♂	♀	Total	♂	♀	Total
21	-	1	1	1	2	3
22	4	6	10	2	4	6
23	9	3	12	15	15	30
24	8	8	16	14	12	26
25	9	21	30	43	29	72
26	7	9	16	36	31	67
27	42	24	66	91	83	174
28	68	45	113	82	73	155
29	18	9	27	26	29	55
30	49	26	75	20	46	66
31	41	29	70	11	46	57
32	60	51	111	18	69	87
33	41	38	79	9	52	61
34	29	27	56	2	22	24
35	13	34	47	4	30	34
36	26	29	55	2	23	25
37	16	25	41	2	20	22
38	10	17	27	2	8	10
39	3	4	7	-	3	3
40	2	14	16	-	8	8
41	-	15	15	1	4	5
42	1	28	29	1	5	6
43	1	17	18	-	2	2
44	-	22	22	-	1	1
45	-	20	20	-	1	1
46	-	14	14	-	-	-
47	-	4	4	-	-	-
48	-	3	3	-	-	-
Total ‰	457	543	1000	382	618	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	-	1	1	1
Number of Fish Measured	457	543	1000	650	1050	1700
Mean Length (cm)	30.85	34.46	32.81	27.74	30.41	29.39
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	269	-	-	342
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	110	-	-	110
Range of Depths (fm)	-	-	135-243	-	-	119-189

GEAR	Otter Trawl (Research)					
CATCHES/LANDINGS	Catches					
MONTH	July			October		
COUNTRY	USSR					
TONNAGE	3600			2800		
SPECIES OR TYPE	Beaked Redfish					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
15	-	1	1	-	-	-
16	1	-	1	-	-	-
17	-	4	4	-	-	-
18	11	7	18	2	-	2
19	-	1	1	3	-	3
20	-	7	7	3	1	4
21	26	4	30	5	1	6
22	67	42	109	12	14	26
23	84	77	161	28	11	39
24	39	39	78	24	14	38
25	31	33	64	28	20	48
26	29	30	59	26	36	62
27	39	26	65	24	34	58
28	34	27	61	26	27	53
29	16	6	22	35	24	59
30	20	9	29	32	20	52
31	27	11	38	22	33	55
32	17	54	71	10	56	66
33	3	27	30	5	76	81
34	1	31	32	-	94	94
35	-	40	40	1	130	131
36	6	33	39	-	78	78
37	1	20	21	-	31	31
38	1	9	10	-	12	12
39	1	-	1	-	2	2
40	3	3	6	-	-	-
41	-	1	1	-	-	-
42	-	1	1	-	-	-
Total ‰	467	543	1000	286	714	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	-	-	-	-
Number of Fish Measured	320	380	700	438	1092	1530
Mean Length (cm)	25.55	28.51	27.16	26.87	32.09	30.58
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	602	-	-	1681
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	110	-	-	110
Range of Depths (fm)	-	-	140-314	-	-	119-216

TABLE 55 LENGTH FREQUENCIES - REDFISH - 3Pa - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	January	November	December
COUNTRY	France (St.-Pierre et Miquelon)		
TONNAGE	151-500		
17	-	2	-
18	-	9	-
19	-	10	1
20	1	11	-
21	2	12	-
22	3	18	1
23	5	21	4
24	8	20	4
25	9	16	8
26	23	16	8
27	52	25	11
28	72	39	16
29	108	81	42
30	92	113	91
31	74	130	119
32	63	130	144
33	78	96	124
34	103	64	109
35	95	50	80
36	70	43	70
37	63	31	44
38	35	28	42
39	23	14	31
40	13	9	24
41	4	5	13
42	1	4	8
43	1	3	6
44	-	-	2
45	-	-	-
46	1	-	-
Total ‰	999	1000	1002
Serial Numbers	-	-	-
Number of Samples	1	3	1
Number of Fish Measured	2632	6547	1710
Mean Length (cm)	32.19	30.96	33.28
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size ¹	100	100	100
Range of Depths (fm)	-	-	-

¹ Stretch mesh

TABLE 56

LENGTH FREQUENCIES - REDFISH - 4R - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)			Otter Trawl (Stern)		
	(Commercial)					
CATCHES/LANDINGS	Landings					
MONTH	August			November		
COUNTRY	Canada (Maritimes)					
TONNAGE	151-500			501-900		
SEX	♂ ^A	♀♀	Total	♂ ^A	♀♀	Total
23	2	-	2	-	-	-
24	2	-	2	-	-	-
25	2	-	2	12	9	21
26	35	5	40	15	12	27
27	58	19	77	59	15	74
28	90	30	120	77	56	133
29	104	37	141	71	80	151
30	118	53	171	15	136	151
31	51	56	107	9	133	142
32	51	69	120	-	90	90
33	23	60	83	-	37	37
34	9	35	44	-	59	59
35	7	23	30	-	40	40
36	7	12	19	-	25	25
37	-	19	19	-	25	25
38	-	14	14	-	15	15
39	-	2	2	-	9	9
40	-	7	7	-	-	-
Total ‰	559	441	1000	258	741	999
Serial Numbers	-	-	185-186	-	-	187-189
Number of Samples	-	-	2	-	-	3
Number of Fish Measured	242	190	432	84	240	324
Mean Length (cm)	29.5	32.0	30.6	28.0	31.4	30.5
Mean Weight (kg)	-	-	0.38	-	-	0.42
Total Weight Landed (tons)	-	-	884	-	-	464
Estimated Number ¹ Landed	-	-	23263	-	-	11048
Mesh(mm) or Hook(no.) Size ²	-	-	3-4	-	-	4.125-4.25
Range of Depths (fm)	-	-	95-140	-	-	100-150

¹ Numbers in 100's² Inches

TABLE 56
(continued)

LENGTH FREQUENCIES - REDFISH - 4R - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)								
	Landings after discards								
CATCHES/LANDINGS	February			August			November		
MONTH	Canada (Newfoundland)								
COUNTRY	151-500						501-900		
TONNAGE	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
15	-	1	1	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-
17	1	-	1	-	-	-	-	-	-
18	3	-	3	-	-	-	-	-	-
19	7	1	8	-	-	-	3	-	3
20	30	6	36	-	-	-	2	3	5
21	16	14	30	-	-	-	-	-	-
22	14	13	27	-	-	-	-	2	2
23	7	11	18	2	-	2	2	-	2
24	27	16	43	-	2	2	-	-	-
25	43	40	83	-	-	-	-	3	3
26	65	47	112	4	4	8	18	3	21
27	64	55	119	22	4	26	18	7	25
28	88	61	149	59	26	85	70	35	105
29	37	54	91	117	57	174	82	77	159
30	24	40	64	115	77	192	140	93	233
31	18	43	61	79	84	163	58	95	153
32	16	38	54	46	99	145	20	78	98
33	11	28	39	22	71	93	12	55	67
34	3	23	26	13	33	46	12	42	54
35	-	7	7	5	22	27	8	8	16
36	-	6	6	5	13	18	7	8	15
37	-	6	6	7	7	14	8	8	16
38	1	3	4	2	2	4	2	3	5
39	1	3	4	-	2	2	8	2	10
40	-	3	3	-	-	-	-	5	5
41	-	1	1	-	-	-	-	-	-
42	-	1	1	-	-	-	-	2	2
43	-	-	-	-	-	-	-	-	-
44	-	-	-	-	2	2	-	2	2
48	1	-	1	-	-	-	-	-	-
Total ‰	477	521	998	498	505	1003	470	531	1001
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	1	-	-	1	-	-	1
Number of Fish Measured	337	367	704	272	275	547	282	319	601
Mean Length (cm)	26.596	28.635	27.659	30.173	31.545	30.863	29.986	31.176	30.617
Mean Weight (kg)	-	-	0.306	-	-	0.501	-	-	0.332
Total Weight Landed (tons)	-	-	-	-	-	948.9	-	-	-
Estimated Number Landed	-	-	-	-	-	1894012	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	Small	-	-	Large	-	-	Large
Range of Depths (fm)	-	-	100	-	-	136-150	-	-	-

TABLE 56
(continued)

LENGTH FREQUENCIES - REDFISH - 4R - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	April	September	November
COUNTRY	France (St.-Pierre et Miquelon)		
TONNAGE	151-500		
13	-	-	1
14	-	1	-
15	-	-	1
16	-	-	-
17	1	1	-
18	5	1	1
19	7	1	1
20	10	1	2
21	8	1	2
22	5	3	3
23	5	-	2
24	7	3	4
25	17	3	4
26	30	12	18
27	57	47	47
28	87	120	121
29	112	184	202
30	132	108	207
31	131	164	149
32	91	119	99
33	59	75	57
34	44	32	32
35	47	19	18
36	55	4	12
37	41	1	7
38	20	2	4
39	7	1	3
40	6	-	2
41	9	-	1
42	2	-	-
43	4	-	-
44	1	-	-
Total ‰	1000	1002	1000
Serial Numbers	-	-	-
Number of Samples	1	1	4
Number of Fish Measured	1223	1577	17898
Mean Length (cm)	30.8	30.19	30.13
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size ¹	100	100	100
Range of Depths (fm)	-	-	-

¹ Stretch mesh

TABLE 57

LENGTH FREQUENCIES - REDFISH - 48 - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)											
	(Commercial)											
CATCHES/LANDINGS	Landings											
MONTH	May			July			July			August		
COUNTRY	Canada (Maritimes)											
TONNAGE	151-500						51-150					
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
20	-	-	-	4	-	4	2	-	2	-	-	-
21	-	-	-	-	-	-	5	2	7	-	-	-
22	-	-	-	-	-	-	-	2	2	-	-	-
23	-	-	-	4	-	4	-	2	2	-	-	-
24	-	-	-	-	-	-	2	5	7	2	2	4
25	-	-	-	16	4	20	5	10	15	5	-	5
26	4	-	4	8	8	16	35	8	43	12	10	22
27	12	-	12	59	20	79	48	23	71	25	20	45
28	12	-	12	102	43	145	135	70	205	100	35	135
29	69	16	85	110	102	212	95	75	170	75	38	113
30	81	32	113	102	71	173	63	85	148	103	40	143
31	101	53	154	59	83	142	53	68	121	53	100	153
32	122	73	195	16	71	87	13	83	96	45	78	123
33	81	65	146	12	47	59	15	35	50	30	63	93
34	41	36	77	-	24	24	15	10	25	25	38	63
35	20	41	61	-	16	16	15	2	17	15	28	43
36	20	12	32	-	8	8	2	-	2	10	5	15
37	12	20	32	4	4	8	5	-	5	10	12	22
38	20	12	32	-	-	-	2	5	7	5	5	10
39	-	24	24	-	-	-	-	2	2	5	2	7
40	-	12	12	-	-	-	2	-	2	-	2	2
41	-	4	4	-	4	4	-	-	-	-	-	-
42	-	4	4	-	-	-	-	-	-	-	2	2
Total ‰	595	404	999	496	505	1001	512	487	999	520	480	1000
Serial Numbers	-	-	190	-	-	191	-	-	192-193	-	-	194&196
Number of Samples	-	-	1	-	-	1	-	-	2	-	-	2
Number of Fish Measured	147	100	247	126	128	254	205	195	400	208	192	400
Mean Length (cm)	31.8	33.6	32.5	29.0	30.7	29.8	29.2	30.0	29.6	30.4	31.5	30.9
Mean Weight (kg)	-	-	0.50	-	-	0.37	-	-	0.37	-	-	0.46
Total Weight Landed (tons)	-	-	105	-	-	1661	-	-	3027	-	-	2960
Estimated Number Landed ¹	-	-	2100	-	-	44892	-	-	81811	-	-	64348
Mesh(mm) or Hook(no.) Size ²	-	-	4	-	-	3	-	-	3	-	-	3
Range of Depths (fm)	-	-	120-200	-	-	125-150	-	-	135-150	-	-	125-140

¹ Numbers in 100's² Inches

TABLE 57
(continued)

LENGTH FREQUENCIES - REDFISH - 4S - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)											
	(Commercial)											
CATCHES/LANDINGS	Landings											
MONTH	August			September			September			October		
COUNTRY	Canada (Maritimes)											
TONNAGE	151-500						51-150					
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
20	-	-	-	-	-	-	-	-	-	2	-	2
21	-	-	-	2	-	2	2	-	2	5	-	5
22	-	-	-	4	-	4	-	-	-	-	-	-
24	-	-	-	4	-	4	5	-	5	8	-	8
25	-	-	-	6	2	8	8	-	8	-	2	2
25	-	-	-	32	4	36	12	-	12	8	-	8
26	19	5	24	40	11	51	28	2	30	18	-	18
27	77	19	96	53	17	70	80	15	95	52	5	57
28	134	43	177	66	36	102	117	28	145	92	55	147
29	129	53	182	83	34	117	110	48	158	78	65	143
30	143	105	248	59	38	97	85	70	155	92	75	167
31	48	67	115	44	68	112	28	92	120	50	98	148
32	29	38	67	23	70	93	18	78	96	22	80	110
33	10	53	63	21	84	105	18	58	76	18	62	80
34	-	19	19	11	53	64	15	28	43	8	45	53
35	5	-	5	6	36	42	5	15	20	5	12	17
36	5	-	5	6	23	29	8	2	10	2	8	10
37	-	-	-	6	13	19	2	10	12	2	-	2
38	-	-	-	2	8	10	-	2	2	-	5	5
39	-	-	-	-	2	2	-	-	-	-	12	12
40	-	-	-	-	4	4	-	12	12	-	5	5
41	-	-	-	-	8	8	-	-	-	-	-	-
42	-	-	-	2	-	2	-	-	-	-	-	-
43	-	-	-	2	2	4	-	-	-	-	-	-
44	-	-	-	2	2	4	-	-	-	-	-	-
45	-	-	-	4	2	6	-	-	-	-	-	-
46	-	-	-	-	2	2	-	-	-	-	-	-
47	-	-	-	2	-	2	-	-	-	-	-	-
Total ‰	599	402	1001	480	519	999	541	460	1001	462	537	999
Serial Numbers	-	-	195	-	-	197-198	-	-	199-200	-	-	201-202
Number of Samples	-	-	1	-	-	2	-	-	2	-	-	2
Number of Fish Measured	125	84	209	228	246	474	216	184	400	185	215	400
Mean Length (cm)	29.1	30.4	29.6	29.3	32.3	30.9	28.9	31.5	30.1	29.1	31.4	30.3
Mean Weight (kg)	-	-	0.40	-	-	0.40	-	-	0.38	-	-	0.39
Total Weight Landed (tons)	-	-	2502	-	-	2673	-	-	3569	-	-	2485
Estimated Number Landed ¹	-	-	62550	-	-	66825	-	-	93921	-	-	63718
Mesh(mm) or Hook(no.) Size ²	-	-	3	-	-	3	-	-	3	-	-	3
Range of Depths (fm)	-	-	140-155	-	-	115-200	-	-	125-145	-	-	130-140

¹ Numbers in 100's² Inches

TABLE 57
(continued)

LENGTH FREQUENCIES - REDFISH - 4S - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)					
	(Commercial)					
CATCHES/LANDINGS	Landings					
MONTH	November			December		
COUNTRY	Canada (Maritimes)					
TONNAGE	151-500					
SEX	♂	♀	Total	♂	♀	Total
20	4	-	4	-	-	-
21	-	-	-	-	-	-
22	4	-	4	4	-	4
23	-	-	-	-	-	-
24	4	-	4	-	-	-
25	-	-	-	5	-	5
26	12	-	12	31	13	44
27	20	8	28	53	35	88
28	130	63	193	128	71	199
29	115	55	170	106	84	190
30	99	99	198	66	75	141
31	47	79	126	18	80	98
32	36	55	91	5	80	85
33	32	51	83	13	36	49
34	-	20	20	13	44	57
35	4	32	36	-	5	5
36	-	12	12	-	13	13
37	8	8	16	-	9	9
38	-	-	-	-	-	-
39	-	-	-	-	9	9
40	-	-	-	-	-	-
41	-	4	4	-	4	4
Total ‰	515	486	1001	442	558	1000
Serial Numbers	203	204	203	204	204	204
Number of Samples	-	-	1	-	-	1
Number of Fish Measured	130	123	253	100	126	226
Mean Length (cm)	29.4	31.1	30.2	28.7	30.8	29.8
Mean Weight (kg)	-	-	0.35	-	-	0.42
Total Weight Landed (tons)	-	-	1728	-	-	223
Estimated Number Landed ¹	-	-	49371	-	-	5310
Mesh(mm) or Hook(no.) Size ²	-	-	3	-	-	4.5
Range of Depths (fm)	-	-	130-155	-	-	125-150

¹ Numbers in 100's² Inches

TABLE 58

LENGTH FREQUENCIES - REDFISH - 4RST - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)											
	Landings											
CATCHES/LANDINGS	January			April			May			June		
MONTH	United States											
COUNTRY	34-440											
TONNAGE												
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
22	-	-	-	40	-	40	-	-	-	-	-	-
23	-	-	-	40	30	70	-	10	10	-	-	-
24	-	-	-	50	30	80	10	10	20	7	3	10
25	30	10	40	90	20	110	-	10	10	10	3	13
26	60	-	60	90	50	140	70	40	110	33	27	60
27	100	30	130	50	70	120	100	100	200	113	53	166
28	170	30	200	10	60	70	150	90	240	90	137	227
29	130	70	200	60	50	110	70	70	140	133	93	226
30	140	90	230	20	90	110	50	80	130	77	70	147
31	30	40	70	50	50	100	30	30	60	37	20	57
32	10	40	50	-	20	20	10	70	80	-	37	37
33	-	10	10	-	30	30	-	-	-	13	27	40
34	-	10	10	-	-	-	-	-	-	3	10	13
35	-	-	-	-	-	-	-	-	-	-	3	3
Total ‰	670	330	1000	500	500	1000	490	510	1000	516	483	999
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	1	1	1	3	3	3
Number of Fish Measured	67	33	100	50	50	100	49	51	100	155	145	300
Mean Length (cm)	28.34	29.76	28.81	26.22	28.22	27.22	28.04	28.59	28.32	28.48	29.09	28.77
Mean Weight (kg)	0.35	0.41	0.37	0.29	0.35	0.32	0.34	0.37	0.35	0.36	0.39	0.37
Total Weight Landed (tons)	234	133	367	126	156	282	276	305	581	783	782	1565
Estimated Number Landed ¹	6607	3254	9861	4394	4394	8788	8017	8344	16361	21757	20354	42111
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	100-150	-	-	101-150	-	-	101-150	-	-	101-150

¹ Numbers in 100's

TABLE 58
(continued)

LENGTH FREQUENCIES - REDFISH - 4RST - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	(Commercial)								
CATCHES/LANDINGS	Landings								
MONTH	July			August			September		
COUNTRY	United States								
TONNAGE	34-440								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
17	-	-	-	1	-	1	-	-	-
18	-	-	-	4	-	4	-	-	-
19	-	-	-	4	-	4	-	-	-
20	-	-	-	1	3	4	-	-	-
21	3	-	3	3	-	3	3	3	6
22	3	-	3	3	1	4	-	7	7
23	3	-	3	1	3	4	3	-	3
24	5	5	10	9	7	16	13	3	16
25	10	8	18	13	7	20	33	7	40
26	33	5	38	34	24	58	43	20	63
27	73	25	98	67	24	91	97	47	144
28	108	68	176	104	66	170	60	33	93
29	85	83	168	93	81	174	63	87	150
30	68	88	156	67	87	154	67	87	154
31	35	113	148	51	57	108	40	100	140
32	15	70	85	14	64	78	23	77	100
33	3	43	46	4	43	47	-	40	40
34	-	13	13	4	17	21	3	17	20
35	5	5	10	1	17	18	-	13	13
36	3	5	8	3	4	7	-	-	-
37	-	10	10	-	3	3	-	7	7
38	-	3	3	-	1	1	-	-	-
39	-	8	8	-	-	-	-	-	-
40	-	-	-	-	1	1	-	-	-
41	-	-	-	-	1	1	-	-	-
50	-	3	3	-	-	-	-	3	3
53	-	3	3	-	-	-	-	-	-
55	-	-	-	-	1	1	-	-	-
Total ‰	452	558	1010	481	512	993	448	551	999
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	4	4	4	7	7	7	3	3	3
Number of Fish Measured	179	221	400	339	361	700	135	165	300
Mean Length (cm)	28.49	30.67	26.69	28.32	30.14	29.26	28.12	30.20	29.26
Mean Weight (kg)	0.36	0.46	0.41	0.36	0.44	0.40	0.35	0.44	0.39
Total Weight Landed (tons)	828	1291	2119	1062	1366	2428	821	1251	2072
Estimated Number Landed ¹	22857	28220	51077	29584	31504	61088	23511	28736	52247
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	125-141	-	-	100-150	-	-	100-125

¹ Numbers in 100's

TABLE 58 LENGTH FREQUENCIES - REDFISH - 4RST - 1969
(continued)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	October			November		
MONTH	United States			United States		
COUNTRY	34-440					
TONNAGE						
SEX	♂ ^a	♀ ^b	Total	♂ ^a	♀ ^b	Total
24	20	-	20	20	-	20
25	40	-	40	10	20	30
26	20	30	50	30	30	60
27	120	40	160	110	60	170
28	150	80	230	150	60	210
29	60	70	130	120	30	150
30	80	30	110	50	120	170
31	60	90	150	40	40	80
32	20	30	50	10	80	90
33	-	40	40	10	10	20
34	-	20	20	-	-	-
Total ‰	570	430	1000	550	450	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1
Number of Fish Measured	57	43	100	55	45	100
Mean Length (cm)	28.21	29.72	28.86	28.27	29.29	28.73
Mean Weight (kg)	0.35	0.41	0.38	0.35	0.39	0.37
Total Weight Landed (tons)	507	447	954	405	369	774
Estimated Number Landed ¹	14433	10888	25321	11483	9395	20878
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64
Range of Depths (fm)	-	-	110-150	-	-	120-140

¹ Numbers in 100's

TABLE 59

LENGTH FREQUENCIES - REDFISH - 4Vn - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)					
	(Commercial)					
CATCHES/LANDINGS	Landings					
MONTH	February			June		
COUNTRY	Canada (Maritimes)					
TONNAGE	151-500					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
25	3	-	3	7	-	7
26	10	-	10	-	-	-
27	28	-	28	2	-	2
28	38	3	41	29	16	45
29	48	3	51	57	20	77
30	93	14	107	79	36	115
31	52	21	73	81	34	115
32	34	17	51	100	41	141
33	41	34	75	61	52	113
34	52	24	76	52	50	102
35	52	17	69	29	34	63
36	28	55	83	14	32	46
37	28	62	90	27	29	56
38	10	82	92	20	29	49
39	3	31	34	2	16	18
40	-	38	38	9	20	29
41	-	7	7	5	5	10
42	-	7	7	-	4	4
43	-	17	17	-	5	5
44	-	21	21	-	-	-
45	-	7	7	-	2	2
46	-	7	7	-	-	-
47	-	7	7	-	-	-
48	-	7	7	-	-	-
Total ‰/oo	520	481	1001	574	425	999
Serial Numbers	-	-	213	-	-	205-206
Number of Samples	-	-	1	-	-	2
Number of Fish Measured	-	-	291	254	188	442
Mean Length (cm)	31.8	37.4	34.5	32.2	34.1	33.0
Mean Weight (kg)	-	-	0.61	-	-	0.90
Total Weight Landed (tons)	-	-	43	-	-	352
Estimated Number Landed ¹	-	-	705	-	-	3911
Mesh(mm) or Hook(no.) Size ²	-	-	4	-	-	4
Range of Depths (fm)	-	-	140-150	-	-	200-225

¹ Numbers in 100's² Inches

TABLE 59 LENGTH FREQUENCIES - REDFISH - 4Vn - 1969
(continued)(FREQUENCIES IN $\phi/00$ - 1 CM GROUPS)

GEAR	Otter Trawl				
	(Commercial)				
CATCHES/LANDINGS	Landings				
MONTH	June	July	August	September	October
COUNTRY	France (St.-Pierre et Miquelon)				
TONNAGE	151-500				
20	-	-	1	-	-
21	-	-	1	-	-
22	-	-	1	1	-
23	-	-	2	1	-
24	1	-	2	-	-
25	-	-	4	1	-
26	1	1	4	2	1
27	1	1	8	2	1
28	6	7	22	14	3
29	8	24	50	18	19
30	26	74	81	34	32
31	62	71	107	71	55
32	101	121	119	100	102
33	134	144	117	117	130
34	158	162	116	129	122
35	120	108	92	125	133
36	123	75	79	106	110
37	84	62	55	71	79
38	60	44	37	49	48
39	29	28	24	30	27
40	23	20	19	24	34
41	17	20	19	32	30
42	18	22	15	25	22
43	8	8	9	17	16
44	8	4	6	11	12
45	4	-	5	8	13
46	5	1	3	5	3
47	1	-	3	4	3
48	1	2	1	2	3
49	-	1	-	1	-
50	-	-	-	1	2
51	1	-	-	-	-
52	-	-	-	-	-
53	-	-	-	1	-
Total $\phi/00$	1000	1000	1002	1002	1000
Serial Numbers	-	-	-	-	-
Number of Samples	1	1	2	2	1
Number of Fish Measured	1445	1100	7357	1863	961
Mean Length (cm)	34.95	34.28	33.76	35.12	35.30
Mean Weight (kg)	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size ¹	100	100	100	100	100
Range of Depths (fm)	-	-	-	-	-

¹ Stretch mesh

TABLE 60

LENGTH FREQUENCIES - REDFISH - 4W - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)								
	(Commercial)								
CATCHES/LANDINGS	Landings								
MONTH	June			July			August		
COUNTRY	Canada (Maritimes)								
TONNAGE	151-500								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
20	4	-	4	-	-	-	5	-	5
21	-	-	-	2	-	2	-	-	-
22	-	-	-	6	-	6	20	-	20
23	11	-	11	10	-	10	44	-	44
24	18	-	18	12	2	14	39	10	49
25	22	-	22	16	2	18	39	5	44
26	44	4	48	38	6	44	54	15	69
27	29	11	40	32	12	44	64	10	74
28	47	18	65	45	10	55	44	10	54
29	66	14	80	47	4	51	84	10	94
30	87	11	98	53	28	81	69	20	89
31	66	14	80	40	26	66	39	5	44
32	29	11	40	28	32	60	25	10	35
33	36	26	62	24	45	69	20	15	35
34	26	62	88	14	71	85	10	34	44
35	7	54	61	12	85	97	5	39	44
36	14	84	98	8	73	81	5	64	69
37	11	51	62	4	67	71	-	79	79
38	-	47	47	2	45	47	5	49	54
39	4	29	33	-	32	32	-	30	30
40	-	22	22	2	32	34	-	15	15
41	-	22	22	2	18	20	-	5	5
42	-	-	-	-	12	12	-	5	5
47	-	-	-	-	2	2	-	-	-
Total ‰	521	480	1001	397	604	1001	571	430	1001
Serial Numbers	-	-	207	-	-	208-209	-	-	210
Number of Samples	-	-	1	-	-	2	-	-	1
Number of Fish Measured	-	-	275	-	-	505	116	87	203
Mean Length (cm)	29.6	35.2	32.3	29.4	35.1	32.8	27.8	34.8	30.8
Mean Weight (kg)	-	-	0.62	-	-	0.65	-	-	0.54
Total Weight Landed (tons)	-	-	233	-	-	475	-	-	438
Estimated Number Landed ¹	-	-	3758	-	-	7308	-	-	8111
Mesh(mm) or Hook(no.) Size ²	-	-	4.5	-	-	4.5	-	-	4.5
Range of Depths (fm)	-	-	210-260	-	-	200-240	-	-	220-240

¹ Numbers in 100's² Inches

TABLE 61

LENGTH FREQUENCIES - REDFISH - 4X - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)
CATCHES/LANDINGS	(Commercial)
MONTH	Landings
COUNTRY	May
TONNAGE	Canada (Maritimes)
	151-500
19	1
20	1
21	1
22	6
23	18
24	25
25	26
26	29
27	22
28	28
29	42
30	51
31	60
32	60
33	68
34	68
35	69
36	58
37	55
38	38
39	55
40	68
41	50
42	56
43	22
44	9
45	9
46	4
47	2
Total ‰	1001
Serial Numbers	211-212
Number of Samples	2
Number of Fish Measured	700
Mean Length (cm)	34.3
Mean Weight (kg)	0.72
Total Weight Landed (tons)	306
Estimated Number Landed ¹	4250
Mesh(mm) or Hook(no.) Size ²	4.5
Range of Depths (fm)	200-250

¹ Numbers in 100's² Inches

TABLE 62

LENGTH FREQUENCIES - REDFISH - 5Y - 1969

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)								
	Landings								
CATCHES/LANDINGS	April			May			June		
MONTH	United States								
COUNTRY	34-440								
TONNAGE									
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
18	-	-	-	5	-	5	-	-	-
19	4	-	4	-	-	-	-	-	-
20	4	4	8	10	-	10	-	-	-
21	10	14	24	5	15	20	10	-	10
22	27	-	27	10	-	10	20	-	20
23	50	19	69	15	25	40	30	30	60
24	26	16	42	30	25	55	60	30	90
25	67	23	90	15	40	55	60	30	90
26	67	32	99	65	25	90	30	30	60
27	72	27	99	40	40	80	80	10	90
28	65	27	92	65	5	70	80	-	80
29	67	24	91	60	30	90	50	50	100
30	29	27	56	35	45	80	-	70	70
31	10	71	81	15	60	75	10	50	60
32	13	43	56	-	60	60	-	50	50
33	-	18	18	15	50	65	-	30	30
34	-	30	30	5	45	50	-	30	30
35	-	26	26	-	40	40	-	50	50
36	-	39	39	-	30	30	-	50	50
37	-	13	13	-	15	15	-	40	40
38	-	35	35	-	30	30	-	-	-
39	-	-	-	-	15	15	-	10	10
40	-	-	-	-	10	10	-	10	10
---	-	-	-	-	-	-	-	-	-
45	-	-	-	-	5	5	-	-	-
Total %	511	488	999	390	610	1000	430	570	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	3	3	3	2	2	2	1	1	1
Number of Fish Measured	153	147	300	78	122	200	43	57	100
Mean Length (cm)	26.32	30.54	28.37	27.09	31.02	29.49	26.09	31.12	28.96
Mean Weight (kg)	0.24	0.39	0.31	0.26	0.41	0.35	0.23	0.41	0.34
Total Weight Landed (tons)	657	1032	1689	199	495	694	229	547	776
Estimated Number Landed ¹	27713	26312	54025	7634	11940	19575	9997	13252	23249
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	61-150	-	-	61-101	-	-	61-101

¹Numbers in 100's

TABLE 62
(continued)

LENGTH FREQUENCIES - REDFISH - 5Y - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)								
	Landings								
CATCHES/LANDINGS	July			August			September		
MONTH	United States								
COUNTRY	34-440								
TONNAGE	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
16	1	-	1	-	-	-	-	-	-
17	1	-	1	2	2	4	-	-	-
18	3	-	3	2	-	2	1	-	1
19	-	4	4	4	4	8	-	-	-
20	9	4	13	10	4	14	9	7	16
21	9	6	15	13	10	23	7	-	7
22	14	10	24	8	12	20	12	13	25
23	26	25	51	12	16	28	29	11	40
24	41	36	77	33	20	53	38	26	64
25	48	30	78	29	8	37	55	29	84
26	50	38	88	44	25	69	70	30	100
27	59	63	122	42	23	65	57	26	83
28	55	51	106	70	26	96	74	29	103
29	40	48	88	50	30	80	63	45	108
30	35	41	76	54	50	104	35	37	72
31	9	56	65	26	39	65	33	37	70
32	3	43	46	27	54	81	14	33	47
33	1	36	37	12	40	52	6	44	50
34	1	35	36	2	41	43	2	45	47
35	-	25	25	-	45	45	-	27	27
36	-	26	26	-	51	51	2	23	25
37	-	13	13	-	24	24	-	16	16
38	-	5	5	-	17	17	-	9	9
39	-	3	3	-	12	12	-	2	2
40	-	-	-	-	2	2	-	6	6
41	-	-	-	-	2	2	-	-	-
42	-	-	-	-	-	-	-	-	-
43	-	-	-	-	2	2	-	-	-
Total ‰	405	598	1003	440	559	999	507	495	1002
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	8	8	8	5	5	5	6	6	6
Number of Fish Measured	323	477	800	218	282	500	288	312	600
Mean Length (cm)	26.25	29.29	28.06	27.35	31.10	29.45	26.99	30.19	28.57
Mean Weight (kg)	0.24	0.34	0.30	0.27	0.42	0.35	0.26	0.38	0.32
Total Weight Landed (tons)	199	425	624	176	346	522	366	523	889
Estimated Number Landed ¹	8425	12442	20867	6520	8291	14811	14216	13892	28108
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	90-120	-	-	80-120	-	-	70-110

¹ Numbers in 100's

TABLE 63

LENGTH FREQUENCIES - REDFISH - 5Z -1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)
CATCHES/LANDINGS	Catches
MONTH	September
COUNTRY	Poland
TONNAGE	2800 BRT
SPECIES	<i>Sebastes mentella</i>
SEX	Mixed
18	16
19	30
20	51
21	105
22	135
23	92
24	130
25	81
26	94
27	75
28	39
29	28
30	10
31	26
32	25
33	28
34	12
35	2
36	2
37	-
38	2
39	5
40	4
41	4
42	4
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	572
Mean Length (cm)	25.0
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	114
Range of Depths (fm)	87

TABLE 63 LENGTH FREQUENCIES - REDFISH - SZ - 1969
(continued)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Offier Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	February			March		
MONTH	United States			51-440		
COUNTRY	51-440			51-440		
TONNAGE	51-440			51-440		
SEX	♂ ¹	♀	Total	♂ ¹	♀	Total
20	-	-	-	10	-	10
21	-	-	-	-	-	-
22	-	-	-	10	-	10
23	20	-	20	10	-	10
24	60	50	110	-	10	10
25	90	40	130	10	10	20
26	70	30	100	10	40	50
27	60	40	100	40	40	80
28	90	30	120	60	20	80
29	130	40	170	70	20	90
30	70	50	120	30	10	40
31	30	20	50	10	20	30
32	30	30	60	30	40	70
33	-	20	20	-	100	100
34	-	-	-	-	60	60
35	-	-	-	-	80	80
36	-	-	-	-	60	60
37	-	-	-	-	60	60
38	-	-	-	-	70	70
39	-	-	-	-	50	50
40	-	-	-	-	20	20
Total ‰/oo	650	350	1000	290	710	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1
Number of Fish Measured	65	35	100	29	71	100
Mean Length (cm)	27.49	28.00	27.67	28.00	33.63	32.00
Mean Weight (kg)	0.27	0.29	0.28	0.29	0.52	0.45
Total Weight Landed (tons)	214	123	337	65	287	352
Estimated Number Landed ¹	7933	4272	12204	2265	5546	7812
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64
Range of Depths (fm)	-	-	61-100	-	-	61-100

¹ Numbers in 100's

TABLE 63
(continued)

LENGTH FREQUENCIES - REDFISH - 52 - 1969

(FREQUENCIES IN ‰ -1 CM GROUPS)

GEAR	Otter Trawl (Commercial)								
	Landings								
CATCHES/LANDINGS	April			May			July		
MONTH	United States								
COUNTRY	51-440								
TONNAGE	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
18	-	-	-	-	-	-	10	-	10
19	7	3	10	20	20	40	-	-	-
20	3	-	3	40	-	40	10	-	10
21	7	-	7	30	40	70	30	-	30
22	3	3	6	50	30	80	20	20	40
23	23	20	43	70	40	110	30	20	50
24	20	10	30	70	40	110	60	20	80
25	47	33	80	40	20	60	20	50	70
26	27	30	57	40	50	90	70	30	100
27	43	33	76	40	40	80	90	40	130
28	97	43	140	30	50	80	50	30	80
29	60	23	83	10	80	90	60	10	70
30	47	43	90	20	20	40	20	60	80
31	23	67	90	-	60	60	40	20	60
32	20	53	73	-	20	20	10	50	60
33	13	57	70	-	10	10	-	50	50
34	3	53	56	-	10	10	-	20	20
35	-	23	23	-	10	10	-	20	20
36	-	33	33	-	-	-	-	30	30
37	-	3	3	-	-	-	-	10	10
38	-	10	10	-	-	-	-	-	-
39	-	10	10	-	-	-	-	-	-
42	-	3	3	-	-	-	-	-	-
Total ‰	443	553	996	460	540	1000	520	480	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	3	3	3	1	1	1	1	1	1
Number of Fish Measured	133	167	360	46	54	100	52	48	100
Mean Length (cm)	27.56	30.62	29.26	24.02	26.81	25.53	26.21	29.42	27.75
Mean Weight (kg)	0.28	0.39	0.34	0.18	0.26	0.22	0.24	0.34	0.29
Total Weight Landed (tons)	299	533	832	47	79	126	48	65	113
Estimated Number Landed ¹	10886	13669	24556	2606	3059	5666	2032	1875	3907
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	61-100	-	-	61-100	-	-	97-102

¹ Numbers in 100's

TABLE 64

AGE FREQUENCIES - REDFISH - 3K - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Research)					
CATCHES/LANDINGS		Catches					
MONTH		April					
COUNTRY		USSR					
TONNAGE		2800					
YEAR-CLASS	AGE	‰ Frequency			Mean Length		
		♂♂	♀♀	Total	♂♂	♀♀	Total
1958	11	6	-	6	31.00	-	31.00
1957	12	6	6	12	33.00	34.00	33.50
1956	13	18	6	24	34.33	36.00	34.75
1955	14	18	6	24	35.33	39.00	36.25
1954	15	98	36	134	36.88	38.33	37.27
1953	16	110	24	134	37.83	39.75	38.18
1952	17	42	24	66	38.29	40.00	38.91
1951	18	48	30	78	39.25	40.80	39.85
1950	19	30	80	110	40.20	42.30	41.72
1949	20	30	30	60	41.00	43.00	42.00
1948	21	6	30	36	43.00	44.40	44.17
1947	22	24	36	60	42.75	45.17	44.20
1946	23	6	30	36	43.00	46.20	45.67
1945	24	-	42	42	-	47.57	47.57
1944	25	-	74	74	-	48.58	48.58
1943	26	-	62	62	-	50.10	50.10
1942	27	-	24	24	-	50.75	50.75
1941	28	-	18	18	-	52.67	52.67
Total ‰		442	558	1000	38.21	44.91	41.95
Serial Numbers		-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-
Number of Fish Measured		73	92	165	-	-	-
Mean Length (cm)		16.74	21.41	19.35	-	-	-
Mean Weight (kg)		-	-	-	-	-	-
Total Weight Landed (tons)		-	-	942	-	-	-
Estimated Number Landed		-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	110	-	-	-	-
Range of Depths (fm)		178	-	181	-	-	-

TABLE 65

AGE FREQUENCIES - REDFISH - 3N - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Research)					
CATCHES/LANDINGS		Catches					
MONTH		July					
COUNTRY		USSR					
TONNAGE		3600					
YEAR-CLASS	AGE	‰ Frequency			Mean Length		
		♂♂	♀♀	Total	♂♂	♀♀	Total
1962	7	10	-	10	22.33	-	22.33
1961	8	25	14	39	23.57	23.50	23.55
1960	9	53	81	134	24.60	24.00	24.24
1959	10	56	126	182	25.50	25.92	25.79
1958	11	56	133	189	27.19	27.71	27.56
1957	12	63	200	263	27.56	28.63	28.37
1956	13	10	91	101	31.33	30.15	30.28
1955	14	3	52	55	32.00	31.80	31.88
1954	15	-	14	14	-	35.00	35.00
1953	16	-	3	3	-	35.00	35.00
1952	17	-	3	3	-	36.00	36.00
1951	18	-	-	-	-	-	-
1950	19	-	7	7	-	37.00	37.00
Total ‰		276	724	1000	26.15	28.07	27.54
Serial Numbers		-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-
Number of Fish Measured		79	207	286	-	-	-
Mean Length (cm)		10.34	11.50	11.18	-	-	-
Mean Weight (kg)		-	-	-	-	-	-
Total Weight Landed (tons)		-	-	342	-	-	-
Estimated Number Landed		-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	110	-	-	-	-
Range of Depths (fm)		119	-	168	-	-	-

GEAR	Mid-Water (Herring) Trawl
CATCHES/LANDINGS	(Research) Catches
MONTH	November
COUNTRY	Germany, Federal Republic
TONNAGE	2000
22	6
24	19
26	180
28	497
30	254
32	19
34	19
36	-
38	-
40	-
42	6
Total ‰	1000
Serial Numbers	-
Number of Samples	4
Number of Fish Measured	161
Mean Length (cm)	28.7
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	161
Mesh(mm) or Hook(no.) Size	40
Range of Depths (fm)	25-219

TABLE 66
(continued)

LENGTH FREQUENCIES - SILVER HAKE - 4W - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)						
	Catches						
CATCHES/LANDINGS	January	March	May	June	July	October	November
MONTH	USSR						
COUNTRY	BMRT, SRIM						
TONNAGE							
10	-	4	-	-	-	-	-
12	-	12	-	-	-	3	-
14	-	6	-	3	-	13	-
16	-	1	-	7	-	20	1
18	-	2	-	27	10	123	8
20	17	10	-	22	-	280	38
22	46	51	3	17	-	224	135
24	147	185	43	31	22	157	114
26	225	263	123	205	145	70	134
28	200	159	358	292	303	67	319
30	142	83	307	222	270	23	173
32	118	82	117	89	170	13	53
34	63	66	33	54	62	7	18
36	15	32	13	22	15	-	5
38	13	16	-	6	3	-	1
40	12	11	3	2	-	-	1
42	2	11	-	-	-	-	-
44	-	6	-	-	-	-	-
46	-	-	-	1	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	1	4	1	5	2	1	4
Number of Fish Measured	600	1000	300	1500	600	300	1200
Mean Length (cm)	28.6	28.2	29.5	28.7	29.8	22.6	27.2
Mean Weight (kg)	0.160	0.160	0.172	0.180	0.185	-	0.126
Total Weight Landed (tons)	160	864	5035	2	5235	1564	1534
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	40	40	40	40	40	40	40
Range of Depths (fm)	125	90-150	60-100	80-150	80-100	70-80	70-160

TABLE 67 LENGTH FREQUENCIES - SILVER HAKE - 5Y - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	June			July		
MONTH	United States					
COUNTRY	0-150					
TONNAGE						
SEX	♂ ¹	♀	Total	♂ ¹	♀	Total
14	-	-	-	1	1	2
16	-	-	-	1	4	4
18	6	-	6	1	4	6
20	-	6	6	4	7	11
22	-	-	-	1	7	9
24	-	-	-	11	1	12
26	6	6	11	22	-	22
28	-	17	17	17	1	19
30	56	-	56	34	4	39
32	237	17	254	172	14	186
34	186	113	299	167	111	278
36	28	186	215	19	202	220
38	-	79	79	1	119	120
40	-	17	17	-	33	33
42	-	23	23	-	13	13
44	-	6	6	-	6	6
46	-	-	-	-	1	1
48	-	-	-	-	4	4
50	-	-	-	-	1	1
52	-	-	-	-	3	3
54	-	6	6	-	1	1
56	-	6	6	-	5	5
58	-	-	-	-	3	3
<hr/>						
Total ‰	519	482	1001	451	545	998
Serial Numbers	-	-	-	-	-	-
Number of Samples	4	4	4	12	12	12
Number of Fish Measured	92	85	177	606	738	1344
Mean Length (cm)	33.00	36.59	34.73	32.38	36.65	34.72
Mean Weight (kg)	0.25	0.39	0.32	0.22	0.34	0.29
Total Weight Landed (tons)	731	1038	1769	2080	3803	5883
Estimated Number Landed	28718 ¹	26533 ¹	55252 ¹	92827 ¹	112127 ¹	204954 ¹
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64
Range of Depths (fm)	-	-	40-105	-	-	25-60

¹Numbers in 100's

TABLE 67
(continued)

LENGTH FREQUENCIES - SILVER HAKE - 5Y- 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	August			September		
MONTH	August			September		
COUNTRY	United States					
TONNAGE	0-150					
SEX	♂ ¹	♀	Total	♂ ¹	♀	Total
8	3	-	3	-	-	-
10	-	-	-	-	-	-
12	-	-	-	-	-	-
14	-	2	2	-	-	-
16	11	17	27	-	-	-
18	20	15	35	-	40	40
20	18	27	46	-	-	-
22	18	18	36	-	-	-
24	29	14	42	-	-	-
26	11	8	18	-	-	-
28	9	2	11	-	40	40
30	47	9	56	40	-	40
32	188	12	200	80	80	160
34	161	77	238	160	120	280
36	14	137	150	40	200	240
38	2	96	97	-	200	200
40	-	21	21	-	-	-
42	-	6	6	-	-	-
44	-	2	2	-	-	-
46	-	3	3	-	-	-
48	-	2	2	-	-	-
50	-	-	-	-	-	-
52	-	2	2	-	-	-
54	-	3	3	-	-	-
Total ‰	531	473	1000	320	680	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	6	6	6	1	1	1
Number of Fish Measured	349	313	662	8	17	25
Mean Length (cm)	30.69	33.55	32.03	33.75	34.74	34.42
Mean Weight (kg)	0.19	0.26	0.23	0.24	0.28	0.26
Total Weight Landed (tons)	1614	2004	3618	475	1167	1642
Estimated Number Landed	85344 ¹	75807 ¹	161151 ¹	19936 ¹	42363 ¹	62299 ¹
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64
Range of Depths (fm)	-	-	20-72	-	-	45-65

¹ Numbers in 100's

TABLE 68

LENGTH FREQUENCIES - SILVER HAKE - 52 - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl								
	(Commercial)								
CATCHES/LANDINGS	Landings								
MONTH	May			June			July		
COUNTRY	United States								
TONNAGE	0-150								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
22	-	-	-	-	-	-	19	-	19
24	-	44	44	-	-	-	48	-	48
26	183	84	268	40	-	40	29	10	39
28	200	116	316	-	-	-	29	38	67
30	61	80	141	40	-	40	48	-	48
32	76	72	148	80	-	80	133	48	181
34	-	8	8	120	120	240	124	67	191
36	-	-	-	-	320	320	19	95	114
38	-	-	-	-	80	80	-	171	171
40	-	4	4	-	160	160	-	95	95
42	-	36	36	-	-	-	-	29	29
44	-	-	-	-	-	-	-	-	-
46	-	-	-	-	-	-	-	-	-
48	-	36	36	-	40	40	-	-	-
Total ‰	520	480	1001	280	720	1000	449	553	1002
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	2	2	2	1	1	1	1	1	1
Number of Fish Measured	26	24	50	7	18	25	47	58	105
Mean Length (cm)	28.61	31.46	29.98	32.21	37.94	36.34	31.10	36.81	34.25
Mean Weight (kg)	0.16	0.25	0.20	0.23	0.36	0.32	0.22	0.35	0.29
Total Weight Landed (tons)	165	231	396	190	775	965	279	555	834
Estimated Number Landed	10053 ¹	9280 ¹	19333 ¹	8378 ¹	21544 ¹	29922 ¹	12835 ¹	15838 ¹	28673 ¹
Mesh(mm) or Hook(no.) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	120-160	-	-	35-75	-	-	25-50

¹

Numbers in 100's

TABLE 69

LENGTH FREQUENCIES - SILVER HAKE - 52e - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl					
	(Research)				(Commercial)	
CATCHES/LANDINGS	Catches					
MONTH	January	November			April	May
COUNTRY	Germany, Federal Republic				USSR	
TONNAGE	2000				BMRT, SRTM	
SPECIES OR TYPE	Mixed	<i>M. bilinearis</i>	<i>M. albidus</i>	Total	<i>M. bilinearis</i>	
10	-	-	-	-	3	-
12	-	-	-	-	-	-
14	-	-	-	-	1	-
16	-	-	-	-	2	-
18	-	-	-	-	8	-
20	-	-	-	-	9	7
22	5	-	-	-	18	14
24	79	-	-	-	55	39
26	206	-	-	-	120	187
28	241	16	14	30	118	227
30	149	123	19	142	78	186
32	97	145	66	211	92	128
34	30	118	126	244	97	93
36	19	79	118	197	73	52
38	19	25	71	96	64	24
40	41	11	30	41	41	19
42	32	-	19	19	63	8
44	41	-	8	8	38	7
46	5	-	3	3	46	4
48	19	-	3	3	22	1
50	11	-	3	3	26	4
52	3	-	3	3	14	-
54	3	-	-	-	8	-
56	-	-	-	-	1	-
58	-	-	-	-	3	-
60	-	-	-	-	1	-
Total ‰	1000	517	483	1000	1001	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	-	-	1	3	5
Number of Fish Measured	369	189	176	365	900	1395
Mean Length (cm)	31.25	33.38	36.16	34.72	34.5	30.6
Mean Weight (kg)	-	-	-	-	0.323	0.160
Total Weight Landed (tons)	-	-	-	-	2915	963
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	110	-	-	30 ¹	40	40
Range of Depths (fm)	104-142	-	-	134-156	30-120	25-140

¹Codend liner

TABLE 69
(continued)

LENGTH FREQUENCIES - SILVER HAKE - 52a - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)				
	Catches				
CATCHES/LANDINGS	July	August	September	October	November
MONTH	USSR				
COUNTRY	BMRT, SRTM				
TONNAGE	<i>M. bilinearis</i>				
SPECIES OR TYPE					
14	2	-	-	-	-
16	20	-	+	-	-
18	73	3	2	-	-
20	92	7	15	1	-
22	59	12	44	6	+
24	34	20	75	55	7
26	37	47	89	134	262
28	109	151	84	140	258
30	195	269	141	146	144
32	132	196	166	147	90
34	95	120	126	108	61
36	72	86	93	88	45
38	49	44	79	63	28
40	26	22	46	42	18
42	9	10	20	33	10
44	1	5	12	16	5
46	1	4	4	12	2
48	+	2	3	4	1
50	-	2	1	4	1
52	-	+	+	1	+
54	-	+	-	-	+
56	-	+	-	-	+
Total ‰	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	6	34	28	17	47
Number of Fish Measured	1893	10389	8437	5120	14389
Mean Length (cm)	29.3	32.0	32.0	32.5	29.9
Mean Weight (kg)	0.194	0.260	0.251	0.256	0.208
Total Weight Landed (tons)	104	2843	2681	1294	3987
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	40	40	40	40	40
Range of Depths (fm)	15-80	25-80	30-60	30-60	30-60

TABLE 70 LENGTH FREQUENCIES - SILVER HAKE - 5Zw - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl						
	(Commercial)						
CATCHES/LANDINGS	Catches						
MONTH	January	February	April	May	June	August	October
COUNTRY	USSR						
TONNAGE	BMRT, SRTM						
SPECIES OR TYPE	<i>M. bilinearis</i>						
18	-	-	-	6	-	+	-
20	-	-	-	20	-	1	1
22	17	12	17	36	10	1	9
24	37	126	50	59	12	11	16
26	170	218	157	116	53	53	60
28	300	227	196	130	115	222	200
30	283	158	160	161	165	337	263
32	143	105	120	138	265	193	210
34	17	46	80	109	170	93	105
36	10	25	67	78	75	40	62
38	-	19	33	54	38	22	30
40	-	22	40	32	25	9	19
42	7	14	53	26	30	6	12
44	3	9	17	13	15	5	6
46	10	6	3	13	10	3	4
48	3	8	7	5	5	3	2
50	-	1	-	4	5	1	1
52	-	1	-	-	2	-	-
54	-	1	-	-	5	-	-
56	-	1	-	-	-	-	-
58	-	1	-	-	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	1	2	1	5	1	24	21
Number of Fish Measured	300	850	300	1968	400	7402	6274
Mean Length (cm)	29.6	29.9	31.7	31.7	33.2	31.3	31.7
Mean Weight (kg)	0.171	0.210	0.190	0.190	0.265	0.240	0.235
Total Weight Landed (tons)	572	366	256	2319	7352	11590	8432
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	40	40	40	40	40	40	40
Range of Depths (fm)	90	80-120	70-100	10-95	20-25	25-30	30-40

TABLE 71 LENGTH FREQUENCIES - SILVER HAKE - 6 - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)				
CATCHES/LANDINGS	Catches				
MONTH	January	February	April	August	October
COUNTRY	USSR				
TONNAGE	BMRT, SRM				
SPECIES OR TYPE	<i>M. bilinearis</i>				
18	-	3	-	-	-
20	-	15	-	-	2
22	-	33	7	4	2
24	-	107	32	29	8
26	-	197	120	148	95
28	20	200	213	258	268
30	40	155	243	245	277
32	80	83	168	154	153
34	180	47	88	70	90
36	200	22	40	29	48
38	160	17	15	18	13
40	90	27	10	23	10
42	90	20	17	21	10
44	60	27	23	1	8
46	30	20	7	-	6
48	20	10	12	-	5
50	30	8	5	-	5
52	-	5	-	-	-
54	-	1	-	-	-
56	-	3	-	-	-
Total ‰	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	1	1	1	5	1
Number of Fish Measured	100	600	400	1627	621
Mean Length (cm)	38.1	31.7	31.5	30.6	31.2
Mean Weight (kg)	0.395	0.300	0.218	0.208	0.234
Total Weight Landed (tons)	100	2	739	2046	2
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	40	40	40	40	40
Range of Depths (fm)	30	30	80	20-30	30

TABLE 72

AGE FREQUENCIES -- SILVER HAKE - 4W - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		January and March						May and June					
COUNTRY		USSR											
TONNAGE		BMRT, SRM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1967	2	10	13	26 ¹	22.8	23.2	22.7	-	-	-	-	-	-
1966	3	110	139	265 ¹	26.1	25.7	25.7	227	145	372	26.3	27.7	26.8
1965	4	101	234	335	29.3	29.9	29.7	150	353	503	29.2	29.4	29.3
1964	5	23	240	263	32.0	33.8	33.6	25	85	110	30.5	31.1	30.9
1963	6	3	38	41	34.5	37.0	36.8	-	15	15	-	34.5	34.5
1962	7	-	46	46	-	39.1	39.1	-	-	-	-	-	-
1961	8	-	21	21	-	42.2	42.2	-	-	-	-	-	-
1960	9	-	3	3	-	47.5	47.5	-	-	-	-	-	-
Total ‰		247	734	1000	27.9	31.5	30.5	402	598	1000	27.6	29.3	28.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	7	-	-	-	-	-	2	-	-	-
Number of Fish Aged		166	494	673	-	-	-	80	119	199	-	-	-
Mean Age		3.59	4.53	4.27	-	-	-	3.50	3.95	3.77	-	-	-
Mean Weight (kg)		-	-	0.202	-	-	-	-	-	0.160	-	-	-
Total Weight Landed (tons)		-	-	1113	-	-	-	-	-	14097	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	90-150	-	-	-	-	-	60-150	-	-	-

¹ 13 juveniles = 19‰.

TABLE 73

AGE FREQUENCIES - SILVER HAKE - 52e - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		April and May						July and August					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		88	99	Tot.	88	99	Tot.	88	99	Tot.	88	99	Tot.
1968	1	-	-	-	-	-	-	31	51	82	20.0	20.1	20.0
1967	2	23	23	46	25.0	25.0	25.0	46	40	86	23.7	23.4	23.6
1966	3	191	157	348	27.4	27.7	27.5	162	133	295	29.1	29.4	29.3
1965	4	186	104	290	30.1	29.5	29.8	126	157	283	31.1	31.6	31.4
1964	5	100	87	187	33.0	34.3	33.6	40	88	128	34.3	35.5	35.1
1963	6	17	40	57	35.3	38.3	37.4	4	61	65	36.5	38.4	38.2
1962	7	4	45	49	36.5	40.7	40.3	-	46	46	-	40.8	40.8
1961	8	-	15	15	-	44.4	44.4	-	13	13	-	43.8	43.8
1960	9	-	8	8	-	51.0	51.0	-	2	2	-	46.5	46.5
Total ‰		521	479	1000	29.6	32.1	30.8	409	591	1000	29.0	32.0	30.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	5	-	-	-	-	-	5	-	-	-
Number of Fish Aged		246	226	472	-	-	-	195	282	477	-	-	-
Mean Age		3.83	4.42	4.01	-	-	-	3.27	4.07	3.75	-	-	-
Mean Weight (kg)		-	-	0.186	-	-	-	-	-	0.199	-	-	-
Total Weight Landed (tons)		-	-	4411	-	-	-	-	-	5628	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	25-140	-	-	-	-	-	15-80	-	-	-

TABLE 73
(continued)

AGE FREQUENCIES - SILVER HAKE - 5Ze - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		October											
COUNTRY		USSR											
TONNAGE		BMRT, SRM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		85	90	Tot.	85	90	Tot.	85	90	Tot.	85	90	Tot.
1967	2	60	9	86 ¹	26.5	26.5	26.5						
1966	3	196	-	205 ¹	30.0	-	29.8						
1965	4	40	114	154	32.5	33.4	32.8						
1964	5	68	180	248	34.5	36.6	36.0						
1963	6	-	111	111	-	38.8	38.8						
1962	7	-	128	128	-	42.0	42.0						
1961	8	-	34	34	-	45.0	45.0						
1960	9	-	34	34	-	52.0	52.0						
Total ‰		364	610	1000	30.8	39.3	35.4						
Serial Numbers		-	-	-									
Number of Samples		-	-	1									
Number of Fish Aged		49	65	117									
Mean Age		3.32	5.75	4.77									
Mean Weight (kg)		-	-	0.298									
Total Weight Landed (tons)		-	-	5355									
Estimated Number Landed		-	-	-									
Mesh(mm) or Hook(no.) Size		-	-	40									
Range of Depths (fm)		-	-	30-60									

¹3 juveniles = 26‰.

TABLE 74

AGE FREQUENCIES - SILVER HAKE - 52w - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		January and February						June					
COUNTRY		USSR											
TONNAGE		BMRT, SRIM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		00	01	Tot.	00	01	Tot.	00	01	Tot.	00	01	Tot.
1968	1	-	-	-	-	-	-	2	2	18 ²	18.5	18.5	16.3
1967	2	13	7	36 ¹	26.5	26.5	25.6	38	56	94	22.3	22.9	22.7
1966	3	114	91	205	27.5	27.4	27.5	130	52	182	27.0	26.7	26.9
1965	4	292	111	403	30.4	31.4	30.6	282	74	356	30.3	31.0	30.5
1964	5	32	127	159	33.0	35.7	35.2	147	98	245	33.3	34.9	33.9
1963	6	10	72	82	35.2	39.8	39.2	12	47	59	37.2	38.2	38.0
1962	7	-	46	46	-	42.4	42.4	2	22	24	36.5	41.6	41.2
1961	8	-	49	49	-	46.4	46.4	-	18	18	-	43.6	43.6
1960	9	-	10	10	-	52.8	52.8	-	4	4	-	48.5	48.5
1959	10	-	7	7	-	55.5	55.5	-	-	-	-	-	-
1958	11	-	3	3	-	60.5	60.5	-	-	-	-	-	-
Total ‰		461	523	1000	29.9	36.1	33.0	613	373	1000	30.0	32.5	30.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	3	-	-	-	-	-	5	-	-	-
Number of Fish Aged		142	160	307	-	-	-	301	184	492	-	-	-
Mean Age		3.81	5.17	4.49	-	-	-	3.94	4.48	4.10	-	-	-
Mean Weight (kg)		-	-	0.214	-	-	-	-	-	0.190	-	-	-
Total Weight Landed (tons)		-	-	2341	-	-	-	-	-	9927	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	80-120	-	-	-	-	-	10-100	-	-	-

¹5 juveniles = 16‰²7 juveniles = 14‰

TABLE 74
(continued)

AGE FREQUENCIES - SILVER HAKE - 52w - 1969

(FREQUENCIES IN %/oo)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		August						October					
COUNTRY		USSR											
TONNAGE		BMRT. SRIM											
YEAR-CLASS	AGE	%oo Frequency			Mean Length			%oo Frequency			Mean Length		
		80 ¹	90 ²	Tot.	80 ¹	90 ²	Tot.	80 ¹	90 ²	Tot.	80 ¹	90 ²	Tot.
1968	1	-	-	8 ¹	-	-	22.5	-	-	12 ²	-	-	23.0
1967	2	41	8	49	25.3	26.5	25.5	6	-	18 ²	27.5	-	25.8
1966	3	348	66	422 ¹	29.5	30.5	29.6	235	125	360	29.7	30.6	30.0
1965	4	149	199	356 ¹	30.8	32.8	32.0	174	233	410 ²	31.8	32.7	32.3
1964	5	-	75	75	-	35.8	35.8	26	99	125	33.8	35.2	34.9
1963	6	-	49	49	-	38.5	38.5	-	26	26	-	37.6	37.6
1962	7	-	33	33	-	41.5	41.5	-	40	40	-	41.5	41.5
1961	8	-	8	8	-	48.5	48.5	-	6	6	-	46.5	46.5
1960	9	-	-	-	-	-	-	-	3	3	-	48.5	48.5
Total %oo		538	438	1000	29.6	34.5	31.6	441	532	1000	30.7	33.8	32.2
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	4	-	-	-
Number of Fish Aged		65	53	121	-	-	-	152	183	344	-	-	-
Mean Age		3.20	4.51	3.76	-	-	-	3.50	4.35	3.90	-	-	-
Mean Weight (kg)		-	-	0.240	-	-	-	-	-	0.215	-	-	-
Total Weight Landed (tons)		-	-	28424	-	-	-	-	-	9577	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	25-30	-	-	-	-	-	30-40	-	-	-

¹ 3 juveniles = 24%/oo² 9 juveniles = 27%/oo

TABLE 75

AGE FREQUENCIES - SILVER HAKE - 6 - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		January and February						April and May					
COUNTRY		USSR											
TONNAGE		BMRT, SRIM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1968	1	-	-	- ¹	-	-	-	3	-	5 ²	14.5	-	13.5
1967	2	30	53	103 ¹	23.9	23.8	23.5	16	53	72 ²	23.5	22.7	22.7
1966	3	91	73	167 ¹	26.9	27.3	27.1	106	120	226	28.1	27.1	27.5
1965	4	89	98	187	30.5	30.6	30.5	193	166	359	30.2	30.1	30.1
1964	5	52	153	205	33.4	35.4	34.9	61	126	187	33.2	33.9	33.7
1963	6	12	140	152	35.4	38.3	38.1	8	41	49	35.2	36.6	36.4
1962	7	-	102	102	-	42.4	42.4	-	49	49	-	41.5	41.5
1961	8	-	42	42	-	45.7	45.7	-	38	38	-	45.3	45.3
1960	9	-	35	35	-	49.9	49.9	-	15	15	-	49.2	49.2
1959	10	-	7	7	-	51.5	51.5	-	-	-	-	-	-
Total ‰		274	703	1000	29.3	36.1	33.9	387	608	1000	29.8	32.4	31.4
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	2	-	-	-	-	-	4	-	-	-
Number of Fish Aged		164	420	598	-	-	-	150	238	390	-	-	-
Mean Age		3.73	5.34	4.83	-	-	-	3.79	4.59	4.27	-	-	-
Mean Weight (kg)		-	-	0.300	-	-	-	-	-	0.218	-	-	-
Total Weight Landed (tons)		-	-	161	-	-	-	-	-	806	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	30	-	-	-	-	-	80	-	-	-

¹ 14 juveniles = 23‰.² 2 juveniles = 5‰.

TABLE 75
(continued)

AGE FREQUENCIES - SILVER HAKE - 6 - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)												
CATCHES/LANDINGS		Catches												
MONTH		August												
COUNTRY		USSR												
TONNAGE		BMRT, SRIM												
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length			
		80	90	Tot.	80	90	Tot.	80	90	Tot.	80	90	Tot.	
1968	1	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	2	51	-	61 ¹	26.0	-	26.0	-	-	-	-	-	-	-
1966	3	283	230	513	28.4	30.0	29.1	-	-	-	-	-	-	-
1965	4	64	244	308	30.1	32.1	31.7	-	-	-	-	-	-	-
1964	5	7	68	75	32.5	36.0	35.7	-	-	-	-	-	-	-
1963	6	-	13	13	-	39.0	39.0	-	-	-	-	-	-	-
1962	7	3	20	23	42.5	41.5	41.6	-	-	-	-	-	-	-
1961	8	-	7	7	-	44.5	44.5	-	-	-	-	-	-	-
1960	9	-	-	-	-	-	-	-	-	-	-	-	-	-
1959	10	-	-	-	-	-	-	-	-	-	-	-	-	-
Total ‰		408	582	1000	28.5	32.3	30.7							
Serial Numbers		-	-	-										
Number of Samples		-	-	1										
Number of Fish Aged		120	172	295										
Mean Age		3.05	3.92	3.56										
Mean Weight (kg)		-	-	0.208										
Total Weight Landed (tons)		-	-	6051										
Estimated Number Landed		-	-	-										
Mesh(mm) or Hook(no.) Size		-	-	40										
Range of Depths (fm)		-	-	20-30										

¹ 3 juveniles - 10"/..

TABLE 76

AGE/LENGTH KEYS AND FREQUENCIES (SILVER HAKE) - 1969

(Available on request from the Secretariat)

In accordance with a recommendation made by the Research and Statistics Committee at their Annual Meeting in 1962 and reaffirmed in 1965, Age/Length Keys and Frequencies will not be published but are to be deposited in the Secretariat and made available to Member Countries on request. The following Age/Length Keys and Frequencies for silver hake are now on file in the Secretariat.

GEAR: Otter Trawl

U. S. S. R.

DIVISION	MONTH
4W	January-March May-June October-November
5Ze	April-May July-August October
5Zw	January-February June August October
6	January-February April-May August

GEAR	Prawn Trawl (Research)
CATCHES/LANDINGS	NK
MONTH	April
COUNTRY	Denmark (Greenland)
TONNAGE	167 BRT
12	3
13	-
14	8
15	14
16	8
17	8
18	28
19	14
20	20
21	42
22	56
23	102
24	65
25	130
26	110
27	59
28	68
29	45
30	48
31	14
32	25
33	20
34	8
35	11
36	17
37	23
38	28
39	6
40	6
41	6
42	6
Total ‰	998
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	354
Mean Length (cm)	26.2
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	36
Range of Depths (fm)	253-297

TABLE 78

LENGTH FREQUENCIES - AMERICAN PLAICE - 1D - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Prawn Trawl (Research)	
CATCHES/LANDINGS	Catches	
MONTH	April	May
COUNTRY	Denmark (Greenland)	
TONNAGE	167 BRT	
7	2	-
8	3	11
9	2	10
10	8	26
11	26	4
12	42	1
13	28	10
14	62	5
15	167	21
16	96	15
17	58	14
18	44	12
19	38	25
20	29	34
21	21	26
22	21	23
23	41	73
24	39	67
25	45	106
26	38	87
27	33	87
28	26	74
29	23	40
30	24	40
31	15	26
32	6	23
33	11	22
34	6	18
35	6	27
36	8	10
37	10	27
38	8	10
39	3	8
40	5	10
41	2	-
42	1	1
43	1	3
44	-	3
45	-	-
46	1	-
47	-	-
48	-	-
49	-	-
50	-	-
51	-	1
Total ‰	999	1000
Serial Numbers	-	-
Number of Samples	-	-
Number of Fish Measured	1443	728
Mean Length (cm)	20.1	25.5
Mean Weight (kg)	-	-
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	36	36
Range of Depths (fm)	138-116	165

TABLE 79 LENGTH FREQUENCIES - AMERICAN PLAICE - 2J - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)		
	Catches		
CATCHES/LANDINGS	February	May	June
MONTH			
COUNTRY	Poland		
TONNAGE	2799		
21	-	4	1
22	-	5	1
23	-	5	2
24	-	10	8
25	2	16	5
26	1	23	11
27	2	26	17
28	4	48	22
29	3	37	38
30	4	55	51
31	20	61	54
32	20	43	66
33	25	54	87
34	31	51	58
35	25	44	59
36	21	40	53
37	32	43	54
38	45	44	49
39	37	41	46
40	48	32	37
41	40	26	28
42	42	26	30
43	45	27	29
44	33	30	34
45	57	28	23
46	47	23	21
47	51	27	23
48	74	24	19
49	38	24	19
50	37	23	14
51	31	12	10
52	56	9	6
53	29	11	10
54	37	12	4
55	16	8	5
56	16	5	5
57	16	2	-
58	9	3	-
59	5	1	-
60	2	-	1
61	-	-	-
62	-	-	1
Total ‰	1001	1003	1000
Serial Numbers	-	-	-
Number of Samples	1	2	1
Number of Fish Measured	1318	1290	1662
Mean Length (cm)	44.2	37.2	37.1
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	114	-	114
Range of Depths (fm)	230	-	208

TABLE 80 LENGTH FREQUENCIES - AMERICAN PLAICE - 3K - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl	
	(Commercial)	
CATCHES/LANDINGS	Catches	
MONTH	May	July
COUNTRY	Poland	
TONNAGE	2799	
20	4	-
21	3	-
22	2	1
23	12	-
24	7	1
25	17	4
26	16	1
27	21	10
28	16	11
29	15	14
30	25	7
31	18	17
32	27	27
33	35	23
34	23	26
35	18	28
36	34	30
37	30	40
38	29	31
39	34	41
40	43	51
41	37	40
42	43	33
43	35	43
44	41	41
45	45	44
46	30	31
47	39	55
48	54	41
49	34	38
50	37	57
51	37	41
52	28	44
53	20	37
54	15	24
55	15	24
56	12	21
57	11	10
58	7	-
59	8	6
60	10	1
61	5	-
62	1	-
63	3	-
64	1	-
65	1	-
66	2	-
Total ‰	1000	994
Serial Numbers	-	-
Number of Samples	1	1
Number of Fish Measured	986	704
Mean Length (cm)	41.6	43.5
Mean Weight (kg)	-	-
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	114	114
Range of Depths (fm)	197	164

TABLE 81

LENGTH FREQUENCIES - AMERICAN PLAICE - 3L - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	(Commercial)								
CATCHES/LANDINGS	Landings after Discard								
MONTH	February			April			August		
COUNTRY	Canada (Newfoundland)								
TONNAGE	501-900								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
21	1	-	1	-	-	-	-	-	-
25	1	-	1	-	-	-	-	-	-
26	1	2	3	-	-	-	1	-	1
27	1	1	2	-	-	-	-	-	-
28	1	2	3	-	-	-	-	-	-
29	1	2	3	-	-	-	-	2	2
30	1	3	4	-	-	-	-	1	1
31	4	5	9	5	-	5	4	10	14
32	8	6	14	6	1	7	5	3	8
33	8	10	18	5	6	11	15	7	22
34	18	14	32	14	11	25	19	14	33
35	19	22	41	30	15	45	23	27	50
36	24	28	52	27	16	43	30	23	53
37	29	33	62	29	21	50	28	23	51
38	37	35	72	32	28	60	24	30	54
39	35	31	66	49	25	74	32	29	61
40	38	32	70	37	29	66	22	28	50
41	32	34	66	48	27	75	35	28	63
42	33	34	67	37	37	74	24	24	48
43	20	35	55	38	36	74	12	35	47
44	14	27	41	21	18	39	16	25	41
45	15	28	43	22	30	52	10	25	35
46	9	24	33	20	22	42	10	32	42
47	9	26	35	18	24	42	11	26	37
48	5	20	25	8	22	30	5	26	31
49	-	27	27	5	28	33	2	35	37
50	1	22	23	3	22	25	-	26	26
51	-	20	20	2	17	19	1	35	36
52	-	18	18	-	11	11	1	28	29
53	-	16	16	-	14	14	-	17	17
54	-	13	13	-	10	10	-	26	26
55	-	15	15	-	14	14	-	15	15
56	-	10	10	-	20	20	-	14	14
57	-	12	12	-	10	10	1	8	9
58	-	9	9	-	10	10	-	6	6
59	-	4	4	-	7	7	-	5	5
60	-	4	4	-	2	2	-	9	9
61	-	5	5	-	4	4	-	5	5
62	-	4	4	-	3	3	-	4	4
63	-	2	2	-	-	-	-	2	2
64	-	2	2	-	3	3	-	5	5
65	-	1	1	-	-	-	-	-	-
66	-	1	1	-	-	-	-	1	1
67	-	1	1	-	-	-	-	-	-
68	-	1	1	-	-	-	-	-	-
69	-	-	-	-	2	2	-	-	-
70	-	-	-	-	-	-	-	-	-
71	-	1	1	-	-	-	-	-	-
Total ‰	365	642	1007	456	545	1001	331	659	990
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	5	-	-	3	-	-	2
Number of Fish Measured	713	1261	1974	572	683	1255	329	655	984
Mean Length (cm)	39.288	44.236	42.449	40.372	45.375	43.095	39.271	45.388	43.342
Mean Weight (kg)	-	-	0.824	-	-	0.829	-	-	1.015
Total Weight Landed (tons)	-	-	2712.8	-	-	3837.4	-	-	3746.3
Estimated Number Landed	-	-	3292233	-	-	4628951	-	-	3690936
Mesh(mm) or Hook(no.) Size	-	-	Large	-	-	Large	-	-	Large
Range of Depths (fm)	-	-	100-115	-	-	40-65	-	-	35-90

TABLE 81
(continued)

LENGTH FREQUENCIES - AMERICAN PLAICE - 3L - 1969

(FREQUENCIES IN %/oc - 1 CM GROUPS)

GEAR	Otter Trawl (Side)			Otter Trawl
	(Commercial)			
CATCHES/LANDINGS	Landings			
MONTH	June			September
COUNTRY	Canada (Maritimes)			France (St. Pierre et Miquelon)
TONNAGE	151-500			
SEX	♂♂	♀♀	Total	Mixed
32	-	-	-	13
33	-	-	-	27
34	-	-	-	76
35	-	9	9	27
36	-	-	-	71
37	5	5	10	76
38	28	14	42	71
39	23	14	37	49
40	28	23	51	71
41	19	19	38	62
42	23	33	56	62
43	52	38	90	36
44	14	23	37	53
45	42	47	89	44
46	23	38	61	58
47	19	28	47	53
48	28	61	89	27
49	14	38	52	18
50	28	33	61	40
51	-	42	42	22
52	-	19	19	18
53	5	52	57	-
54	-	5	5	4
55	-	9	9	4
56	5	23	28	4
57	-	5	5	-
58	-	5	5	-
59	-	14	14	-
60	-	14	14	-
61	-	5	5	4
62	-	14	14	-
63	-	-	-	-
64	-	-	-	4
65	-	5	5	4
66	-	5	5	-
67	-	-	-	-
68	-	-	-	-
69	-	-	-	-
70	-	5	5	-
Total %/oc	356	645	1001	998
Serial Numbers	-	-	176	-
Number of Samples	-	-	1	1
Number of Fish Measured	76	137	213	225
Mean Length (cm)	44.0	48.5	46.9	41.60
Mean Weight (kg)	-	-	0.86	0.74
Total Weight Landed (tons)	-	-	690	-
Estimated Number Landed	-	-	8023 ¹	-
Mesh(mm) or Hook(no.) Size	-	-	4 1/2 ²	100
Range of Depths (fm)	-	-	30-60	55-220

¹Numbers in 100's²Inches

TABLE 82

LENGTH FREQUENCIES - AMERICAN PLAICE - 3N - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)			
	Landings	Landings after Discard		
CATCHES/LANDINGS	September	November		
MONTH	France (St. Pierre et Miquelon)	Canada (Newfoundland)		
COUNTRY	151-500	501-900		
TONNAGE	Mixed	♂♂	♀♀	Total
SEX				
21	-	1	-	1
22	-	-	-	-
23	1	-	-	-
24	-	1	-	1
25	2	2	1	3
26	1	2	1	3
27	1	6	1	7
28	-	5	6	11
29	2	10	8	18
30	6	11	12	23
31	11	18	11	29
32	22	17	7	24
33	24	12	8	20
34	42	24	11	35
35	49	17	11	28
36	59	21	8	29
37	55	17	15	32
38	59	14	6	20
39	60	19	13	32
40	64	33	8	41
41	50	19	18	37
42	58	33	14	47
43	47	23	18	41
44	45	46	12	58
45	46	48	25	73
46	37	35	14	49
47	40	35	19	54
48	34	28	19	47
49	21	27	12	39
50	19	17	15	32
51	20	16	22	38
52	18	5	18	23
53	16	1	12	13
54	15	2	8	10
55	11	1	12	13
56	8	1	9	10
57	13	-	10	10
58	10	-	11	11
59	8	-	7	7
60	5	-	4	4
61	7	-	3	3
62	2	-	-	-
63	4	-	1	1
64	3	-	4	4
65	2	-	2	2
66	2	-	2	2
67	-	-	-	-
68	2	-	-	-
69	-	-	2	2
70	2	-	-	-
71	-	-	1	1
Total ‰	1004	567	421	988
Serial Numbers	-	-	-	-
Number of Samples	1	-	-	2
Number of Fish Measured	1194	556	419	975
Mean Length (cm)	42.53	41.259	45.088	42.905
Mean Weight (kg)	0.91	-	-	1.452
Total Weight Landed (tons)	3.35	-	-	2371.7
Estimated Number Landed	-	-	-	1633402
Mesh(mm) or Hook(no.) Size	100	-	-	Large
Range of Depths (fm)	60	-	-	30-45

TABLE 83

LENGTH FREQUENCIES - AMERICAN PLAICE - 3Ps - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)
CATCHES/LANDINGS	Landings
MONTH	December
COUNTRY	France (St. Pierre et Miquelon)
TONNAGE	151-500
19	3
20	3
21	7
22	24
23	55
24	21
25	55
26	55
27	62
28	86
29	76
30	58
31	93
32	76
33	52
34	62
35	31
36	38
37	27
38	21
39	14
40	17
41	6
42	6
43	10
44	3
45	10
46	-
47	-
48	-
49	3
50	3
51	-
52	3
53	3
54	-
55	-
56	-
57	7
58	3
59	-
60	-
61	-
62	-
63	3
Total ‰	996
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	291
Mean Length (cm)	31.09
Mean Weight (kg)	0.31
Total Weight Landed (tons)	49
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	100
Range of Depths (fm)	30-80

GEAR	Otter Trawl (Side)
CATCHES/LANDINGS	(Commercial)
MONTH	Landings
COUNTRY	February
TONNAGE	Canada (Maritimes)
	151-500
30	15
31	10
32	20
33	35
34	60
35	25
36	40
37	35
38	40
39	55
40	25
41	30
42	40
43	45
44	50
45	20
46	35
47	55
48	15
49	25
50	20
51	5
52	35
53	15
54	10
55	25
56	35
57	35
58	35
59	25
60	10
61	25
62	20
63	10
64	10
65	5
66	--
67	5
Total ‰	1000
Serial Numbers	175
Number of Samples	1
Number of Fish Measured	200
Mean Length (cm)	45.5
Mean Weight (kg)	0.98
Total Weight Landed (tons)	363
Estimated Number Landed	3704 ¹
Mesh(mm) or Hook(no.) Size	4 1/2 ²
Range of Depths (fm)	130-160

¹Numbers in 100's²Inches

TABLE 85

LENGTH FREQUENCIES - GREENLAND HALIBUT - 1B - 1969

(FREQUENCIES IN ‰ -1 CM GROUPS)

GEAR	Otter Trawl (Research)			
	Catches			
CATCHES/LANDINGS	July	September	July	September
MONTH	July	September	July	September
COUNTRY	Denmark (Greenland)			
TONNAGE	167 BRT			
9	6	-	60	16
10	63	-	61	8
11	157	-	62	-
12	152	8	63	8
13	60	16	64	24
14	10	24	65	24
15	2	16	66	-
16	10	16	67	8
17	4	-	68	8
18	8	-	69	16
19	12	-	70	16
20	30	-	71	8
21	28	-	72	8
22	18	-	73	-
23	4	-	74	16
24	4	-	75	8
25	4	-	76	2
26	8	8	77	8
27	2	8	78	-
28	2	-	79	-
29	12	-	80	24
30	16	-	81	-
31	12	-	82	8
32	18	-		
33	16	-		
34	14	8		
35	20	16		
36	30	24		
37	22	40		
38	28	-		
39	22	48		
40	20	16		
41	16	8		
42	22	16		
43	20	24		
44	26	16		
45	18	16		
46	12	40		
47	8	24		
48	14	40		
49	6	40		
50	8	24		
51	4	24		
52	2	8		
53	-	32		
54	4	40		
55	4	24		
56	-	32		
57	6	32		
58	2	65		
59	2	32		
Total ‰			992	993
Serial Numbers			-	-
Number of Samples			-	-
Number of Fish Measured			492	124
Mean Length (cm)			24.7	49.7
Mean Weight (kg)			-	-
Total Weight Landed (tons)			-	-
Estimated Number Landed			-	-
Mesh(mm) or Hook(no.) Size			36	36
Range of Depths (fm)			220-264	182

GEAR	Longline		
CATCHES/LANDINGS	(Research)		
MONTH	Catches		
COUNTRY	May		
TONNAGE	Denmark (Greenland)		
	167 BRT		
43	1	95	6
44	-	96	5
45	-	97	4
46	1	98	7
47	1	99	3
48	1	100	1
49	1	101	4
50	2	102	1
51	4	103	-
52	4	104	1
53	4	105	1
54	4	106	-
55	8	107	1
56	4	108	-
57	11	109	-
58	9	110	1
59	13	111	1
60	22		
61	17		
62	19		
63	27		
64	27		
65	35		
66	40		
67	40		
68	53		
69	40		
70	61		
71	53		
72	45		
73	42		
74	37		
75	40		
76	27		
77	40		
78	26		
79	13		
80	25		
81	20		
82	14		
83	18		
84	9		
85	14		
86	19		
87	14		
88	13		
89	9		
90	8		
91	9		
92	6		
93	9		
94	4		
Total ‰			999
Serial Numbers			-
Number of Samples			-
Number of Fish Measured			1387
Mean Length (cm)			72.9
Mean Weight (kg)			-
Total Weight Landed (tons)			-
Estimated Number Landed			-
Mesh(mm) or Hook(no.) Size			-
Range of Depths (fm)			138-220

TABLE 86
(continued)

LENGTH FREQUENCIES - GREENLAND HALIBUT - 1D - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)			
	Catches			
CATCHES/LANDINGS				
MONTH	January	February	January	February
COUNTRY	Denmark (Greenland)			
TONNAGE	167 BRT			
7	9	-	60	6
8	37	-	61	6
9	106	-	62	9
10	129	-	63	8
11	34	-	64	8
12	10	-	65	11
13	3	-	66	13
14	8	-	67	26
15	24	11	68	12
16	28	22	69	10
17	63	-	70	12
18	74	-	71	9
19	53	-	72	16
20	35	-	73	6
21	9	22	74	5
22	3	34	75	3
23	1	-	76	4
24	2	22	77	2
25	7	-	78	2
26	3	-	79	3
27	8	45	80	2
28	5	45	81	4
29	3	34	82	1
30	5	56	83	2
31	-	11	84	1
32	2	67	85	3
33	5	22	86	1
34	2	22	87	2
35	3	22	88	2
36	3	45	89	1
37	2	11	90	3
38	2	22	91	2
39	4	45	92	1
40	2	34	93	1
41	3	11	94	-
42	7	-	95	3
43	5	22	96	2
44	1	11	97	-
45	6	45	98	1
46	7	11	99	-
47	8	-	100	-
48	4	22	101	-
49	9	11	102	1
50	3	22	103	1
51	2	-	104	-
52	6	-	105	-
53	5	11	106	1
54	6	-	107	-
55	6	-	108	-
56	10	-	109	-
57	7	-	110	1
58	5	-		
59	5	-		
Total ‰			996	990
Serial Numbers			-	-
Number of Samples			-	-
Number of Fish Measured			1719	89
Mean Length (cm)			30.4	43.6
Mean Weight (kg)			-	-
Total Weight Landed (tons)			-	-
Estimated Number Landed			-	-
Mesh(mm) or Hook(no.) Size			36	36
Range of Depths (fm)			121-341	215

TABLE 86
(continued)

LENGTH FREQUENCIES - GREENLAND HALIBUT - 1D - 1969

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl				
CATCHES/LANDINGS	(Research)				
MONTH	Catches				
COUNTRY	March	April	March	April	
TONNAGE	Denmark (Greenland)				
	167 BRT				
7	4	4	60	11	18
8	36	7	61	15	11
9	47	44	62	22	-
10	36	110	63	25	7
11	22	121	64	11	11
12	18	74	65	36	29
13	4	26	66	25	11
14	15	-	67	18	11
15	-	4	68	58	15
16	-	15	69	44	7
17	-	11	70	58	15
18	-	15	71	25	4
19	-	29	72	33	7
20	-	11	73	33	11
21	4	-	74	22	7
22	7	4	75	29	4
23	-	-	76	15	-
24	4	-	77	15	11
25	-	4	78	-	7
26	4	-	79	4	-
27	-	-	80	4	4
28	-	7	81	7	4
29	-	-	82	4	-
30	4	7	83	-	-
31	4	7	84	-	4
32	-	4	85	-	4
33	4	7	86	-	-
34	7	-	87	-	-
35	4	-	88	4	-
36	-	-	89	4	-
37	4	-	90	4	4
38	-	-	91	4	-
39	7	11	92	-	4
40	4	11	93	4	-
41	11	4	94	4	4
42	7	4	95	4	-
43	4	-	96	-	-
44	4	4	97	-	-
45	11	29			
46	7	18	107	4	-
47	29	7			
48	11	22			
49	15	15			
50	11	15			
51	11	15			
52	15	15			
53	7	7			
54	4	15			
55	25	4			
56	11	15			
57	18	18			
58	11	33			
59	11	15			
Total %				1008	1002
Serial Numbers				-	-
Number of Samples				-	-
Number of Fish Measured				275	272
Mean Length (cm)				53.0	35.7
Mean Weight (kg)				-	-
Total Weight Landed (tons)				-	-
Estimated Number Landed				-	-
Mesh(mm) or Hook(no.) Size				36	36
Range of Depths (fm)				160-165	132-341

TABLE 86 LENGTH FREQUENCIES - GREENLAND HALIBUT - 1D - 1969 (FREQUENCIES IN ‰ - 1 CM GROUPS)
(continued)

GEAR	Otter Trawl (Research)						
	Catches						
CATCHES/LANDINGS							
MONTH	July	August	November				
COUNTRY	Denmark (Greenland)						
TONNAGE	167 BRT						
7	-	-	7	60	21	-	-
8	-	-	2	61	25	-	-
9	2	7	7	62	21	1	-
10	4	51	2	63	25	-	-
11	29	165	7	64	15	-	-
12	53	275	15	65	21	-	-
13	57	251	35	66	11	1	-
14	40	87	107	67	23	-	-
15	2	34	234	68	2	-	-
16	6	5	145	69	8	-	-
17	6	1	115	70	2	-	-
18	15	1	55	71	6	-	-
19	32	9	5	72	13	-	-
20	23	7	-	73	4	-	-
21	21	17	-	74	8	-	-
22	11	25	10	75	4	1	-
23	4	22	30	76	2	-	-
24	-	3	32	77	2	-	-
25	6	1	52	78	2	-	-
26	2	-	52	79	2	-	-
27	4	-	22	80	2	1	-
28	2	-	10	81	6	-	-
29	4	1	2				
30	2	-	-	87	2	-	-
31	4	-	2	88	2	-	-
32	4	4	2	89	2	-	-
33	6	4	7	90	-	-	-
34	4	1	15	91	2	-	-
35	8	-	2				
36	4	-	12				
37	6	1	-				
38	-	1	-				
39	15	4	-				
40	6	5	-				
41	2	-	2				
42	11	-	-				
43	15	1	-				
44	17	1	-				
45	23	-	-				
46	19	-	-				
47	17	3	-				
48	27	-	-				
49	23	1	-				
50	32	-	2				
51	19	-	2				
52	27	-	-				
53	23	-	-				
54	25	-	-				
55	19	1	-				
56	6	-	-				
57	29	1	-				
58	25	1	-				
59	21	-	-				
Total ‰					995	995	992
Serial Numbers					-	-	-
Number of Samples					-	-	-
Number of Fish Measured					476	760	401
Mean Length (cm)					42.5	14.3	18.4
Mean Weight (kg)					-	-	-
Total Weight Landed (tons)					-	-	-
Estimated Number Landed					-	-	-
Mesh(mm) or Hook(no.) Size					36	36	36
Range of Depths (fm)					143-338	132-121	132-121

TABLE 87 LENGTH FREQUENCIES - GREENLAND HALIBUT - 2J - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl			
	(Commercial)			
CATCHES/LANDINGS	Catches			
MONTH	June			
COUNTRY	Poland			
TONNAGE	2799			
28	1	81	-	
29	1	82	1	
30	2	83	2	
31	3	84	2	
32	6	85	1	
33	10	86	-	
34	13	87	1	
35	16	88	2	
36	9	89	-	
37	22	90	-	
38	16	91	1	
39	12	92	-	
40	16	93	-	
41	17	94	1	
42	22	95	-	
43	17	96	1	
44	17	97	-	
45	41	98	1	
46	21			
47	28			
48	28			
49	39			
50	39			
51	25			
52	53			
53	49			
54	49			
55	42			
56	49			
57	40			
58	42			
59	40			
60	35			
61	18			
62	18			
63	21			
64	14			
65	20			
66	10			
67	8			
68	6			
69	3			
70	6			
71	5			
72	6			
73	7			
74	5			
75	7			
76	3			
77	3			
78	1			
79	3			
80	5			
Total ‰			1002	
Serial Numbers			-	
Number of Samples			1	
Number of Fish Measured			1084	
Mean Length (cm)			52.9	
Mean Weight (kg)			-	
Total Weight Landed (tons)			-	
Estimated Number Landed			-	
Mesh(mm) or Hook(no.) Size			114	
Range of Depths (fm)			219	

TABLE 88 LENGTH FREQUENCIES - GREENLAND HALIBUT - 3K - 1969 (FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl		
CATCHES/LANDINGS	(Commercial)		
MONTH	Catches		
COUNTRY	May-July		
TONNAGE	Poland		
		2799	
25-27	4	80	3
28	4	81	2
29	3	82	3
30	1	83	1
31	10	84	2
32	5	85	1
33	6	86	2
34	6	87	1
35	13	88	1
36	12	89	3
37	17	90	2
38	10		
39	10		
40	15		
41	14		
42	15		
43	12		
44	15		
45	18		
46	22		
47	26		
48	29		
49	26		
50	23		
51	21		
52	30		
53	36		
54	32		
55	38		
56	40		
57	49		
58	38		
59	38		
60	39		
61	32		
62	29		
63	28		
64	35		
65	27		
66	22		
67	17		
68	18		
69	18		
70	18		
71	7		
72	7		
73	11		
74	6		
75	6		
76	8		
77	4		
78	5		
79	3		
Total %			999
Serial Numbers			-
Number of Samples			1
Number of Fish Measured			971
Mean Length (cm)			55.3
Mean Weight (kg)			-
Total Weight Landed (tons)			-
Estimated Number Landed			-
Mesh(mm) or Hook(no.) Size			114
Range of Depths (fm)			208

GEAR	Otter Trawl			
	(Research)	(Commercial)		
CATCHES/LANDINGS	Catches			
MONTH	February	May	June	July
COUNTRY	Germany, Fed. Rep.	Poland		
TONNAGE	2000	2799		
22-26	-	13	4	-
28	-	2	-	-
29	-	5	3	-
30	-	10	3	-
31	-	5	2	-
32	-	14	4	4
33	-	12	4	2
34	-	13	6	-
35	-	11	11	8
36	-	13	4	8
37	5	22	7	15
38	-	42	14	13
39	-	38	26	27
40	5	56	48	38
41	9	64	46	31
42	18	64	65	52
43	42	97	82	40
44	42	76	83	69
45	44	83	78	44
46	76	43	63	59
47	93	49	68	42
48	116	36	45	46
49	93	34	45	42
50	111	31	35	27
51	116	19	27	52
52	74	13	31	69
53	42	14	23	40
54	30	18	28	34
55	12	10	17	23
56	16	19	26	42
57	12	17	27	25
58	16	11	17	38
59	9	17	20	34
60	-	12	12	27
61	2	8	11	19
62	5	4	8	8
63	5	5	4	15
64	-	1	1	-
65	5	1	2	-
66	-	1	-	-

71	2	-	-	-
Total ‰	1000	1003	1000	993
Serial Numbers	-	1	-	-
Number of Samples	1	-	-	-
Number of Fish Measured	431	843	896	477
Mean Length (cm)	49.7	44.4	46.2	48.8
Mean Weight (kg)	1.01	-	-	-
Total Weight Landed (tons)	2612	-	-	-
Estimated Number Landed	2586	-	-	-
Mesh(mm) or Hook(no.) Size	120	114	114	114
Range of Depths (fm)	230-240	197	219	208

TABLE 90 LENGTH FREQUENCIES - WITCH - 3N - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl
	(Commercial)
CATCHES/LANDINGS	Landings
MONTH	September
COUNTRY	France (St. Pierre et Miquelon)
TONNAGE	151-500
33	1
34	-
35	9
36	11
37	19
38	33
39	50
40	49
41	58
42	56
43	59
44	52
45	55
46	89
47	90
48	66
49	71
50	61
51	52
52	10
53	31
54	24
55	12
56	13
57	14
58	6
59	3
60	3
Total ‰	997
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	980
Mean Length (cm)	45.81
Mean Weight (kg)	0.65
Total Weight Landed (tons)	1.1
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	100
Range of Depths (fm)	50-60

TABLE 91 LENGTH FREQUENCIES - WITCH - 3Ps - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	January	April	December
COUNTRY	France (St. Pierre et Miquelon)		
TONNAGE	151-500		
18	-	-	2
19	-	-	-
20	-	-	4
21	-	-	-
22	-	-	7
23	-	-	2
24	-	-	9
25	1	-	2
26	1	-	4
27	2	-	15
28	1	-	11
29	2	-	18
30	1	-	42
31	4	-	53
32	5	1	46
33	10	2	91
34	11	1	86
35	5	7	75
36	17	19	97
37	33	23	108
38	34	44	108
39	41	60	44
40	41	64	46
41	66	66	24
42	75	71	22
43	68	72	15
44	88	90	15
45	78	84	9
46	77	93	11
47	76	88	15
48	82	70	2
49	48	48	7
50	46	33	-
51	21	24	-
52	12	13	-
53	12	8	2
54	14	8	2
55	8	4	-
56	6	4	-
57	5	-	2
58	7	-	-
59	1	-	-
Total ‰	999	997	996
Serial Numbers	-	-	-
Number of Samples	1	2	2
Number of Fish Measured	829	1341	453
Mean Length (cm)	44.27	44.12	35.74
Mean Weight (kg)	0.70	0.62	0.28
Total Weight Landed (tons)	12.3	5.4	1.4
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	100	100	100
Range of Depths (fm)	100	40-90	30-200

TABLE 92

LENGTH FREQUENCIES - WITCH - 4R - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Danish Seine			Otter Trawl
	(Commercial)			
CATCHES/LANDINGS	Landings			
MONTH	September			November
COUNTRY	Canada (Maritimes)			France (St. Pierre et Miquelon)
TONNAGE	26-50			151-500
SEX	♂	♀	Total	Mixed
21	-	-	-	7
22	-	-	-	7
23	-	-	-	7
24	-	-	-	21
25	-	-	-	7
26	-	-	-	14
27	-	-	-	-
28	-	-	-	21
29	-	-	-	7
30	-	-	-	21
31	-	-	-	34
32	-	-	-	55
33	-	-	-	27
34	-	-	-	41
35	35	5	40	75
36	25	5	30	103
37	45	30	75	89
38	75	40	115	96
39	75	45	120	62
40	25	80	105	48
41	30	40	70	34
42	35	55	90	55
43	20	65	85	27
44	20	65	85	14
45	-	30	30	48
46	10	50	60	27
47	-	40	40	-
48	-	35	35	21
49	-	10	10	14
50	-	10	10	-
51	-	-	-	14
52	-	-	-	7
Total ‰	395	605	1000	1003
Serial Numbers	-	-	180	-
Number of Samples	-	-	1	1
Number of Fish Measured	79	121	200	146
Mean Length (cm)	39.2	42.6	41.2	37.19
Mean Weight (kg)	-	-	0.47	0.33
Total Weight Landed (tons)	-	-	128	1.4
Estimated Number Landed	-	-	2723 ¹	-
Mesh(mm) or Hook(no.) Size	-	-	3.6 ²	100
Range of Depths (fm)	-	-	54-60	140-165

¹Numbers in 100's²Inches

GEAR	Otter Trawl (Side)		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	February		
COUNTRY	Canada (Maritimes)		
TONNAGE	151-500		
SEX	♂ ¹	♀	Total
27	5	-	5
28	5	-	5
29	-	-	-
30	10	5	15
31	15	5	20
32	25	-	25
33	15	-	15
34	25	5	30
35	5	-	5
36	15	-	15
37	45	10	55
38	50	20	70
39	10	10	20
40	40	-	40
41	50	25	75
42	65	5	70
43	40	15	55
44	25	45	70
45	45	55	100
46	10	45	55
47	-	75	75
48	15	70	85
49	-	30	30
50	5	15	20
51	-	20	20
52	-	20	20
53	-	5	5
Total ‰	520	480	1000
Serial Numbers	-	-	181
Number of Samples	-	-	1
Number of Fish Measured	104	96	200
Mean Length (cm)	39.4	45.5	42.3
Mean Weight (kg)	-	-	0.50
Total Weight Landed (tons)	-	-	253
Estimated Number Landed	-	-	5060 ¹
Mesh(mm) or Hook(no.) Size	-	-	4.5 ²
Range of Depths (fm)	-	-	130-160

¹Numbers in 100's²Inches

TABLE 94

LENGTH FREQUENCIES - WITCH - 4W - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Danish Seine (Commercial)					
CATCHES/LANDINGS	Landings					
MONTH	May			October		
COUNTRY	Canada (Maritimes)					
TONNAGE	51-150					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
31	5	-	5	5	5	10
32	-	-	-	-	-	-
33	-	5	5	5	20	25
34	24	5	29	15	20	35
35	29	19	48	10	45	55
36	38	38	76	5	30	35
37	33	24	57	20	85	105
38	29	24	53	25	15	40
39	33	19	52	15	35	50
40	14	24	38	45	45	90
41	53	33	86	15	55	70
42	19	43	62	25	50	75
43	38	38	76	10	35	45
44	43	24	67	15	25	40
45	33	38	71	10	45	55
46	24	43	67	10	35	45
47	14	33	47	5	40	45
48	10	24	34	20	25	45
49	5	29	34	15	30	35
50	5	53	58	10	10	20
51	-	10	10	15	25	40
52	-	10	10	10	5	15
53	-	5	5	-	10	10
54	-	5	5	-	10	10
55	-	-	-	-	-	-
56	-	5	5	-	5	5
57	-	-	-	-	-	-
Total ‰	449	551	1000	295	705	1000
Serial Numbers	-	-	182	-	-	183
Number of Samples	-	-	1	-	-	1
Number of Fish Measured	94	115	209	59	141	200
Mean Length (cm)	40.6	43.6	42.3	41.8	41.9	41.9
Mean Weight (kg)	-	-	0.54	-	-	0.50
Total Weight Landed (tons)	-	-	206	-	-	43
Estimated Number Landed	-	-	3815 ¹	-	-	860 ¹
Mesh(mm) or Hook(no.) Size	-	-	5.0 ²	-	-	4.5 ²
Range of Depths (fm)	-	-	58-65	-	-	60-103

¹Numbers in 100's²Inches

TABLE 95

LENGTH FREQUENCIES - YELLOWTAIL - 3L - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (side)						Otter Trawl		
	(Commercial)						Landings after Discards		
CATCHES/LANDINGS	Landings						Landings after Discards		
MONTH	June			August			August		
COUNTRY	Canada (Maritimes)						Canada (Newfoundland)		
TONNAGE	151-500						501-900		
SEX	♂ ¹	♀ ¹	Total	♂ ¹	♀ ¹	Total	♂ ¹	♀ ¹	Total
22	-	-	-	-	-	-	-	1	1
27	-	-	-	10	-	10	-	-	-
28	-	-	-	-	-	-	-	1	1
29	-	-	-	10	5	15	-	3	3
30	-	-	-	5	-	5	6	13	19
31	-	5	5	10	15	25	21	19	40
32	15	-	15	10	5	15	29	21	50
33	25	-	25	10	5	15	21	29	50
34	25	5	30	30	20	50	33	33	66
35	35	20	55	40	75	115	38	57	95
36	50	40	90	70	60	130	57	48	105
37	70	60	130	75	55	130	45	52	97
38	65	55	120	65	35	100	67	62	129
39	55	30	85	45	90	135	55	58	113
40	55	60	115	30	25	55	39	48	87
41	55	60	115	25	60	85	20	30	50
42	25	100	125	10	65	75	4	23	27
43	-	50	50	5	20	25	4	21	25
44	-	10	10	-	5	5	6	14	20
45	-	10	10	-	-	-	1	11	12
46	-	5	5	-	5	5	1	4	5
47	-	15	15	-	-	-	1	3	4
48	-	-	-	-	5	5	-	3	3
Total ‰	475	525	1000	450	550	1000	448	554	1002
Serial Numbers	-	-	177	-	-	178	-	-	-
Number of Samples	-	-	1	-	-	1	-	-	2
Number of Fish Measured	95	105	200	90	110	200	357	438	795
Mean Length (cm)	37.7	40.0	38.9	36.6	38.2	37.5	36.692	37.406	37.086
Mean Weight (kg)	-	-	0.50	-	-	0.45	-	-	0.587
Total Weight Landed (tons)	-	-	702	-	-	245	-	-	178.4
Estimated Number Landed	-	-	14040 ¹	-	-	5444 ¹	-	-	303918
Mesh(mm) or Hook(no.) Size	-	-	4 1/2 ²	-	-	4 1/2 ²	-	-	Large
Range of Depths (fm)	-	-	30-60	-	-	30-60	-	-	40-85

¹Numbers in 100's²Inches

TABLE 96

LENGTH FREQUENCIES - YELLOWTAIL - 3N - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)					
CATCHES/LANDINGS	Landings after Discards					
MONTH	November					
COUNTRY	Canada (Newfoundland)					
TONNAGE	151-500			501-900		
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
29	-	-	-	-	1	1
30	3	10	13	2	-	2
31	7	7	14	6	1	7
32	17	10	27	4	8	12
33	3	3	6	11	15	26
34	42	17	59	16	22	38
35	31	35	66	45	36	81
36	14	45	59	36	30	66
37	52	45	97	53	41	94
38	52	35	87	67	54	121
39	28	63	91	63	48	111
40	28	52	80	60	56	116
41	31	73	104	32	57	89
42	49	42	91	18	41	59
43	21	73	94	12	33	45
44	3	42	45	3	41	44
45	3	31	34	4	36	40
46	-	7	7	-	17	17
47	3	7	10	2	16	18
48	-	3	3	1	1	2
49	-	3	3	1	5	6
50	-	-	-	-	4	4
51	-	3	3	-	-	-
Total ‰	387	606	993	436	563	999
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	1	-	-	2
Number of Fish Measured	112	175	287	421	541	962
Mean Length (cm)	38.036	39.811	39.118	38.086	39.978	39.150
Mean Weight (kg)	-	-	0.557	-	-	0.667
Total Weight Landed (tons)	-	-	294.1	-	-	1729.8
Estimated Number Landed	-	-	528007	-	-	2593403
Mesh(mm) or Hook(no.) Size	-	-	Large	-	-	Large
Range of Depths (fm)	-	-	24	-	-	20-30

TABLE 97

LENGTH FREQUENCIES - YELLOWTAIL - 4Vs - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	May		
COUNTRY	Canada (Maritimes)		
TONNAGE	501-900		
SEX	♂	♀	Total
28	10	5	15
29	10	-	10
30	20	5	25
31	25	5	30
32	30	5	35
33	30	35	65
34	25	45	70
35	40	20	60
36	40	40	80
37	45	50	95
38	30	55	85
39	5	70	75
40	5	75	80
41	5	40	45
42	5	25	30
43	5	30	35
44	5	15	20
45	5	15	20
46	-	10	10
47	-	35	35
48	-	30	30
49	-	5	5
50	-	25	25
51	-	10	10
52	-	-	-
53	-	5	5
54	-	-	-
55	-	5	5
Total ‰	340	660	1000
Serial Numbers	-	-	179
Number of Samples	-	-	1
Number of Fish Measured	68	132	200
Mean Length (cm)	34.9	40.2	38.4
Mean Weight (kg)	-	-	0.54
Total Weight Landed (tons)	-	-	353
Estimated Number Landed	-	-	6537 ¹
Mesh(mm) or Hook(no.) Size	-	-	5 ²
Range of Depths (fm)	-	-	30-60

¹Numbers in 100's²Inches

TABLE 98

LENGTH FREQUENCIES - YELLOWTAIL - 52 - 1969

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)											
	Landings											
CATCHES/LANDINGS	January			February			March			April		
MONTH	United States											
COUNTRY	0-215											
TONNAGE	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total
27	1	-	1	-	-	-	-	-	-	-	-	-
28	1	-	1	1	-	1	1	-	1	-	-	-
29	3	1	4	3	1	4	6	2	8	-	-	-
30	5	2	7	7	2	9	10	6	16	-	-	-
31	11	8	20	18	10	28	26	22	48	3	-	3
32	20	15	36	22	23	45	27	29	56	8	2	9
33	51	28	79	44	26	69	41	47	88	17	8	25
34	44	47	91	61	48	109	50	54	104	34	13	47
35	59	66	125	64	59	124	55	43	98	51	27	78
36	54	67	121	53	71	124	45	71	116	48	56	104
37	45	57	103	36	57	94	43	45	88	53	52	105
38	33	52	85	30	42	72	31	45	76	47	56	103
39	27	52	79	28	45	73	26	39	65	36	54	90
40	15	54	69	16	41	57	16	38	55	37	61	98
41	8	42	50	13	32	45	11	44	55	24	63	87
42	6	41	47	10	27	38	7	36	44	19	56	74
43	2	28	30	6	26	32	4	25	30	4	49	53
44	2	19	21	3	19	22	3	19	22	2	34	36
45	1	9	11	1	16	17	2	9	10	2	33	35
46	1	7	8	1	13	13	-	7	7	1	13	15
47	-	4	4	1	10	11	-	4	4	-	15	15
48	-	6	6	-	7	7	-	6	6	-	7	7
49	-	2	2	-	3	3	-	2	2	-	4	4
50	-	1	1	-	3	3	-	2	2	-	3	3
51	-	1	1	-	2	2	-	2	2	-	2	2
52	-	-	-	-	-	-	-	-	-	-	1	1
53	-	-	-	-	-	-	-	-	-	-	1	1
54	-	-	-	-	-	-	-	-	-	-	1	1
55	-	-	-	-	-	-	-	-	-	-	1	1
Total %/oo	392	608	1000	418	582	1000	403	597	1000	387	613	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	18	18	18	20	20	20	16	16	16	15	15	15
Number of Fish Measured	871	1262	2133	743	1045	1788	702	1016	1718	540	860	1400
Mean Length (cm)	35.70	38.13	37.18	35.74	38.20	37.18	35.51	37.58	36.74	37.29	40.27	39.12
Mean Weight (kg)	0.42	0.53	0.49	0.42	0.54	0.49	0.41	0.51	0.47	0.47	0.76	0.64
Total Weight Landed (tons)	1026	2019	3045	594	1060	1654	653	1193	1846	563	1446	2009
Estimated Number Landed	24558 ¹	38103 ¹	62661 ¹	14115 ¹	19672 ¹	33786 ¹	15813 ¹	23446 ¹	39259 ¹	12072 ¹	19137 ¹	31209 ¹
Mesh(mm) or Hook(no.) Size	-	-	114	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	4-60	-	-	5-42	-	-	5-45	-	-	4-100

¹Numbers in 100's

TABLE 98
(continued)

LENGTH FREQUENCIES - YELLOWTAIL - 5Z - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)											
	Landings											
CATCHES/LANDINGS	May			June			July			August		
MONTH	United States											
COUNTRY	0-215											
TONNAGE												
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
29	-	-	-	1	-	1	1	-	1	-	-	-
30	-	-	-	1	-	1	1	-	1	3	-	3
31	1	-	2	3	1	4	7	2	9	5	3	8
32	8	5	13	10	4	15	17	11	28	26	16	42
33	19	15	34	20	12	32	20	21	41	34	32	66
34	49	30	79	50	29	79	32	52	84	54	50	104
35	65	59	124	68	45	113	22	89	110	50	74	124
36	59	60	119	52	78	130	25	89	114	36	68	104
37	68	72	145	54	74	128	10	101	111	37	76	112
38	44	55	99	47	90	137	11	92	103	32	64	97
39	25	64	89	39	62	101	4	90	94	30	56	86
40	15	54	69	22	46	68	3	81	84	18	43	61
41	11	47	58	15	47	62	1	69	70	22	32	54
42	9	45	54	6	35	41	1	44	44	8	32	41
43	4	37	41	4	32	37	-	35	35	5	23	29
44	-	22	22	1	19	21	-	27	27	2	17	19
45	1	23	24	1	10	11	-	17	17	1	15	17
46	1	13	14	-	12	12	-	6	6	-	9	9
47	-	5	5	-	4	4	-	9	9	1	7	8
48	-	4	4	-	2	2	-	3	3	-	4	4
49	-	2	2	-	3	3	-	7	7	-	3	3
50	-	-	-	-	-	-	-	1	1	-	4	4
51	-	1	1	-	-	-	-	-	-	-	1	1
52	-	1	1	-	-	-	-	1	1	-	1	1
53	-	-	-	-	-	-	-	-	-	-	-	-
54	-	1	1	-	-	-	-	-	-	-	-	-
Total ‰	380	620	1000	395	605	1000	154	846	1000	366	634	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	13	13	13	13	13	13	12	12	12	15	15	15
Number of Fish Measured	519	885	1404	518	1030	1548	356	1220	1576	570	1043	1613
Mean Length (cm)	36.50	39.00	38.05	36.55	38.66	37.83	34.75	38.47	37.90	36.27	38.13	37.45
Mean Weight (kg)	0.44	0.68	0.59	0.44	0.65	0.57	0.37	0.54	0.51	0.42	0.53	0.49
Total Weight Landed (tons)	546	1389	1935	578	1325	1903	263	2091	2354	876	1907	2783
Estimated Number Landed	12593 ¹	20537 ¹	33130 ¹	13245 ¹	20307 ¹	33552 ¹	7105 ¹	38989 ¹	46095 ¹	20884 ¹	36237 ¹	57120 ¹
Mesh(mm) or Hook(no.) Size	-	-	114	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	18-48	-	-	16-55	-	-	20-36	-	-	20-53

¹Numbers in 100's

TABLE 98
(continued)

LENGTH FREQUENCIES - YELLOWTAIL - 52 - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)											
	Landings											
CATCHES/LANDINGS	September			October			November			December		
MONTH	United States											
COUNTRY	G-215											
TONNAGE												
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
25	-	-	-	-	-	-	2	1	3	-	-	-
26	-	-	-	-	-	-	4	-	4	-	-	-
27	-	-	-	1	-	1	12	3	15	-	-	-
28	-	-	-	1	1	1	14	6	19	1	-	1
29	5	1	6	1	-	1	44	22	67	1	-	1
30	9	3	11	2	4	5	61	42	104	3	-	3
31	18	12	30	16	6	23	70	63	133	13	7	20
32	27	28	55	28	24	52	45	55	100	31	17	48
33	33	48	81	42	43	85	43	57	99	52	46	98
34	48	79	127	58	60	118	31	52	83	58	70	128
35	40	69	108	49	74	124	32	47	79	47	74	121
36	37	63	100	35	68	103	33	38	70	34	54	88
37	29	51	80	28	74	103	15	32	47	25	70	95
38	28	62	90	24	54	78	12	25	38	25	58	82
39	28	53	80	18	53	71	6	28	34	12	45	57
40	18	46	65	16	45	61	3	25	27	13	46	59
41	7	37	44	8	39	47	1	22	23	1	36	37
42	8	28	36	3	38	41	-	17	17	8	33	40
43	4	20	24	2	23	25	-	8	8	5	23	28
44	1	15	17	2	17	19	-	13	13	2	22	23
45	1	16	17	-	14	14	-	7	7	-	19	19
46	-	7	7	-	12	12	-	4	4	1	13	13
47	-	4	4	-	-	-	-	3	3	-	15	15
48	-	6	6	-	-	-	-	1	1	-	9	9
49	-	3	3	-	-	-	-	-	-	-	6	6
50	-	3	3	-	-	-	-	-	-	-	5	5
51	-	1	1	-	-	-	-	-	-	-	2	2
52	-	1	1	-	-	-	-	-	-	-	-	-
53	-	-	-	-	-	-	-	-	-	-	2	2
54	-	-	-	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-	-	-	-
56	-	1	1	-	-	-	-	-	-	-	-	-
Total ‰	342	658	1000	334	666	1000	429	571	1000	329	671	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	17	17	17	13	13	13	14	14	14	17	17	17
Number of Fish Measured	725	1506	2231	694	1375	2069	669	946	1615	474	924	1398
Mean Length (cm)	35.56	37.57	36.88	35.33	37.82	36.99	35.20	38.03	36.82	35.19	38.28	37.26
Mean Weight (kg)	0.40	0.50	0.47	0.37	0.48	0.44	0.36	0.49	0.44	0.36	0.50	0.46
Total Weight Landed (tons)	905	2208	3113	829	2179	3008	881	1599	2480	662	1881	2543
Estimated Number Landed	22741 ¹	43747 ¹	66488 ¹	22675 ¹	45222 ¹	67897 ¹	24263 ¹	32271 ¹	56534 ¹	18275 ¹	37225 ¹	55500 ¹
Mesh(mm) or Hook(no.) Size	-	-	114	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	22-53	-	-	18-43	-	-	18-37	-	-	18-43

¹Numbers in 100's

TABLE 99

LENGTH FREQUENCIES - POLLOCK - 4W - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Stern)	
	(Commercial)	
CATCHES/LANDINGS	Landings	
MONTH	February	July
COUNTRY	Canada (Maritimes)	
TONNAGE	501-900	
45	-	8
48	-	19
51	-	34
54	-	15
57	5	42
60	25	88
63	45	118
66	59	191
69	94	179
72	109	122
75	79	57
78	94	27
81	94	31
84	94	27
87	109	15
90	64	15
93	64	12
96	45	-
99	20	-
Total ‰	1000	1000
Serial Numbers	171	172
Number of Samples	1	1
Number of Fish Measured	202	262
Mean Length (cm)	80.11	68.60
Mean Weight (kg)	5.39	3.48
Total Weight Landed (tons)	71	45
Estimated Number Landed	132 ¹	129 ¹
Mesh(mm) or Hook(no.) Size	4.5 ²	4.5 ²
Range of Depths (fm)	30-110	40-95

¹Numbers in 100's²Inches

TABLE 100

LENGTH FREQUENCIES - POLLOCK - 4X - 1969

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)		
	(Commercial)		
CATCHES/LANDINGS	Landings		
MONTH	July	October	November
COUNTRY	Canada (Maritimes)		
TONNAGE	151-500		
39	-	3	-
42	-	10	-
45	-	10	-
48	-	27	15
51	5	50	48
54	16	56	78
57	38	56	67
60	55	99	133
63	76	109	93
66	115	142	141
69	158	159	152
72	142	113	130
75	186	89	63
78	76	36	44
81	66	17	22
84	44	10	11
87	5	3	4
90	5	7	-
93	11	3	-
Total ‰	998	999	1001
Serial Numbers	173	174	175
Number of Samples	1	1	1
Number of Fish Measured	183	302	270
Mean Length (cm)	72.1	66.3	66.3
Mean Weight (kg)	4.49	3.96	3.93
Total Weight Landed (tons)	247	192	101
Estimated Number Landed	550 ¹	485 ¹	257 ¹
Mesh(mm) or Hook(no.) Size	4.5 ²	4.5 ²	4.5 ²
Range of Depths (fm)	55-93	52-100	65-95

¹Numbers in 100's
²Inches

GEAR	Otter Trawl (Commercial)
CATCHES/LANDINGS	Catches
MONTH	March
COUNTRY	USSR
TONNAGE	BMRT. SRTM
40	4
42	-
44	-
46	13
48	-
50	-
52	34
54	17
56	17
58	68
60	47
62	51
64	17
66	81
68	119
70	136
72	114
74	72
76	59
78	38
80	17
82	30
84	21
86	17
88	4
90	4
92	4
94	8
96	-
98	4
100	-
102	4
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	236
Mean Length (cm)	70.6
Mean Weight (kg)	-
Total Weight Landed (tons)	81
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	110-130

TABLE 102 LENGTH FREQUENCIES - RED HAKE - 52e - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Research)
CATCHES/LANDINGS	Catches
MONTH	January
COUNTRY	Germany, Federal Republic
TONNAGE	2000
33	3
34	-
35	3
36	3
37	28
38	37
39	95
40	61
41	149
42	110
43	134
44	122
45	92
46	49
47	24
48	15
49	18
50	18
51	6
52	9
53	9
54	6
55	3
56	3
57	3
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	328
Mean Length (cm)	43.37
Mean Weight (kg)	0.72
Total Weight Landed (tons)	531
Estimated Number Landed	738
Mesh(mm) or Hook(no.) Size	110
Range of Depths (fm)	109-131

TABLE 102
(continued)

LENGTH FREQUENCIES - RED HAKE - 5Ze - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl			
	(Commercial)			
CATCHES/LANDINGS	Catches			
MONTH	April	May	September	November
COUNTRY	USSR			
TONNAGE	BMRT, SRTM			
12	-	+	-	-
14	-	2	-	-
16	-	7	-	-
18	-	19	+	+
20	-	36	13	1
22	-	23	100	9
24	-	19	233	74
26	7	10	320	163
28	137	28	167	230
30	183	84	117	220
32	253	151	30	147
34	213	188	10	64
36	127	167	7	29
38	43	127	3	21
40	10	76	-	15
42	20	31	-	11
44	7	17	-	8
46	-	11	-	4
48	-	2	-	3
50	-	2	-	1
Total ‰	1000	1000	1000	1000
Serial Numbers	-	-	-	-
Number of Samples	1	13	1	10
Number of Fish Measured	300	4086	300	3248
Mean Length (cm)	33.1	34.1	26.2	30.3
Mean Weight (kg)	-	-	0.126	0.325
Total Weight Landed (tons)	321	148	971	850
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-
Range of Depths (fm)	50-70	10-50	40	30-40

TABLE 103

LENGTH FREQUENCIES - RED HAKE - 52w - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Commercial)			
	Catches			
CATCHES/LANDINGS	April	May	June	August
MONTH	USSR			
COUNTRY	BMRT, SRTM			
TONNAGE				
12	-	+	+	-
14	-	2	+	-
16	-	5	2	-
18	-	12	5	+
20	-	25	10	3
22	-	43	16	3
24	3	62	21	7
26	10	72	22	67
28	77	95	70	133
30	177	105	155	324
32	327	120	204	230
34	217	135	206	157
36	133	125	120	63
38	43	85	76	7
40	3	56	50	3
42	7	32	22	3
44	-	15	12	-
46	-	7	3	-
48	3	2	3	-
50	-	2	3	-
Total ‰	1000	1000	1000	1000
Serial Numbers	-	-	-	-
Number of Samples	1	55	20	1
Number of Fish Measured	300	17978	6237	300
Mean Length (cm)	33.1	32.4	33.7	31.46
Mean Weight (kg)	-	-	-	0.245
Total Weight Landed (tons)	99	5277	4387	2786
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-
Range of Depths (fm)	20-30	20-10	20-30	20

TABLE 103
(continued)

LENGTH FREQUENCIES - RED HAKE - 52w - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Commercial)							
	Landings							
CATCHES/LANDINGS	May	June	July	August	September	October	November	December
MONTH	United States							
COUNTRY	0-215							
TONNAGE								
17	4	2	4	-	-	-	-	-
18	-	-	-	-	-	-	-	-
19	9	1	-	12	-	-	-	-
20	5	1	1	3	-	-	-	-
21	7	12	6	3	1	4	-	-
22	11	41	11	7	12	-	-	-
23	14	30	17	7	12	-	9	-
24	11	10	29	40	16	26	-	-
25	11	15	31	32	21	41	-	-
26	28	38	28	43	46	14	9	-
27	17	30	40	25	64	29	9	-
28	13	59	61	24	57	48	18	24
29	46	70	75	61	92	73	51	37
30	86	52	110	27	73	24	50	-
31	109	109	108	52	112	86	72	24
32	80	80	92	99	131	96	77	85
33	121	79	94	60	77	69	96	85
34	100	68	75	60	94	108	112	-
35	90	92	69	88	53	111	112	58
36	62	53	57	88	33	44	112	119
37	52	43	48	25	23	42	110	106
38	29	35	13	99	15	52	62	169
39	15	29	8	17	2	14	26	145
40	22	16	5	12	26	36	42	111
41	22	5	4	15	5	31	-	-
42	4	8	10	17	13	15	9	37
43	-	6	2	22	12	17	24	-
44	18	7	1	28	-	5	-	-
45	6	7	-	17	4	2	-	-
46	4	-	1	3	-	5	-	-
47	4	1	-	12	2	-	-	-
48	-	-	-	2	-	-	-	-
49	-	1	-	-	-	8	-	-
50	-	-	-	-	-	-	-	-
51	-	-	-	-	4	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-	-
Number of Samples	5	9	13	6	6	8	3	3
Number of Fish Measured	271	298	611	150	251	208	65	35
Mean Length (cm)	32.76	31.77	31.26	33.42	31.58	33.30	34.32	36.32
Mean Weight (kg)	0.24	0.24	0.21	0.25	0.18	0.27	0.25	0.21
Total Weight Landed (tons)	1094	847	668	408	997	314	104	67
Estimated Number Landed	45873 ¹	35120 ¹	32215 ¹	16201 ¹	56436 ¹	11663 ¹	4075 ¹	3158 ¹
Mesh(mm) or Hook(no.) Size	64	64	64	64	64	64	64	64
Range of Depths (fm)	14-27	14-33	18-30	20-32	21-34	20-32	16-30	15-28

¹Numbers in 100's

TABLE 104

LENGTH FREQUENCIES - RED HAKE - 6 - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl
	(Commercial)
CATCHES/LANDINGS	Catches
MONTH	April
COUNTRY	USSR
TONNAGE	BMRT, SRIM
12	1
14	3
16	16
18	21
20	30
22	56
24	70
26	101
28	138
30	167
32	157
34	91
36	70
38	36
40	26
42	11
44	4
46	1
48	1
50	+
Total ‰	1000
Serial Numbers	-
Number of Samples	9
Number of Fish Measured	2946
Mean Length (cm)	30.0
Mean Weight (kg)	-
Total Weight Landed (tons)	1125
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	30-40

GEAR	Otter Trawl (Commercial)					
	Landings					
CATCHES/LANDINGS	United States					
MONTH	May	June	July	September	October	November
COUNTRY	United States					
TONNAGE	0-215					
17	-	8	-	-	-	-
18	-	-	-	-	-	-
19	-	9	-	5	-	-
20	-	-	-	8	-	-
21	18	17	-	10	-	-
22	-	12	56	-	-	-
23	29	23	56	6	-	-
24	25	7	56	12	44	14
25	-	24	50	34	-	14
26	14	16	50	55	92	7
27	-	43	25	70	-	21
28	18	55	67	103	-	14
29	18	86	50	66	-	75
30	49	125	25	118	136	90
31	98	119	50	74	92	27
32	49	181	50	73	184	61
33	98	75	124	99	-	110
34	116	62	143	75	44	83
35	134	49	81	27	92	107
36	81	33	-	35	-	27
37	60	25	67	9	44	126
38	42	15	25	18	136	85
39	70	-	25	18	92	7
40	39	8	-	9	-	-
41	-	-	-	36	-	55
42	-	-	-	6	-	23
43	-	-	-	3	44	31
44	-	-	-	3	-	-
45	-	8	-	-	-	-
46	46	-	-	8	-	-
47	-	-	-	9	-	-
48	-	-	-	5	-	23
49	-	-	-	3	-	-
50	-	-	-	3	-	-
Total ‰	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	3	3	2	6	1	2
Number of Fish Measured	51	128	35	207	22	81
Mean Length (cm)	34.02	30.73	30.51	31.45	33.26	34.48
Mean Weight (kg)	0.25	0.20	0.22	0.18	0.26	0.29
Total Weight Landed (tons)	89	156	98	33	6	27
Estimated Number Landed	3469 ¹	8075 ¹	4387 ¹	2327 ¹	228 ¹	916 ¹
Mesh(mm) or Hook(no.) Size	64	64	64	64	64	64
Range of Depths (fm)	18-22	17-30	18-22	16-30	28-31	18-22

¹ Numbers in 100's

TABLE 106

AGE FREQUENCIES - RED HAKE - 52e - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		April and May						September					
COUNTRY		USSR											
TONNAGE		RMRT. SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		80 ⁺	90 ⁺	Tot.	80 ⁺	90 ⁺	Tot.	80 ⁺	90 ⁺	Tot.	80 ⁺	90 ⁺	Tot.
1968	1	18	31	118	20.3	20.5	18.9	-	-	-	-	-	-
1967	2	62	71	133	24.4	23.9	24.1	454	423	877	25.9	26.3	26.1
1966	3	144	138	282	27.9	30.0	28.9	51	62	113	30.1	30.7	30.5
1965	4	131	276	407	32.0	36.1	34.8	10	-	10	38.5	-	38.5
1964	5	19	39	58	34.3	35.9	35.4	-	-	-	-	-	-
1963	6	-	2	2	-	34.5	34.5	-	-	-	-	-	-
Total ‰		374	557	1000	28.7	32.1	29.8	515	485	1000	26.6	26.7	26.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	9	-	-	-	-	-	2	-	-	-
Number of Fish Aged		163	242	435	-	-	-	50	47	97	-	-	-
Mean Age		3.2	3.4	3.3	-	-	-	2.1	2.1	2.1	-	-	-
Mean Weight (kg)		-	-	-	-	-	-	-	-	0.126	-	-	-
Total Weight Landed (tons)		-	-	835	-	-	-	-	-	3342	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	10-70	-	-	-	-	-	40	-	-	-

30 juveniles = 69‰ (2nd Quarter)

TABLE 107

AGE FREQUENCIES - RED HAKE - SZw - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl (Commercial)											
CATCHES/LANDINGS		Catches											
MONTH		April and May						September					
COUNTRY		USSR											
TONNAGE		EMRT, SRIM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		85	90	Tot.	85	90	Tot.	85	90	Tot.	85	90	Tot.
1967	2	85	94	179	23.5	23.1	23.3	25	-	25	32.5	-	32.5
1966	3	339	193	532	30.3	31.6	30.7	494	185	679	32.0	34.4	33.6
1965	4	80	173	253	33.1	37.9	36.4	148	148	296	35.1	37.1	36.7
1964	5	3	33	36	36.5	39.7	39.5	-	-	-	-	-	-
Total ‰		507	493	1000	29.6	32.8	31.2	667	333	1000	32.7	36.0	33.8
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	8	-	-	-	-	-	2	-	-	-
Number of Fish Aged		184	179	363	-	-	-	54	27	81	-	-	-
Mean Age		3.0	3.1	3.1	-	-	-	3.2	3.4	3.3	-	-	-
Mean Weight (kg)		-	-	-	-	-	-	-	-	-	-	-	-
Total Weight Landed (tons)		-	-	9763	-	-	-	-	-	8954	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	10-30	-	-	-	-	-	20	-	-	-

TABLE 107
(continued)

AGE FREQUENCIES -- RED HAKE - 52w - 1969

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		(Commercial)											
MONTH		Catches											
COUNTRY		October											
TONNAGE		USSR											
		BMRT, SRIM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		65	77	Tot.	65	77	Tot.	65	77	Tot.	65	77	Tot.
1967	2	49	35	91	27.1	27.1	27.3						
1966	3	406	300	713	31.7	32.5	32.1						
1965	4	35	154	189	37.3	38.3	38.1						
1964	5	-	7	7	-	48.5	48.5						
Total ‰		490	496	1000	31.7	34.3	32.8						
Serial Numbers		-	-	-									
Number of Samples		-	-	3									
Number of Fish Aged		70	71	143									
Mean Age		3.0	3.3	3.2									
Mean Weight (kg)		-	-	-									
Total Weight Landed (tons)		-	-	9987									
Estimated Number Landed		-	-	-									
Mesh(mm) or Hook(no.) Size		-	-	40									
Range of Depths (fm)		-	-	30-40									

2 juveniles = 14‰.

TABLE 108

AGE FREQUENCIES - RED HAKE - 6 - 1969

(FREQUENCIES IN 0/00)

GEAR		Otter Trawl											
CATCHES/LANDINGS		(Commercial)											
MONTH		Catches											
COUNTRY		April and May											
TONNAGE		USSR											
		BMT, SRTM											
YEAR-CLASS	AGE	0/00 Frequency			Mean Length			0/00 Frequency			Mean Length		
		00	00	Tot.	00	00	Tot.	00	00	Tot.	00	00	Tot.
1967	2	44	27	71	25.5	25.7	25.7						
1966	3	358	203	561	30.8	31.0	30.9						
1965	4	97	194	291	33.8	37.3	36.2						
1964	5	17	59	76	34.5	38.2	37.4						
1963	6	-	1	1	-	42.5	42.5						
Total 0/00		516	484	1000	31.0	34.1	32.5						
Serial Numbers		-	-	-									
Number of Samples		-	-	12									
Number of Fish Aged		340	320	660									
Mean Age		3.1	3.7	3.4									
Mean Weight (kg)		-	-	-									
Total Weight Landed (tons)		-	-	1133									
Estimated Number Landed		-	-	-									
Mesh(mm) or Hook(no.) Size		-	-	40									
Range of Depths (fm)		-	-	30-40									

TABLE 109

AGE/LENGTH KEYS AND FREQUENCIES (RED HAKE) - 1969

(Available on request from the Secretariat)

In accordance with a recommendation made by the Research and Statistics Committee at their Annual Meeting in 1962 and reaffirmed in 1965, Age/Length Keys and Frequencies will not be published but are to be deposited in the Secretariat and made available to Member Countries on request. The following Age/Length Keys and Frequencies for red hake are now on file in the Secretariat.

GEAR: Otter Trawl

U. S. S. R.

DIVISION	MONTH
5Za	April-May September November
5Zw	April-May September October
6	April May

TABLE 110

LENGTH FREQUENCIES - WHITE HAKE - 5 Ze - 1969

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl
CATCHES/LANDINGS	(Research)
MONTH	January
COUNTRY	Germany, Federal Republic
TONNAGE	2000
38	13
40	53
42	53
44	20
46	80
48	60
50	147
52	120
54	107
56	140
58	60
60	40
62	20
64	33
66	13
68	13
70	-
72	7
74	7
76	-
78	7
80	-
82	-
84	7
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	150
Mean Length (cm)	53.58
Mean Weight (kg)	1.20
Total Weight Landed (tons)	180
Estimated Number Landed	150
Mesh(mm) or Hook(no.) Size	110
Range of Depths (fm)	131-156

GEAR	Longline
CATCHES/LANDINGS	(Research)
MONTH	September
COUNTRY	Denmark (Greenland)
TONNAGE	167 BRT
34	8
35	-
36	25
37	-
38	8
39	8
40	-
41	17
42	17
43	17
44	42
45	17
46	42
47	33
48	58
49	25
50	67
51	25
52	25
53	25
54	42
55	33
56	17
57	25
58	33
59	67
60	58
61	33
62	25
63	17
64	33
65	42
66	33
67	17
68	25
69	17
70	-
71	-
72	8
73	8
74	8
Total ‰	1000
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	120
Mean Length (cm)	-
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	33-61

TABLE 112 LENGTH FREQUENCIES - ARCTIC CHAR - 1D - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Gillnet	
CATCHES/LANDINGS	(Research)	
MONTH	Catches	
COUNTRY	June	July
TONNAGE	Denmark (Greenland)	
	0-50	
15	12	5
16	-	5
17	-	5
18	12	5
19	12	16
20	24	5
21	12	5
22	-	5
23	36	5
24	48	-
25	48	11
26	36	11
27	12	22
28	24	16
29	12	22
30	-	27
31	12	16
32	12	27
33	12	5
34	36	33
35	12	88
36	24	43
37	12	54
38	-	38
39	36	43
40	-	38
41	24	38
42	-	49
43	36	27
44	24	27
45	12	33
46	12	38
47	60	38
48	12	43
49	71	27
50	36	33
51	71	16
52	71	16
53	24	5
54	24	-
55	36	33
56	12	5
57	-	-
58	24	-
59	-	5
60	-	-
61	-	5
62	-	5
63	12	-
Total ‰	1005	993
Serial Numbers	-	-
Number of Samples	-	-
Number of Fish Measured	84	184
Mean Length (cm)	40.2	39.2
Mean Weight (kg)	-	0.675
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	>100	>100
Range of Depths (fm)	-	-

GEAR	Otter Trawl
CATCHES/LANDINGS	(Research)
MONTH	April
COUNTRY	Denmark (Greenland)
TONNAGE	167 BRT
8	6
9	-
10	6
11	19
12	51
13	135
14	205
15	192
16	96
17	122
18	90
19	32
20	38
21	-
22	-
23	6
Total ‰	998
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	156
Mean Length (cm)	15.2
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	36
Range of Depths (fm)	121-138

TABLE 114

LENGTH FREQUENCIES - HERRING - 1C - 1961

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	June
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
17	10
18	20
19	10
20	50
21	120
22	150
23	200
24	60
25	90
26	30
27	60
28	40
29	100
30	10
31	20
32	30
Total ‰	1000
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	100
Mean Length (cm)	24.1
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

TABLE 115

LENGTH FREQUENCIES - HERRING - 1F - 1962

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	August	September
COUNTRY	Denmark (Greenland)	
CATCHES/LANDINGS	Catches	
COMMERCIAL/RESEARCH	Research	
11	-	1
12	-	12
13	-	115
14	-	343
15	-	329
16	-	70
17	5	2
18	2	-
19	2	1
20	2	1
21	-	-
22	-	-
23	-	1
24	14	-
25	27	-
26	14	-
27	77	1
28	45	-
29	142	1
30	140	1
31	183	4
32	81	6
33	52	13
34	36	15
35	23	10
36	7	5
37	23	4
38	5	11
39	20	17
40	38	19
41	29	12
42	16	6
43	16	-
44	2	-
Total ‰	1001	1000
Serial Numbers	-	-
Number of Samples	-	-
Number of Fish Measured	443	1378
Mean Length (cm)	31.4	17.2
Mean Weight (kg)	-	-
Total Weight Landed (tons)	0	0
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	-	-
Range of Depths (fm)	0-5	0-5

TABLE 116 LENGTH FREQUENCIES - HERRING - 1F - 1963

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	August
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
14	4
15	13
16	19
17	28
18	23
19	30
20	19
21	21
22	4
23	-
24	-
25	-
26	6
27	8
28	2
29	4
30	6
31	11
32	34
33	62
34	110
35	123
36	95
37	81
38	89
39	108
40	59
41	26
42	15
43	2
Total ‰	1002
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	529
Mean Length (cm)	33.3
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

MONTH	August
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
13	1
14	-
15	-
16	-
17	2
18	29
19	100
20	203
21	139
22	142
23	136
24	68
25	16
26	9
27	9
28	-
29	1
30	3
31	3
32	13
33	14
34	22
35	21
36	12
37	3
38	7
39	8
40	17
41	14
42	5
43	1
Total ‰	998
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	862
Mean Length (cm)	23.5
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

TABLE 118

LENGTH FREQUENCIES - HERRING - 1F - 1965

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	August
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
19	1
20	4
21	10
22	10
23	15
24	25
25	34
26	43
27	68
28	91
29	138
30	170
31	47
32	23
33	36
34	53
35	55
36	43
37	28
38	23
39	22
40	25
41	22
42	12
43	2
Total ‰	1000
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	813
Mean Length (cm)	30.9
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

MONTH	August
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
27	2
28	7
29	30
30	117
31	205
32	264
33	132
34	35
35	10
36	45
37	25
38	20
39	32
40	17
41	27
42	15
43	12
44	2
Total ‰	997
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	401
Mean Length (cm)	33.0
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

TABLE 120

LENGTH FREQUENCIES - HERRING - 1F - 1968

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	August
COUNTRY	Denmark (Greenland)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
29	48
30	144
31	245
32	242
33	146
34	46
35	11
36	2
37	3
38	3
39	17
40	28
41	40
42	15
43	9
44	2
Total ‰	1001
Serial Numbers	-
Number of Samples	-
Number of Fish Measured	652
Mean Length (cm)	-
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	-
Range of Depths (fm)	0-5

TABLE 121 LENGTH FREQUENCIES - HERRING - 3Pn¹ - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	January			February			March			December		
COUNTRY	Canada (Newfoundland)											
CATCHES/LANDINGS	Catches											
COMMERCIAL/RESEARCH	Commercial											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
26	1	1	2	1	1	2	1	1	2	-	1	1
27	1	1	2	2	1	3	3	-	3	1	2	3
28	4	3	7	2	3	5	4	2	6	-	1	1
29	8	6	14	7	2	9	14	7	21	3	3	6
30	31	22	53	18	21	39	35	21	56	16	12	28
31	54	43	97	58	50	108	79	46	125	57	41	98
32	90	90	180	98	120	218	119	84	203	99	70	169
33	126	121	247	112	135	247	141	99	240	90	119	209
34	100	117	217	118	111	229	91	119	210	134	131	265
35	37	57	94	39	60	99	43	47	90	67	89	156
36	16	22	38	11	16	27	10	23	33	20	34	54
37	13	18	31	2	6	8	3	5	8	3	5	8
38	5	9	14	1	3	4	-	1	1	-	1	1
39	1	2	3	2	-	2	1	1	2	-	1	1
40	1	-	1	-	-	-	-	-	-	-	-	-
Total ‰	488	512	1000	471	529	1000	544	456	1000	490	510	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	-	-	-	-	-	-	-	-	-	-
Number of Fish Measured	1622	1705	3327	658	740	1398	597	500	1097	567	589	1156
Mean Length (cm)	32.9	33.3	33.1	32.8	33.0	32.9	32.5	33.1	32.8	33.1	33.4	33.3
Mean Weight (kg)	.274	.280	.277	.272	.275	.274	.267	.275	.271	.276	.281	.278
Total Weight Landed (tons)	-	-	-	-	-	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	-	-	-	-	-	-	-	-	-	-

¹ Inshore, Cape Ray to Burgeo, Nfld.

TABLE 122

LENGTH FREQUENCIES - HERRING - 3P₈¹ - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	January			February			November			December		
COUNTRY	Canada (Newfoundland)											
CATCHES/LANDINGS	Catches											
COMMERCIAL/RESEARCH	Commercial											
SEX	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total	♂♂ ¹	♀♀	Total
20	7	3	10	-	-	-	-	-	-	-	-	-
21	1	6	7	-	-	-	-	-	-	-	-	-
22	1	1	2	-	-	-	-	-	-	1	-	1
23	1	1	2	-	-	-	-	-	-	-	-	-
24	1	1	2	-	-	-	-	-	-	1	-	1
25	2	-	2	-	-	-	-	-	-	-	-	-
26	1	1	2	-	-	-	-	-	-	-	-	-
27	3	2	5	-	9	9	3	-	3	1	1	2
28	2	3	5	9	9	18	-	3	3	-	2	2
29	10	2	12	19	-	19	3	-	3	4	1	5
30	24	14	38	-	9	9	17	23	40	17	9	26
31	48	43	91	9	-	9	26	20	46	51	43	94
32	60	64	124	37	28	65	94	94	188	96	83	179
33	118	111	229	102	102	204	109	94	203	112	126	238
34	116	115	231	130	185	315	137	140	277	127	130	257
35	49	57	106	74	121	195	60	123	183	67	79	146
36	20	29	49	37	74	111	17	31	48	18	24	42
37	17	22	39	9	9	18	3	-	3	1	5	6
38	11	28	39	9	19	27	3	-	3	-	-	-
39	2	2	4	-	-	-	-	-	-	-	1	1
40	-	1	1	-	-	-	-	-	-	-	-	-
Total ‰	494	506	1000	435	565	1000	472	528	1000	496	504	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	-	-	-	-	-	-	-	-	-	-
Number of Fish Measured	443	453	896	47	61	108	165	185	350	831	845	1676
Mean Length (cm)	32.9	33.4	33.1	33.7	34.1	33.9	33.2	33.5	33.4	33.1	33.3	33.2
Mean Weight (kg)	.272	.281	.277	.284	.291	.288	.278	.281	.280	.275	.279	.277
Total Weight Landed (tons)	-	-	-	-	-	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	-	-	-	-	-	-	-	-	-	-

¹ Inshore, Burgeo to Pass Island, Nfld.

MONTH	January			February		
	♂ ¹	♀	Total	♂ ¹	♀	Total
COUNTRY	Canada (Newfoundland)					
CATCHES/LANDINGS	Catches					
COMMERCIAL/RESEARCH	Commercial					
SEX	♂ ¹	♀	Total	♂ ¹	♀	Total
18	1	-	1	-	-	-
19	1	1	2	-	-	-
20	4	4	8	-	-	-
21	4	3	7	-	-	-
22	2	2	4	-	-	-
23	1	7	8	-	10	10
24	18	19	37	31	31	62
25	84	83	167	124	103	227
26	125	93	218	82	52	134
27	52	45	97	21	10	31
28	9	7	16	-	-	-
29	1	2	3	10	-	10
30	17	12	29	72	31	103
31	51	56	107	145	31	176
32	56	87	143	82	52	134
33	36	36	72	21	21	42
34	15	20	35	-	21	21
35	3	8	11	10	10	20
36	6	4	10	-	10	10
37	4	6	10	-	-	-
38	1	4	5	10	-	10
39	2	2	4	-	-	-
Total ‰	496	504	1000	618	382	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	-	-	-	-
Number of Fish Measured	768	779	1547	60	37	97
Mean Length (cm)	28.1	28.6	28.3	28.4	28.4	28.4
Mean Weight (kg)	.183	.196	.189	.196	.190	.194
Total Weight Landed (tons)	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-	-	-
Range of Depths (fm)	-	-	-	-	-	-

¹ Fortune Bay, Nfld.

TABLE 124 LENGTH FREQUENCIES - HERRING - 4R¹ - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	December		
COUNTRY	Canada (Newfoundland)		
CATCHES/LANDINGS	Catches		
COMMERCIAL/RESEARCH	Commercial		
SEX	♂ ^a	♀	Total
22	-	2	2
23	1	1	2
24	1	1	2
25	6	3	9
26	7	21	28
27	26	25	51
28	47	37	84
29	56	42	98
30	68	53	121
31	53	41	94
32	41	48	89
33	64	40	104
34	61	52	113
35	47	39	86
36	31	23	54
37	19	22	41
38	6	6	12
39	4	5	9
40	-	1	1
Total ‰	538	462	1000
Serial Numbers	-	-	-
Number of Samples	-	-	-
Number of Fish Measured	536	460	996
Mean Length (cm)	31.7	31.6	31.6
Mean Weight (kg)	.283	.280	.282
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-
Range of Depths (fm)	-	-	-

¹ Hawke's Bay, Nfld.

TABLE 125 LENGTH FREQUENCIES - HERRING -4T¹ - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	November		
COUNTRY	Canada		
CATCHES/LANDINGS	Catches		
COMMERCIAL/RESEARCH	Commercial		
SEX	♂ ¹	♀	Total
25	1	-	1
26	-	-	-
27	-	3	3
28	6	9	15
29	13	19	32
30	23	24	47
31	39	33	72
32	80	80	160
33	97	129	226
34	111	144	255
35	54	88	142
36	14	22	36
37	4	6	10
38	1	-	1
Total ‰	443	557	1000
Serial Numbers	-	-	-
Number of Samples	-	-	-
Number of Fish Measured	526	664	1190
Mean Length (cm)	32.9	33.1	33.0
Mean Weight (kg)	.272	.275	.274
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-
Range of Depths (fm)	-	-	-

¹ Magdalen Islands

TABLE 126

LENGTH FREQUENCIES - HERRING - 4W - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	April	November
COUNTRY	Canada (Maritimes)	Germany, Federal Republic
CATCHES/LANDINGS	Catches	NK
COMMERCIAL/RESEARCH	Commercial	NK
20	2	-
21	17	-
22	13	-
23	19	-
24	26	-
25	64	-
26	119	1
27	191	-
28	134	5
29	226	24
30	115	157
31	25	254
32	17	177
33	21	154
34	11	108
35	-	66
36	-	37
37	-	10
38	-	7
Total ‰	1000	1000
Serial Numbers	-	-
Number of Samples	1	-
Number of Fish Measured	530	813
Mean Length (cm)	28.2	32.65
Mean Weight (kg)	-	-
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	T	-
Range of Depths (fm)	-	-

TABLE 127

LENGTH FREQUENCIES - HERRING - 4X - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	July
COUNTRY	USSR
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Commercial
25	3
26	-
27	-
28	7
29	67
30	147
31	197
32	150
33	113
34	163
35	113
36	33
37	7
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	300
Mean Length (cm)	32.2
Mean Weight (kg)	0.303
Total Weight Landed (tons)	4
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	40
Range of Depths (fm)	60-90

TABLE 128

LENGTH FREQUENCIES - HERRING - 5Ye - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	April	June
COUNTRY	Canada (Maritimes)	
CATCHES/LANDINGS	Catches	
COMMERCIAL/RESEARCH	Commercial	
23	-	3
24	-	6
25	5	19
26	68	19
27	210	47
28	171	142
29	34	265
30	29	271
31	49	126
32	146	57
33	151	22
34	103	10
35	24	13
36	5	-
37	5	-
Total ‰	1000	1000
Serial Numbers	-	-
Number of Samples	1	1
Number of Fish Measured	205	317
Mean Length (cm)	30.6	30.0
Mean Weight (kg)	-	-
Total Weight Landed (tons)	-	-
Estimated Number Landed	-	-
Mesh(mm) or Hook(no.) Size	S	T
Range of Depths (fm)	-	-

MONTH	September
COUNTRY	Canada (Maritimes)
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Commercial
22	5
23	5
24	39
25	39
26	48
27	48
28	101
29	101
30	135
31	188
32	140
33	116
34	15
35	15
36	5
Total ‰	1000
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	207
Mean Length (cm)	30.3
Mean Weight (kg)	-
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size	8
Range of Depths (fm)	-

TABLE 130

LENGTH FREQUENCIES - HERRING - 52e - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	May
COUNTRY	France
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
21	-
22	6
23	26
24	41
25	53
26	54
27	85
28	105
29	81
30	65
31	116
32	172
33	142
34	40
35	6
36	-
Total ‰	1000
Serial Numbers	-
Number of Samples	30
Number of Fish Measured	4767
Mean Length (cm)	30.02
Mean Weight (kg)	0.210
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size ¹	50
Range of Depths (fm)	25-100

¹ Stretch mesh

TABLE 131 LENGTH FREQUENCIES - HERRING - 52w - 1969

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	June
COUNTRY	France
CATCHES/LANDINGS	Catches
COMMERCIAL/RESEARCH	Research
20	6
21	3
22	20
23	3
24	17
25	43
26	20
27	63
28	94
29	114
30	169
31	214
32	140
33	77
34	14
35	3
Total ‰	1000
Serial Numbers	-
Number of Samples	4
Number of Fish Measured	350
Mean Length (cm)	30.14
Mean Weight (kg)	0.228
Total Weight Landed (tons)	-
Estimated Number Landed	-
Mesh(mm) or Hook(no.) Size ¹	50
Range of Depths (fm)	30

¹ Stretch mesh

TABLE 132

AGE/LENGTH KEY - HERRING - 3P (SOUTH) - 1969 (4th QUARTER)

COUNTRY		Germany, Federal Republic												
CATCHES/LANDINGS		NK												
COMMERCIAL/RESEARCH		NK												
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths												
Year- Length Group (cm)	Class Age	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	9	> 9		Months Within Quarter			
											Oct	Nov	Dec	
25		2	-	-	-	-	-	-	-	2			20	
26		10	1	-	-	-	-	-	-	11			110	
27		6	7	-	-	-	-	-	-	13			140	
28		2	7	3	2	-	-	-	-	14			150	
29		-	1	2	3	-	-	-	-	6			80	
30		-	-	1	10	-	-	-	-	11			110	
31		-	-	-	6	1	-	-	-	7			70	
32		-	-	-	-	1	1	-	1	3			30	
33		-	-	-	1	-	1	2	3	7			70	
34		-	-	-	-	1	1	1	5	8			100	
35		-	-	-	-	-	-	-	5	5			50	
36		-	-	-	-	-	-	-	5	5			50	
37		-	-	-	-	-	-	-	1	1			10	
38		-	-	-	-	-	-	-	2	2			10	
Total No. of Ages Read		20	16	6	22	3	3	3	22	95	1000			
Serial Numbers		No. of Age Samples												
		Number of fish measured each month										100		
		Mean length of fish (cm) each month										30.63		
		Mean weight of fish (kg) each month										-		
		Total weight caught or landed (tons) each month										-		
		Estimated number caught or landed (whole numbers) each month										-		
		Range of depths (m) each month										-		
		Mesh size (mm)										-		

TABLE 133

AGE/LENGTH KEY - HERRING - 4T - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches												Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial											Apr	May	Jun	
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Class Length Group (cm)	Age	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957				
		2	3	4	5	6	7	8	9	10	11	12	Apr	May	Jun	
17		-	-	1	-	-	-	-	-	-	-	-	1	-	1	-
18		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20		-	-	-	1	-	-	-	-	-	-	-	1	-	-	1
21		-	-	-	-	1	-	1	-	-	-	-	2	-	2	-
22		-	-	-	-	-	-	1	-	-	-	-	1	-	1	-
23		1	-	1	-	-	-	-	1	-	-	-	3	-	2	1
24		1	5	1	-	-	-	-	-	-	-	-	7	-	7	2
25		-	14	6	1	-	-	-	-	-	-	-	21	-	15	10
26		-	18	32	2	1	2	-	-	-	-	-	55	10	45	20
27		-	14	55	16	2	-	-	1	-	-	-	88	-	66	41
28		-	1	80	58	9	1	-	1	-	-	-	150	60	105	70
29		-	-	29	100	24	2	1	1	-	-	-	157	120	88	90
30		-	-	9	54	86	12	7	3	-	-	-	171	80	54	149
31		-	-	1	21	65	57	30	9	2	-	-	185	130	98	114
32		-	1	-	11	24	72	164	51	5	1	-	329	250	225	144
33		-	-	1	1	-	12	47	253	11	2	1	328	240	199	174
34		-	-	-	1	2	6	16	101	41	2	2	171	110	79	125
35		-	-	-	-	1	1	1	17	22	-	-	42	-	11	44
36		-	-	-	-	-	-	1	4	4	1	2	12	-	1	14
37		-	-	-	-	-	-	-	-	1	-	1	2	-	1	1
Total No. of Ages Read		2	53	216	266	215	165	269	442	86	6	6	1726	1000	1000	1000
Serial Numbers		No. of Age Samples											11			
	Number of fish measured each month												100	850	800	
	Mean length of fish (cm) each month												32.0	31.2	31.7	
	Mean weight of fish (kg) each month												-	-	-	
	Total weight caught or landed (tons) each month												-	-	-	
	Estimated number caught or landed (whole numbers) each month												-	-	-	
	Range of depths (m) each month												-	-	-	
	Mesh size (mm)												N	N	S	

TABLE 133
(continued)

AGE/LENGTH KEY - HERRING - 4T - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches							Months Within Quarter		
COMMERCIAL/RESEARCH		Research						Total No. of Ages Read	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths							Months Within Quarter		
Length Group (cm)	Year-Class	1967	1966	1965	1964	1963	1962	Total No. of Ages Read	PER MILLE		
	Age	2	3	4	5	6	7		Apr	May	Jun
22		8	5	2	1	-	-	16			133
23		18	10	-	-	-	-	28			234
24		2	4	-	-	-	-	6			59
25		-	12	4	-	-	-	16			133
26		-	9	10	4	-	-	23			267
27		-	2	3	1	2	1	9			125
28		-	-	-	-	-	-	-			8
29		-	-	-	1	-	-	1			8
30		-	-	-	-	1	-	1			8
31		-	-	-	-	-	-	-			-
32		-	-	-	-	-	-	-			17
33		-	-	-	-	-	-	-			8
Total No. of Ages Read		28	42	19	7	3	1	100	1000		
Serial Numbers		No. of Age Samples						2			
		Number of fish measured each month									120
		Mean length of fish (cm) each month									25.4
		Mean weight of fish (kg) each month									-
		Total weight caught or landed (tons) each month									-
		Estimated number caught or landed (whole numbers) each month									-
		Range of depths (m) each month									-
		Mesh size (mm)									T

TABLE 133
(continued)

AGE/LENGTH KEY - HERRING - 4T - 1969 (3RD QUARTER)

COUNTRY		Canada (Maritimes)											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches												Months Within Quarter		
COMMERCIAL/RESEARCH		Research											Total No. of Ages Read	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths												Months Within Quarter		
Year- Class	Length Age Group (cm)	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	Total No. of Ages Read	Jul	Aug	Sep
		2	3	4	5	6	7	8	9	10	11	12				
19		2	-	-	-	-	-	-	-	-	-	-	2			3
20		2	-	-	-	-	-	-	-	-	-	-	2			3
21		3	-	-	-	-	-	-	-	-	-	-	3			4
22		1	-	-	-	-	-	-	-	-	-	-	1			1
23		-	1	-	-	-	-	-	-	-	-	-	1			1
24		-	13	1	-	-	-	-	-	-	-	-	14			21
25		-	11	6	3	-	-	-	-	-	-	-	20			29
26		-	5	56	12	1	-	-	-	-	-	-	74			109
27		-	3	94	50	3	2	-	-	-	-	-	152			225
28		-	2	46	68	6	1	2	-	-	-	-	125			184
29		-	-	10	53	19	2	1	-	-	-	-	85			125
30		-	-	1	12	42	5	-	-	-	-	-	60			88
31		-	-	-	2	13	7	2	1	2	-	-	27			41
32		-	-	1	1	4	8	7	5	2	-	-	28			41
33		-	-	-	-	-	2	2	13	4	-	-	21			33
34		-	-	-	-	-	-	1	16	16	-	-	33			50
35		-	-	-	-	-	-	-	3	15	1	1	20			33
36		-	-	-	-	1	-	-	1	2	2	-	6			9
Total No. of Ages Read		8	35	215	201	89	27	15	39	41	3	1	674	1000		
Serial Numbers		No. of Age Samples											4			
		Number of fish measured each month												680		
		Mean length of fish (cm) each month												29.1		
		Mean weight of fish (kg) each month												-		
		Total weight caught or landed (tons) each month												-		
		Estimated number caught or landed (whole numbers) each month												-		
		Range of depths (m) each month												-		
		Mesh size (mm)												T		

TABLE 133
(continued)

AGE/LENGTH KEY - HERRING - 4T - 1969 (3RD QUARTER)

COUNTRY		Canada (Maritimes)										Total No. of Ages Read		LENGTH COMPOSITION PER MILLE Within Quarter		
CATCHES/LANDINGS		Catches														
COMMERCIAL/RESEARCH		Commercial														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Length Group (cm)	Class Age	1965	1964	1963	1962	1961	1960	1959	1958	1957	Total No. of Ages Read	PER MILLE				
		4	5	6	7	8	9	10	11	12		Months	Within	Quarter		
												Jul	Aug	Sep		
22		-	-	1	-	-	-	-	-	-	1	2				
23		-	-	-	-	-	1	-	-	-	1	2				
24		-	-	-	-	-	-	-	-	-	-	-				
25		-	-	-	-	-	-	-	-	-	-	-				
26		-	1	-	-	-	-	-	-	-	1	5				
27		2	1	1	-	-	-	-	-	-	4	20				
28		5	7	1	-	-	-	-	-	-	13	65				
29		3	20	4	1	-	-	-	-	-	28	158				
30		3	6	21	-	1	-	-	-	-	31	150				
31		-	1	19	9	-	-	-	-	-	29	148				
32		-	1	6	14	8	2	-	-	1	32	168				
33		-	1	-	4	3	13	3	-	1	25	105				
34		-	-	-	-	1	17	5	-	-	23	110				
35		-	-	-	-	-	2	5	-	-	7	48				
36		-	-	-	-	-	-	-	1	-	1	17				
37		-	-	-	-	-	-	-	-	-	-	-				
38		-	-	-	-	-	-	-	-	-	-	-				
39		-	1	-	-	-	-	-	-	-	1	2				
Total No. of Ages Read		12	30	53	28	13	35	13	1	2	197	1000				
Serial Numbers		No. of Age Samples										2				
		Number of fish measured each month										400				
		Mean length of fish (cm) each month										31.7				
		Mean weight of fish (kg) each month										-				
		Total weight caught or landed (tons) each month										-				
		Estimated number caught or landed (whole numbers) each month										-				
		Range of depths (m) each month										-				
		Mesh size (mm)										N				

TABLE 134

AGE/LENGTH KEY - HERRING - 4V - 1969 (1ST QUARTER)

COUNTRY		USSR											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches												Months	Jan	Feb
COMMERCIAL/RESEARCH		Commercial														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Class	1965	1964	1963	1962	1961	1960	1959	1958	1957	1956	Total No. of Ages Read	PER MILLE				
Length Group (cm)	4	5	6	7	8	9	10	11	12	13		Jan	Feb	Mar		
25	1	-	-	-	-	-	-	-	-	-	1	-	1	-		
26	1	1	-	-	-	-	-	-	-	-	2	-	1	-		
27	-	1	-	-	-	-	-	-	-	-	1	-	2	-		
28	-	8	6	-	-	-	-	-	-	-	14	-	9	3		
29	-	13	18	-	-	-	-	-	-	-	31	-	23	25		
30	-	4	35	2	-	-	-	-	-	-	41	-	38	53		
31	-	-	27	15	-	-	-	-	-	-	42	-	52	57		
32	-	-	9	23	11	-	-	-	-	-	43	-	54	63		
33	-	-	1	20	28	3	-	-	-	-	52	-	84	87		
34	-	-	-	2	20	22	6	-	-	-	50	-	139	135		
35	-	-	-	-	7	31	12	3	-	-	53	-	233	194		
36	-	-	-	-	-	8	23	12	4	-	47	-	186	145		
37	-	-	-	-	-	-	9	11	12	1	33	-	106	115		
38	-	-	-	-	-	20	9	3	1	1	34	-	47	52		
39	-	-	-	-	-	2	6	6	2	-	16	-	17	37		
40	-	-	-	-	-	-	1	4	3	-	8	-	5	22		
41	-	-	-	-	-	-	-	-	1	-	1	-	2	10		
42	-	-	-	-	-	-	-	-	-	-	-	-	1	1		
43	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
Total No. of Ages Read	2	27	96	62	66	86	66	39	23	2	469	-	1000	1000		
Serial Numbers	No. of Age Samples											6				
	Number of fish measured each month											-	1600	600		
	Mean length of fish (cm) each month											-	34.6	34.7		
	Mean weight of fish (kg) each month											-	0.270	0.258		
	Total weight caught or landed (tons) each month											-	6324	9707		
	Estimated number caught or landed (whole numbers) each month											-	-	-		
	Range of depths (m) each month											-	91-155	64-128		
	Mesh size (mm)											-	40	40		

TABLE 134
(continued)

AGE/LENGTH KEY - HERRING - 4V - 1969 (4TH QUARTER)

COUNTRY		USSR											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches												Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial												Oct	Nov	Dec
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Class Length Age Group (cm)	1967	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	2	3	4		
	2	3	4	5	6	7	8	9	10	11	12					
22	2	-	-	-	-	-	-	-	-	-	-	2	1	-	-	
23	2	-	-	-	-	-	-	-	-	-	-	2	2	3	-	
24	-	5	-	-	-	-	-	-	-	-	-	5	7	3	-	
25	-	9	7	-	-	-	-	-	-	-	-	16	16	17	-	
26	-	-	9	-	-	-	-	-	-	-	-	9	15	17	-	
27	-	-	13	2	-	-	-	-	-	-	-	15	21	35	-	
28	-	-	8	12	-	-	-	-	-	-	-	20	29	68	-	
29	-	-	1	17	6	-	-	-	-	-	-	24	40	73	-	
30	-	-	-	13	22	-	-	-	-	-	-	35	80	156	-	
31	-	-	-	6	15	3	-	-	-	-	-	24	100	148	-	
32	-	-	-	-	11	5	2	-	-	-	-	18	91	113	-	
33	-	-	-	-	1	5	5	3	-	-	-	14	82	70	-	
34	-	-	-	-	-	5	10	10	4	-	-	29	126	105	-	
35	-	-	-	-	-	-	-	1	12	9	7	29	156	85	-	
36	-	-	-	-	-	-	-	-	7	11	5	32	126	70	-	
37	-	-	-	-	-	-	-	-	3	4	4	11	67	27	-	
38	-	-	-	-	-	-	-	-	-	1	3	4	28	5	-	
39	-	-	-	-	-	-	-	-	-	-	2	2	10	2	-	
40	-	-	-	-	-	-	-	-	-	-	-	-	3	3	-	
Total No. of Ages Read	4	14	38	50	55	18	18	32	25	23	14	291	1000	1000	-	
Serial Numbers	No. of Age Samples											11				
	Number of fish measured each month											2700	600	-		
	Mean length of fish (cm) each month											33.0	31.6	-		
	Mean weight of fish (kg) each month											0.262	0.139	-		
	Total weight caught or landed (tons) each month											941	99	-		
	Estimated number caught or landed (whole numbers) each month											-	-	-		
	Range of depths (m) each month											73-137	64-155	-		
	Mesh size (mm)											40	40	-		

TABLE 135

AGE/LENGTH KEY - HERRING - 4V (NORTH) - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial											Apr	May	Jun
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class	1966	1965	1964	1963	1962	1961	1960	1959	1958						
Length Age Group (cm)	3	4	5	6	7	8	9	10	11						
26	3	-	-	-	-	-	-	-	-	3			60		
27	-	4	2	1	-	-	-	-	-	7			140		
28	1	5	1	-	-	-	-	-	-	7			140		
29	-	-	1	-	-	-	-	-	-	1			20		
30	-	1	1	2	-	-	-	-	-	4			80		
31	-	-	-	3	1	-	-	-	-	4			80		
32	-	-	-	1	3	4	-	-	-	8			160		
33	-	-	-	1	-	2	4	-	-	7			160		
34	-	-	-	-	-	-	5	-	-	5			100		
35	-	-	-	-	-	-	-	1	-	1			20		
36	-	-	-	-	-	-	-	-	1	1			40		
Total No. of Ages Read	4	10	5	8	4	6	9	2	1	49	1000				
Serial Numbers	No. of Age Samples										1				
	Number of fish measured each month											50			
	Mean length of fish (cm) each month											31.2			
	Mean weight of fish (kg) each month											-			
	Total weight caught or landed (tons) each month											-			
	Estimated number caught or landed (whole numbers) each month											-			
	Range of depths (m) each month											-			
	Mesh size (mm)											W			

TABLE 136

AGE/LENGTH KEY - HERRING - 4V (SOUTH) - 1969 (1ST QUARTER)

COUNTRY		Germany, Federal Republic														
CATCHES/LANDINGS		NK														
COMMERCIAL/RESEARCH		NK														
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths														
Year- Class Length Group (cm)	Age	1968	1967	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		1	2	3	4	5	6	7	8	9	> 9		Months Within Quarter			
												Jan	Feb	Mar		
21		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
26		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
27		-	-	-	-	3	4	-	-	-	-	7	17	10	5	-
28		-	-	-	-	2	4	1	-	-	-	7	28	14	10	-
29		-	-	-	-	2	7	4	-	-	-	13	34	64	20	-
30		-	-	-	-	-	10	3	-	-	1	14	83	91	25	-
31		-	-	-	-	-	5	9	1	2	4	21	61	99	45	-
32		-	-	-	-	-	1	13	3	16	10	43	121	90	137	-
33		-	-	-	-	-	-	3	6	18	52	79	181	183	211	-
34		-	-	-	-	-	-	-	-	4	68	72	209	175	192	-
35		-	-	-	-	-	-	-	-	2	65	67	154	133	182	-
36		-	-	-	-	-	-	-	-	-	53	53	72	86	123	-
37		-	-	-	-	-	-	-	-	-	11	11	28	31	40	-
38		-	-	-	-	-	-	-	-	-	3	3	6	11	5	-
39		-	-	-	-	-	-	-	-	-	1	1	6	7	5	-
40		-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
Total No. of Ages Read												-	-	-	-	
Serial Numbers												No. of Age Samples				
Number of fish measured each month												181	735	203		
Mean length of fish (cm) each month												33.52	33.47	34.19		
Mean weight of fish (kg) each month												-	-	-		
Total weight caught or landed (tons) each month												-	-	-		
Estimated number caught or landed (whole numbers) each month												-	-	-		
Range of depths (m) each month												-	-	-		
Mesh size (mm)												-	-	-		

TABLE 136
(continued)

AGE/LENGTH KEY - HERRING - 4V (SOUTH) - 1969 (4TH QUARTER)

COUNTRY		Germany, Federal Republic												
CATCHES/LANDINGS		NK												
COMMERCIAL/RESEARCH		NK												
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths												
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	9	> 9		Months Within Quarter	Oct	Nov	Dec
26		1	-	-	-	-	-	-	-	1				5
27		1	-	-	-	-	-	-	-	1				5
28		2	-	-	-	-	-	-	-	2				10
29		1	-	1	4	-	-	-	-	6				30
30		-	-	1	7	-	-	-	-	8				40
31		-	-	-	10	4	2	1	-	17				85
32		-	-	-	2	1	3	3	1	10				50
33		-	-	-	2	3	7	10	8	30				150
34		-	-	-	-	2	3	6	25	36				190
35		-	-	-	-	-	-	1	3	34				180
36		-	-	-	-	-	-	-	-	32				160
37		-	-	-	-	-	-	-	-	15				75
38		-	-	-	-	-	-	-	4	4				20
Total No. of Ages Read		5	-	2	25	10	16	23	115	196	1000			
Serial Numbers		No. of Age Samples												
		Number of fish measured each month											200	
		Mean length of fish (cm) each month											34.33	
		Mean weight of fish (kg) each month											-	
		Total weight caught or landed (tons) each month											-	
		Estimated number caught or landed (whole numbers) each month											-	
		Range of depths (m) each month											-	
		Mesh size (mm)											-	

TABLE 136
(continued)

AGE/LENGTH KEY - HERRING - 4V (SOUTH) - 1969 (4TH QUARTER)

COUNTRY		Poland												
CATCHES/LANDINGS		NK												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter			
		3	4	5	6	7	8	9	> 9		Oct	Nov	Dec	
26		-	1	-	-	-	-	-	-	1				8
27		1	-	-	-	-	-	-	-	1				9
28		3	2	1	-	-	-	-	-	6				40
29		-	10	3	2	-	-	-	-	15				115
30		-	-	3	8	3	-	-	-	14				95
31		-	-	5	12	4	-	-	-	21				160
32		-	-	-	5	4	1	-	-	10				90
33		-	-	-	-	1	5	1	-	7				57
34		-	-	-	-	-	5	3	5	13				115
35		-	-	-	-	-	1	2	8	11				91
36		-	-	-	-	-	-	-	16	16				179
37		-	-	-	-	-	-	-	4	4				16
38		-	-	-	-	-	-	-	4	4				25
Total No. of Ages Read		4	13	12	27	12	12	6	37	123	1000			
Serial Numbers		No. of Age Samples												
		Number of fish measured each month									1230			
		Mean length of fish (cm) each month									32.23			
		Mean weight of fish (kg) each month									-			
		Total weight caught or landed (tons) each month									-			
		Estimated number caught or landed (whole numbers) each month									-			
		Range of depths (m) each month									-			
		Mesh size (mm)									-			

TABLE 137

AGE/LENGTH KEY - HERRING - 4W - 1969 (1ST QUARTER)

COUNTRY		Canada (Maritimes)						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches							Jan	Feb	Mar
COMMERCIAL/RESEARCH		Commercial						Total No. of Ages Read	MONTHS WITHIN QUARTER		
STRUCTURES USED IN AGE DETERMINATION		Otoliths							Jan	Feb	Mar
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961				
		3	4	5	6	7	8		Jan	Feb	Mar
13		-	-	-	-	-	-	-	-	2	-
14		-	-	-	-	-	-	-	-	1	-
15		-	-	-	-	-	-	-	-	2	-
16		-	-	-	-	-	-	-	-	13	4
17		-	-	-	-	-	-	-	-	12	1
18		-	-	-	-	-	-	-	-	41	4
19		-	-	-	-	-	-	-	-	109	9
20		2	-	-	-	-	-	2	-	120	19
21		-	-	-	-	-	-	-	-	99	43
22		1	1	-	-	-	-	2	-	77	62
23		-	-	-	-	-	-	-	-	54	53
24		-	2	-	-	-	-	2	-	61	53
25		-	3	-	-	-	-	3	-	54	58
26		-	2	3	-	-	-	5	-	57	53
27		-	-	3	2	-	-	5	-	67	76
28		-	-	5	-	-	-	5	-	89	115
29		-	-	4	1	-	-	5	-	69	124
30		-	-	7	1	-	-	8	-	38	134
31		-	-	-	9	1	-	10	-	21	92
32		-	-	-	1	6	-	7	-	8	55
33		-	-	-	-	1	2	3	-	4	27
34		-	-	-	-	1	1	2	-	2	12
35		-	-	-	-	-	-	-	-	-	4
36		-	-	-	-	-	-	-	-	-	1
37		-	-	-	-	-	-	-	-	-	-
38		-	-	-	-	-	-	-	-	-	1
Total No. of Ages Read		3	8	22	14	9	3	59	1000 1000		
Serial Numbers		No. of Age Samples						1			
		Number of fish measured each month						-	1131	1126	
		Mean length of fish (cm) each month						-	24.1	27.8	
		Mean weight of fish (kg) each month						-	-	-	
		Total weight caught or landed (tons) each month						-	-	-	
		Estimated number caught or landed (whole numbers) each month						-	-	-	
		Range of depths (m) each month						-	-	-	
		Mesh size (mm)						-	T	T	

TABLE 137
(continued)

AGE/LENGTH KEY - HERRING - 4W - 1969 (2ND QUARTER)

COUNTRY		USSR										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial										Apr	May	Jun	
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class	Age	1966	1965	1964	1963	1962	1961	1960	1959	1958					
Length Group (cm)		3	4	5	6	7	8	9	10	11					
20		-	-	-	-	-	-	-	-	-	-	-	-		
21		-	-	-	-	-	-	-	-	-	-	-	-		
22		-	-	-	-	-	-	-	-	-	-	-	-		
23		1	2	-	-	-	-	-	-	-	-	-	-		
24		-	2	-	-	-	-	-	-	-	-	-	-		
25		-	5	3	-	-	-	-	-	-	-	-	-		
26		-	-	1	-	-	-	-	-	-	-	-	-		
27		-	-	1	-	-	-	-	-	-	-	-	-		
28		-	-	-	2	-	-	-	-	-	-	-	-		
29		-	-	2	10	-	-	-	-	-	-	-	-		
30		-	-	7	15	4	-	-	-	-	-	-	-		
31		-	-	2	21	7	-	-	-	-	-	-	-		
32		-	-	-	15	7	4	1	-	-	-	-	-		
33		-	-	-	1	6	11	-	-	-	-	-	-		
34		-	-	-	-	4	6	3	-	-	-	-	-		
35		-	-	-	-	-	8	4	3	1	-	-	-		
36		-	-	-	-	-	1	7	4	4	-	-	-		
37		-	-	-	-	-	-	1	3	-	-	-	-		
38		-	-	-	-	-	-	-	-	1	-	-	-		
39		-	-	-	-	-	-	-	-	-	-	-	-		
Total No. of Ages Read		1	9	16	64	28	30	16	10	6	180	-	1000	1000	
Serial Numbers		No. of Age Samples										g			
		Number of fish measured each month										-	720	1900	
		Mean length of fish (cm) each month										-	30.3	33.4	
		Mean weight of fish (kg) each month										-	0.206	0.303	
		Total weight caught or landed (tons) each month										-	2283	100	
		Estimated number caught or landed (whole numbers) each month										-	-	-	
		Range of depths (m) each month										-	119-128	55-128	
		Mesh size (mm)										-	40	40	

TABLE 137
(continued)

AGE/LENGTH KEY - HERRING - 4W - 1969 (3RD QUARTER)

COUNTRY		Germany, Federal Republic											
CATCHES/LANDINGS		NK											
COMMERCIAL/RESEARCH		NK											
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths											
Year- Class	Length Age Group (cm)	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		4	5	6	7	8	9	> 9		Months Within Quarter	Jul	Aug	Sep
27		2	-	1	-	-	-	-	3				36
28		5	2	-	-	-	-	-	7				97
29		1	6	5	1	-	-	-	13				159
30		-	7	12	-	2	1	-	22				269
31		-	2	5	4	8	3	-	22				281
32		-	-	1	1	2	5	-	9				122
33		-	-	-	-	2	-	-	2				24
34		-	-	-	-	-	-	1	1				12
Total No. of Ages Read		8	17	24	6	14	9	1	79				1000
Serial Numbers		No. of Age Samples											
		Number of fish measured each month											82
		Mean length of fish (cm) each month											30.70
		Mean weight of fish (kg) each month											-
		Total weight caught or landed (tons) each month											-
		Estimated number caught or landed (whole numbers) each month											-
		Range of depths (m) each month											-
		Mesh size (mm)											-

TABLE 137
(continued)

AGE/LENGTH KEY - HERRING - 4W - 1969 (3RD QUARTER)

COUNTRY		USSR												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Group (cm)	Age	1964	1963	1962	1961	1960	1959	1958	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
		5	6	7	8	9	10	11		Months Within	Quarter			
									Jul			Aug	Sep	
26		-	-	-	-	-	-	-	-					3
27		-	-	-	-	-	-	-	-					33
28		2	-	-	-	-	-	-	2					137
29		4	3	-	-	-	-	-	7					163
30		5	4	-	-	-	-	-	9					299
31		4	9	4	-	-	-	-	17					189
32		-	11	6	1	-	-	-	18					140
33		-	3	5	4	-	-	-	12					10
34		-	-	3	9	7	-	-	19					20
35		-	-	-	3	5	1	1	10					3
36		-	-	-	-	1	1	-	2					-
37		-	-	-	-	-	-	-	-					-
38		-	-	-	-	-	-	-	-					3
Total No. of Ages Read		15	30	18	17	13	2	1	96					1000
Serial Numbers		No. of Age Samples							1					
		Number of fish measured each month												307
		Mean length of fish (cm) each month												30.1
		Mean weight of fish (kg) each month												0.242
		Total weight caught or landed (tons) each month												1643
		Estimated number caught or landed (whole numbers) each month												-
		Range of depths (m) each month												55
		Mesh size (mm)												40

TABLE 137
(continued)

AGE/LENGTH KEY - HERRING - 4W - 1969 (4TH QUARTER)

COUNTRY		USSR										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months	Within	Quarter
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class	1965	1964	1963	1962	1961	1960	1959	1958	1957						
Length Group (cm)	4	5	6	7	8	9	10	11	12		Oct	Nov	Dec		
23	-	-	-	-	-	-	-	-	-	-	-	+	2		
24	-	-	-	-	-	-	-	-	-	-	-	+	6		
25	-	-	-	-	-	-	-	-	-	-	-	4	56		
26	-	-	-	-	-	-	-	-	-	-	-	10	152		
27	3	-	-	-	-	-	-	-	-	-	3	2	17		
28	2	1	-	-	-	-	-	-	-	-	3	14	21		
29	-	14	2	-	-	-	-	-	-	-	16	43	38		
30	-	48	25	-	-	-	-	-	-	-	73	236	179		
31	-	50	64	14	-	-	-	-	-	-	128	308	293		
32	-	5	48	12	-	-	-	-	-	-	65	194	204		
33	-	-	21	27	5	-	-	-	-	-	53	88	107		
34	-	-	1	23	4	-	-	-	-	-	28	55	64		
35	-	-	-	1	8	2	1	-	-	-	12	32	39		
36	-	-	-	-	-	5	2	-	1	-	8	18	17		
37	-	-	-	-	-	-	-	1	-	-	1	8	5		
38	-	-	-	-	-	-	-	-	-	-	-	2	1		
39	-	-	-	-	-	-	-	-	-	-	-	+	1		
40	-	-	-	-	-	-	-	-	-	-	-	-	+		
Total No. of Ages Read	5	118	161	77	17	7	3	1	1		390	1000	1000	1000	
Serial Numbers	No. of Age Samples										32				
	Number of fish measured each month										6600	2700	500		
	Mean length of fish (cm) each month										31.4	31.4	28.5		
	Mean weight of fish (kg) each month										0.232	0.233	0.166		
	Total weight caught or landed (tons) each month										4430	1010	4		
	Estimated number caught or landed (whole numbers) each month										-	-	-		
	Range of depths (m) each month										27-155	27-174	55		
	Mesh size (mm)										40	40	40		

TABLE 138

AGE/LENGTH KEY - HERRING - 4X - 1969 (1ST QUARTER)

COUNTRY		Canada (Maritimes)											
CATCHES/LANDINGS									Catches				
COMMERCIAL/RESEARCH									Commercial				
STRUCTURES USED IN AGE DETERMINATION									Otoliths				
Year- Class Length Group (cm)	Age	1967	1966	1965	1964	1963	---	1955	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	14	Months Within Quarter		Jan	Feb	Mar	
7		3	-	-	-	-	-	-	3	2	2	2	
8		37	-	-	-	-	-	-	37	31	30	24	
9		114	-	-	-	-	-	-	114	114	131	63	
10		171	-	-	-	-	-	-	171	137	169	90	
11		175	1	-	-	-	-	-	176	110	107	79	
12		102	4	-	-	-	-	-	106	83	63	70	
13		53	25	-	-	-	-	-	78	43	37	116	
14		8	52	-	-	-	-	-	60	22	16	109	
15		2	42	-	-	-	-	-	44	23	13	73	
16		-	57	1	-	-	-	-	58	51	15	35	
17		1	61	-	-	-	-	-	62	104	30	7	
18		-	71	1	-	-	-	-	72	117	63	1	
19		-	39	2	-	-	-	-	41	76	45	2	
20		-	31	-	-	-	-	-	31	44	38	7	
21		-	7	2	-	-	-	-	9	17	22	19	
22		-	7	5	-	-	-	-	12	10	20	22	
23		-	2	2	-	-	-	-	4	2	11	33	
24		-	-	6	1	-	-	-	7	1	15	36	
25		-	-	3	-	-	-	-	3	1	14	53	
26		-	1	1	4	-	-	-	6	< 1	17	39	
27		-	-	-	4	1	-	-	5	4	29	44	
28		-	1	-	2	1	-	-	4	5	27	34	
29		-	-	-	1	2	-	-	3	2	30	28	
30		-	-	-	1	-	-	-	1	< 1	21	7	
31		-	-	-	1	2	-	-	3	1	14	3	
32		-	-	-	-	-	-	-	-	-	10	1	
33		-	-	-	-	-	-	-	-	-	6	1	
34		-	-	-	-	-	-	-	-	-	3	1	
35		-	-	-	-	-	-	-	-	-	2	-	
36		-	-	-	-	-	-	-	-	-	-	-	
37		-	-	-	-	-	-	-	-	-	-	-	
38		-	-	-	-	-	-	-	-	-	-	1	
39		-	-	-	-	-	-	-	-	-	-	-	
40		-	-	-	-	-	-	-	-	-	-	-	
41		-	-	-	-	-	-	1	1	-	-	-	
Total No. of Ages Read		666	401	23	14	6		1	1111				
Serial Numbers		No. of Age Samples							16				
		Number of fish measured each month							2273	1810	1516		
		Mean length of fish (cm) each month							14.6	16.4	17.1		
		Mean weight of fish (kg) each month							-	-	-		
		Total weight caught or landed (tons) each month							-	-	-		
		Estimated number caught or landed (whole numbers) each month							-	-	-		
		Range of depths (m) each month							-	-	-		
		Mesh size (mm)							S	S-T	S		

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (1ST QUARTER)

COUNTRY		Canada (Maritimes)										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Research										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Age Group (cm)		1968 1967 1966			Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter						
		1	2	3		Jan	Feb	Mar				
7		1	6	-	7	20	74	7				
8		-	10	-	10	7	189	20				
9		-	16	-	16	-	264	50				
10		-	15	-	15	7	162	100				
11		-	23	-	23	34	74	203				
12		-	32	-	32	136	128	244				
13		-	55	-	55	401	81	240				
14		-	8	-	8	68	7	43				
15		-	2	1	3	55	7	13				
16		-	-	13	13	163	7	-				
17		-	-	10	10	61	-	40				
18		-	-	7	7	41	7	23				
19		-	-	1	1	7	-	10				
20		-	-	-	-	-	-	-				
21		-	-	-	-	-	-	7				
						1000	1000	1000				
Total No. of Ages Read		1	167	32	200							
Serial Numbers		No. of Age Samples				3						
		Number of fish measured each month				147	148	300				
		Mean length of fish (cm) each month				14.3	10.4	12.7				
		Mean weight of fish (kg) each month				-	-	-				
		Total weight caught or landed (tons) each month				-	-	-				
		Estimated number caught or landed (whole numbers) each month				-	-	-				
		Range of depths (m) each month				-	-	-				
		Mesh size (mm)				T	T	T				

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (1ST QUARTER)

COUNTRY		United States				
CATCHES/LANDINGS		Catches				
COMMERCIAL/RESEARCH		Commercial				
STRUCTURES USED IN AGE DETERMINATION		Otoliths				
Year- Class	1967	1966	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
				Jan	Feb	Mar
Length Group (cm)	2	3				
6	-	-	-	1	-	-
7	1	-	1	-	8	6
8	3	-	3	13	38	14
9	21	-	21	81	105	103
10	72	-	72	104	180	163
11	131	-	131	137	258	186
12	79	3	82	110	187	103
13	24	25	49	51	75	103
14	10	52	62	46	72	143
15	-	50	50	72	22	114
16	-	34	34	94	33	54
17	-	23	23	96	13	8
18	-	19	19	90	2	3
19	-	18	18	67	2	-
20	-	6	6	25	5	-
21	-	4	4	9	-	-
22	-	-	-	2	-	-
23	-	-	-	1	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	1	-	-
Total No. of Ages Read	341	234	575	1000	1000	1000
Serial Numbers			No. of Age Samples	34		
	Number of fish measured each month			951	400	350
	Mean length of fish (cm) each month			14.4	11.9	12.6
	Mean weight of fish (kg) each month			-	-	-
	Total weight caught or landed (tons) each month			-	-	-
	Estimated number caught or landed (whole numbers) each month			-	-	-
	Range of depths (m) each month			-	-	-
	Mesh size (mm)			-	-	-

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Group (cm)	Age	1967	1966	1965	1964	1963	1962	1961	1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8	9		Months Within Quarter			
											Apr	May	Jun	
7		-	-	-	-	-	-	-	-	-	-	< 1	-	-
8		7	-	-	-	-	-	-	-	7	7	5	-	-
9		27	-	-	-	-	-	-	-	27	46	44	< 1	-
10		92	-	-	-	-	-	-	-	92	86	79	3	-
11		139	-	-	-	-	-	-	-	139	114	91	7	-
12		176	4	-	-	-	-	-	-	180	135	85	12	-
13		187	23	-	-	-	-	-	-	210	159	72	17	-
14		122	45	-	-	-	-	-	-	167	117	43	20	-
15		57	57	-	-	-	-	-	-	114	77	30	14	-
16		14	77	-	-	-	-	-	-	91	46	27	9	-
17		5	85	1	-	-	-	-	-	91	17	33	10	-
18		-	97	2	-	-	-	-	-	99	27	61	9	-
19		3	158	6	-	-	-	-	-	167	15	109	13	-
20		-	187	12	-	-	-	-	-	199	15	113	25	-
21		-	199	17	-	-	-	-	-	216	10	87	40	-
22		-	159	29	-	-	-	-	-	188	6	39	53	-
23		-	98	30	1	-	-	-	-	129	1	17	62	-
24		-	43	28	1	-	-	-	-	72	1	8	59	-
25		-	17	31	6	1	-	-	-	55	2	6	59	-
26		-	3	28	14	-	-	-	-	45	2	7	47	-
27		-	-	25	29	1	-	-	-	55	10	11	43	-
28		-	1	7	57	3	-	-	-	68	16	12	61	-
29		-	-	11	69	22	-	-	-	102	27	8	103	-
30		-	-	1	61	30	3	-	-	95	32	7	126	-
31		-	-	-	27	46	9	2	-	84	18	4	85	-
32		-	-	1	6	34	16	2	-	59	10	1	52	-
33		-	1	-	-	18	31	9	1	60	3	1	38	-
34		-	-	-	-	5	12	14	1	32	-	< 1	22	-
35		-	-	-	-	-	1	2	2	5	1	-	8	-
36		-	-	-	-	-	-	-	-	-	-	-	2	-
37		-	-	-	-	-	-	-	-	-	-	-	1	-
38		-	-	-	-	-	-	-	-	-	-	-	< 1	-
39		-	-	-	-	-	-	-	-	-	-	-	-	-
40		-	-	-	-	-	-	-	-	-	-	-	-	-
41		-	-	-	-	-	-	-	-	-	-	-	< 1	-
Total No. of Ages Read		829	1254	229	271	160	72	29	4	2848				
Serial Numbers		No. of Age Samples								29				
		Number of fish measured each month									1045	3886	16751	
		Mean length of fish (cm) each month									15.6	17.0	26.6	
		Mean weight of fish (kg) each month									-	-	-	
		Total weight caught or landed (tons) each month									-	-	-	
		Estimated number caught or landed (whole numbers) each month									-	-	-	
		Range of depths (m) each month									-	-	-	
		Mesh size (mm)									W	W-S	W-S&N-T	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)								
CATCHES/LANDINGS		Catches								
COMMERCIAL/RESEARCH		Research								
STRUCTURES USED IN AGE DETERMINATION		Otoliths								
Year- Length Group (cm)	Class Age	1967		1966		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	2	3		Months Within Quarter			
							Apr	May	Jun	
7		-	-			-	1	-	-	
8		1	-			1	14	12	-	
9		17	-			17	104	127	-	
10		30	-			30	200	113	-	
11		59	-			59	240	47	20	
12		61	-			61	212	99	90	
13		88	3			91	125	234	170	
14		84	1			85	42	194	340	
15		37	1			38	15	46	280	
16		4	5			9	12	17	20	
17		4	6			10	12	25	20	
18		-	15			15	16	46	30	
19		-	6			6	5	21	30	
20		-	1			1	2	9	-	
21		-	-			-	-	8	-	
22		-	-			-	-	2	-	
Total No. of Ages Read		385	38			423	1000	1000	1000	
Serial Numbers		No. of Age Samples				5				
		Number of fish measured each month					1024	895	100	
		Mean length of fish (cm) each month					12.0	13.3	14.7	
		Mean weight of fish (kg) each month					-	-	-	
		Total weight caught or landed (tons) each month					-	-	-	
		Estimated number caught or landed (whole numbers) each month					-	-	-	
		Range of depths (m) each month					-	-	-	
		Mesh size (mm)					-	-	-	
							T	T	T	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (2ND QUARTER)

COUNTRY		USSR													
CATCHES/LANDINGS		Catches													
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Age Group (cm)		1966	1965	1964	1963	1962	1961	1960	1959	1958	Total No. of Ages Read	LENGTH COMPOSITION PER MILE Months Within Quarter			
		3	4	5	6	7	8	9	10	11		Apr	May	Jun	
19		-	-	-	-	-	-	-	-	-	-				8
20		3	-	-	-	-	-	-	-	-	3				40
21		3	-	-	-	-	-	-	-	-	3				41
22		6	-	-	-	-	-	-	-	-	6				43
23		8	-	-	-	-	-	-	-	-	8				37
24		2	1	-	-	-	-	-	-	-	3				24
25		-	4	-	-	-	-	-	-	-	4				18
26		-	9	2	-	-	-	-	-	-	11				22
27		-	-	4	-	-	-	-	-	-	4				19
28		-	-	7	4	-	-	-	-	-	11				28
29		-	-	8	17	1	-	-	-	-	26				50
30		-	-	3	12	6	-	-	-	-	21				78
31		-	-	-	11	8	2	-	-	-	21				123
32		-	-	-	5	6	10	1	-	-	22				160
33		-	-	-	1	14	37	14	1	-	67				128
34		-	-	-	-	4	26	12	3	-	45				90
35		-	-	-	-	-	5	7	5	-	17				43
36		-	-	-	-	-	-	2	2	-	4				29
37		-	-	-	-	-	-	-	-	1	1				16
38		-	-	-	-	-	-	-	-	-	-				3
Total No. of Ages Read		22	14	24	50	39	80	36	11	1	277	1000			
Serial Numbers		No. of Age Samples										4			
		Number of fish measured each month											1300		
		Mean length of fish (cm) each month											29.8		
		Mean weight of fish (kg) each month											0.216		
		Total weight caught or landed (tons) each month											15		
		Estimated number caught or landed (whole numbers) each month											-		
		Range of depths (m) each month											128-146		
		Mesh size (mm)											40		

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (2ND QUARTER)

COUNTRY		United States										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Age Group (cm)	1967 1966 1965 1964 1963 1962 1961							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2	3	4	5	6	7	8		Months Within Quarter			
									Apr	May	Jun	
8	-	-	-	-	-	-	-	-	13	2	-	
9	1	-	-	-	-	-	-	1	44	12	1	
10	13	-	-	-	-	-	-	13	49	35	10	
11	63	-	-	-	-	-	-	63	124	70	49	
12	97	-	-	-	-	-	-	97	156	77	67	
13	117	7	-	-	-	-	-	124	84	73	65	
14	77	20	-	-	-	-	-	97	62	44	49	
15	33	24	-	-	-	-	-	57	53	28	42	
16	10	45	-	-	-	-	-	55	31	43	40	
17	2	71	-	-	-	-	-	73	36	62	38	
18	-	88	-	-	-	-	-	88	31	101	47	
19	-	93	-	-	-	-	-	93	27	134	61	
20	-	100	-	-	-	-	-	100	80	122	91	
21	-	87	-	-	-	-	-	87	107	87	116	
22	-	33	1	-	-	-	-	34	76	40	90	
23	-	36	4	1	-	-	-	41	9	25	53	
24	-	11	9	2	-	-	-	22	-	13	29	
25	-	9	6	1	-	-	-	16	18	7	24	
26	-	1	3	1	-	-	-	5	-	2	10	
27	-	-	1	3	4	-	-	8	-	10	12	
28	-	-	1	3	7	-	-	11	-	8	23	
29	-	-	-	1	8	-	-	9	-	1	28	
30	-	-	-	-	13	4	-	17	-	2	27	
31	-	-	-	-	3	1	-	4	-	1	14	
32	-	-	-	-	1	-	-	1	-	1	11	
33	-	-	-	-	-	-	2	2	-	-	3	
Total No. of Ages Read	413	625	25	12	36	5	2	1118	1000	1000	1000	
Serial Numbers	No. of Age Samples							89				
	Number of fish measured each month								225	2000	1874	
	Mean length of fish (cm) each month								15.8	17.6	19.9	
	Mean weight of fish (kg) each month								-	-	-	
	Total weight caught or landed (tons) each month								-	-	-	
	Estimated number caught or landed (whole numbers) each month								-	-	-	
	Range of depths (m) each month								-	-	-	
	Mesh size (mm)								-	-	-	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (2ND QUARTER)

COUNTRY		United States											
CATCHES/LANDINGS		Landings											
COMMERCIAL/RESEARCH		Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class	Length Age Group (cm)	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	> 8		Months Within Quarter	Apr	May	Jun
19		3	-	-	-	-	-	-	3				3
20		4	-	-	-	-	-	-	4				4
21		18	-	-	-	-	-	-	18				17
22		38	1	-	-	-	-	-	39				37
23		34	4	-	-	-	-	-	38				36
24		24	6	-	-	-	-	-	30				28
25		12	11	-	-	-	-	-	23				22
26		1	20	6	-	-	-	-	27				26
27		-	13	37	7	-	-	-	57				54
28		-	2	88	35	-	-	-	125				118
29		-	-	40	107	18	-	-	165				156
30		-	-	18	106	41	2	-	167				158
31		-	-	-	30	62	13	-	105				100
32		-	-	-	-	37	73	6	116				110
33		-	-	-	-	2	39	51	92				87
34		-	-	-	-	-	-	37	37				35
35		-	-	-	-	-	-	7	7				7
36		-	-	-	-	-	-	2	2				2
Total No. of Ages Read		134	57	189	285	160	127	103	1055				1000
Serial Numbers									No. of Age Samples	15			
		Number of fish measured each month											1055
		Mean length of fish (cm) each month											29.4964
		Mean weight of fish (kg) each month											-
		Total weight caught or landed (tons) each month											-
		Estimated number caught or landed (whole numbers) each month											-
		Range of depths (m) each month											-
		Mesh size (mm)											-

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (3RD QUARTER)

COUNTRY		Canada (Maritimes)										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Group (cm)	Age	1968	1967	1966	1965	1964	1963	1962	1961	1960					
		1	2	3	4	5	6	7	8	9	Jul	Aug	Sep		
9		-	1	-	-	-	-	-	-	-	1	< 1	-	1	
10		-	8	-	-	-	-	-	-	-	8	2	< 1	< 1	
11		3	17	-	-	-	-	-	-	-	20	4	< 1	1	
12		14	43	-	-	-	-	-	-	-	57	13	3	3	
13		4	154	-	-	-	-	-	-	-	158	26	11	14	
14		-	266	-	-	-	-	-	-	-	266	33	21	40	
15		-	375	-	-	-	-	-	-	-	375	30	52	65	
16		-	417	9	-	-	-	-	-	-	426	23	56	102	
17		-	255	25	-	1	-	-	-	-	281	19	34	97	
18		-	140	50	-	-	-	-	-	-	190	12	23	84	
19		-	59	54	1	-	-	-	-	-	114	11	23	68	
20		-	10	61	-	-	-	-	-	-	71	13	21	38	
21		-	4	113	-	-	-	-	-	-	117	26	37	27	
22		-	-	168	-	-	1	-	-	-	169	68	84	32	
23		-	-	218	2	1	-	-	-	-	221	126	102	28	
24		-	-	175	2	1	-	-	-	-	178	136	55	29	
25		-	-	98	6	-	-	1	-	-	105	111	25	19	
26		-	1	68	15	2	-	-	-	-	86	75	14	12	
27		-	-	20	19	4	-	-	-	-	43	45	9	13	
28		-	-	3	12	23	3	-	-	-	41	35	11	19	
29		-	-	-	14	61	4	-	-	-	79	52	37	30	
30		-	-	1	5	90	10	1	-	-	107	58	71	53	
31		-	-	-	3	44	46	7	2	-	102	38	77	61	
32		-	-	-	1	27	60	45	3	-	136	20	71	54	
33		-	-	-	-	5	32	72	21	2	132	13	67	47	
34		-	-	-	-	1	9	34	26	4	74	8	52	35	
35		-	-	-	-	1	1	7	4	3	16	2	28	15	
36		-	-	-	-	-	-	1	-	-	1	1	12	9	
37		-	-	-	-	-	-	-	-	-	-	< 1	3	3	
38		-	-	-	-	-	-	-	-	-	-	< 1	1	< 1	
39		-	-	-	-	-	-	-	-	-	-	-	< 1	1	
40		-	-	-	-	-	-	-	-	-	-	-	< 1	-	
41		-	-	-	-	-	-	-	-	-	-	-	< 1	-	
Total No. of Ages Read		21	1750	1063	80	261	166	168	56	9	3574	1000	1000	1000	
Serial Numbers		No. of Age Samples										36			
		Number of fish measured each month										20803	19925	7209	
		Mean length of fish (cm) each month										24.3	25.7	23.2	
		Mean weight of fish (kg) each month										-	-	-	
		Total weight caught or landed (tons) each month										-	-	-	
		Estimated number caught or landed (whole numbers) each month										-	-	-	
		Range of depths (m) each month										-	-	-	
		Mesh size (mm)										W-S-T	W-S-T	W-S-T	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (3RD QUARTER)

COUNTRY		United States										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	1967	1966	1965	1964	1963	1962	1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		2	3	4	5	6	7	8		Months Jul	Aug	Quarter Sep
6		-	-	-	-	-	-	-	-	1	-	-
7		-	-	-	-	-	-	-	-	-	-	-
8		-	-	-	-	-	-	-	-	-	1	-
9		-	-	-	-	-	-	-	-	1	2	-
10		2	-	-	-	-	-	-	2	8	-	-
11		5	-	-	-	-	-	-	5	35	-	2
12		16	-	-	-	-	-	-	16	74	6	5
13		41	-	-	-	-	-	-	41	93	27	19
14		133	-	-	-	-	-	-	133	106	77	71
15		257	-	-	-	-	-	-	257	66	110	110
16		176	1	-	-	-	-	-	177	34	91	132
17		156	4	-	-	-	-	-	160	21	100	143
18		128	13	-	-	-	-	-	141	20	77	127
19		71	39	-	-	-	-	-	110	39	64	83
20		28	112	-	-	-	-	-	140	69	71	48
21		5	157	-	-	-	-	-	162	129	108	40
22		3	178	-	-	-	-	-	181	128	112	55
23		-	118	1	-	-	-	-	119	72	83	64
24		-	57	3	-	-	-	-	60	40	42	51
25		-	11	5	-	-	-	-	16	15	12	26
26		-	1	8	-	-	-	-	9	12	4	10
27		-	1	4	1	-	-	-	6	4	2	4
28		-	-	2	2	-	-	-	4	6	3	3
29		-	-	1	5	3	-	-	9	8	1	2
30		-	-	-	3	4	-	-	7	6	3	2
31		-	-	-	2	5	1	-	8	5	2	1
32		-	-	-	1	1	5	3	10	7	1	1
33		-	-	-	-	-	-	-	-	1	1	1
Total No. of Ages Read		1021	692	24	14	13	6	3	1773	1000	1000	1000
Serial Numbers		No. of Age Samples							177			
		Number of fish measured each month							2268	2756	2802	
		Mean length of fish (cm) each month							18.9	19.3	18.9	
		Mean weight of fish (kg) each month							-	-	-	
		Total weight caught or landed (tons) each month							-	-	-	
		Estimated number caught or landed (whole numbers) each month							-	-	-	
		Range of depths (m) each month							-	-	-	
		Mesh size (mm)							-	-	-	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (3RD QUARTER)

COUNTRY		United States																		
CATCHES/LANDINGS		Landings																		
COMMERCIAL/RESEARCH		Commercial																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Year- Length Group(cm)	Class Age	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE										
		3	4	5	6	7	8	> 8		Months Within Quarter										
										Jul	Aug	Sep								
20		6	-	-	-	-	-	-	6	4	49	-								
21		15	-	-	-	-	-	-	15	8	128	-								
22		23	-	-	-	-	-	-	23	38	137	-								
23		23	1	-	-	-	-	-	24	88	29	-								
24		10	1	-	-	-	-	-	11	38	20	-								
25		8	4	-	-	-	-	-	12	38	20	91								
26		4	16	3	-	-	-	-	23	80	29	91								
27		-	18	24	1	-	-	-	43	160	49	-								
28		-	4	36	9	-	-	-	49	185	39	91								
29		-	-	24	26	-	-	-	50	143	157	182								
30		-	-	7	24	1	-	-	32	80	108	272								
31		-	-	-	17	15	-	-	32	75	108	91								
32		-	-	-	-	8	8	2	18	38	78	182								
33		-	-	-	-	-	4	3	7	8	29	-								
34		-	-	-	-	-	-	5	5	17	10	-								
35		-	-	-	-	-	-	-	-	-	-	-								
36		-	-	-	-	-	-	1	1	-	10	-								
Total No. of Ages Read									89	44	94	77	24	12	11	351				
Serial Numbers									No. of Age Samples			7								
Number of fish measured each month										238	102	11								
Mean length of fish (cm) each month										27.9311	27.2843	30.4091								
Mean weight of fish (kg) each month										-	-	-								
Total weight caught or landed (tons) each month										-	-	-								
Estimated number caught or landed (whole numbers) each month										-	-	-								
Range of depths (m) each month										-	-	-								
Mesh size (mm)										-	-	-								

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (4TH QUARTER)

COUNTRY		Canada (Maritimes)										
CATCHES/LANDINGS		Catchee										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Length Group (cm)	Class Age	1968	1967	1966	1965	1964	1963	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		1	2	3	4	5	6		Months Within Quarter			
									Oct	Nov	Dec	
7		3	-	-	-	-	-	3	-	3	-	
8		88	-	-	-	-	-	88	11	47	4	
9		174	-	-	-	-	-	174	21	104	21	
10		182	-	-	-	-	-	182	26	135	145	
11		217	-	-	-	-	-	217	27	135	394	
12		160	-	-	-	-	-	160	10	122	353	
13		95	-	-	-	-	-	95	5	100	75	
14		34	1	1	-	-	-	36	2	62	8	
15		9	22	-	-	-	-	31	18	14	-	
16		-	58	1	-	-	-	59	78	13	-	
17		-	90	1	-	-	-	91	159	23	-	
18		-	95	1	-	-	-	96	157	25	-	
19		-	82	1	-	-	-	83	148	33	-	
20		-	40	4	-	-	-	44	90	25	-	
21		-	25	12	-	-	-	37	54	11	-	
22		-	6	12	-	-	-	18	32	12	-	
23		-	1	19	1	-	-	21	28	12	-	
24		-	-	30	2	-	-	32	39	18	-	
25		-	-	47	-	-	-	47	34	33	-	
26		-	-	42	2	-	-	44	32	42	-	
27		-	-	25	1	-	-	26	18	17	-	
28		-	1	5	1	-	-	7	5	12	-	
29		-	1	-	2	-	-	3	2	1	-	
30		-	-	-	1	-	-	1	2	1	-	
31		-	-	-	-	3	2	5	2	-	-	
Total No. of Ages Read		962	422	201	10	3	2	1600	1000	1000	1000	
Serial Numbers		No. of Age Samples						16				
		Number of fish measured each month						3002	1457	241		
		Mean length of fish (cm) each month						19.1	14.7	11.8		
		Mean weight of fish (kg) each month						-	-	-		
		Total weight caught or landed (tons) each month						-	-	-		
		Estimated number caught or landed (whole numbers) each month						-	-	-		
		Range of depths (m) each month						-	-	-		
		Mesh size (mm)						W-S	W-S	S		

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (4TH QUARTER)

COUNTRY		Canada (Maritimes)				
CATCHES/LANDINGS		Catches				
COMMERCIAL/RESEARCH		Research				
STRUCTURES USED IN AGE DETERMINATION		Otoliths				
Year- Class	1968	1967	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
				Months Within Quarter		
Length Group (cm)	1	2		Oct	Nov	Dec
10	7	-	7	-	75	-
11	14	-	14	-	120	5
12	41	-	41	-	360	80
13	53	-	53	-	320	340
14	49	-	49	-	105	380
15	30	1	31	-	15	170
16	5	-	5	-	5	25
Total No. of Ages Read			199	1	200	
Serial Numbers			No. of Age Samples			2
Number of fish measured each month			-	200	200	
Mean length of fish (cm) each month			-	12.8	14.2	
Mean weight of fish (kg) each month			-	-	-	
Total weight caught or landed (tons) each month			-	-	-	
Estimated number caught or landed (whole numbers) each month			-	-	-	
Range of depths (m) each month			-	-	-	
Mesh size (mm)			-	T	T	

TABLE 138
(continued)

AGE/LENGTH KEY - HERRING - 4X - 1969 (4TH QUARTER)

COUNTRY		United States				Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES/LANDINGS		Catches					Months Within Quarter	Oct	Nov	Dec
COMMERCIAL/RESEARCH		Commercial								
STRUCTURES USED IN AGE DETERMINATION		Otoliths								
Year- Class	1968	1967	1966	1965						
Length Group (cm)	1	2	3	4						
5	-	-	-	-	-	1	-	-		
6	-	-	-	-	-	1	-	-		
7	-	-	-	-	-	1	9	-		
8	1	-	-	-	1	11	21	52		
9	13	-	-	-	13	21	82	91		
10	23	-	-	-	23	39	95	131		
11	26	-	-	-	26	25	143	97		
12	68	-	-	-	68	18	175	160		
13	65	-	-	-	65	11	124	251		
14	26	-	-	-	26	14	38	131		
15	4	22	1	-	27	39	11	57		
16	-	81	-	-	81	106	42	12		
17	-	72	-	-	72	148	44	-		
18	-	73	-	-	73	153	65	12		
19	-	35	1	-	36	90	74	6		
20	-	30	1	-	31	64	44	-		
21	-	14	2	-	16	37	21	-		
22	-	3	12	-	15	44	6	-		
23	-	-	13	-	13	60	2	-		
24	-	-	12	1	13	56	2	-		
25	-	-	-	-	-	28	2	-		
26	-	-	1	-	1	17	-	-		
27	-	-	-	-	-	8	-	-		
28	-	-	-	-	-	3	-	-		
29	-	-	-	-	-	1	-	-		
30	-	-	-	-	-	1	-	-		
31	-	-	-	-	-	1	-	-		
32	-	-	-	-	-	1	-	-		
33	-	-	-	-	-	-	-	-		
34	-	-	-	-	-	-	-	-		
35	-	-	-	-	-	1	-	-		
Total No. of Ages Read						600	1000	1000	1000	
Serial Numbers						No. of Age Samples	46			
Number of fish measured each month						1578	475	175		
Mean length of fish (cm) each month						18.6	14.0	12.5		
Mean weight of fish (kg) each month										
Total weight caught or landed (tons) each month										
Estimated number caught or landed (whole numbers) each month										
Range of depths (m) each month										
Mesh size (mm)										

TABLE 139

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (1ST QUARTER)

COUNTRY		Canada (Maritimes)							
CATCHES/LANDINGS		Catches							
COMMERCIAL/RESEARCH		Commercial							
STRUCTURES USED IN AGE DETERMINATION		Otoliths							
Year- Class Length Group (cm)	Age	1967	1966	1965	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4		Months Within Quarter	Jan	Feb	Mar
10		7	-	-	7	35	-	-	
11		17	-	-	17	85	-	-	
12		24	-	-	24	120	-	-	
13		31	3	-	34	170	-	-	
14		6	2	-	8	35	-	23	
15		2	2	-	4	-	-	73	
16		-	34	-	34	100	-	136	
17		-	54	4	58	155	-	232	
18		-	44	4	48	145	-	232	
19		-	33	3	36	115	-	141	
20		-	18	1	19	20	-	105	
21		-	8	1	9	15	-	45	
22		-	-	-	-	-	-	9	
23		-	-	1	1	-	-	4	
24		-	-	-	-	-	-	-	
25		-	-	-	-	-	-	-	
26		-	-	1	1	5	-	-	
Total No. of Ages Read		87	198	15	300	1000	-	1000	
Serial Numbers		No. of Age Samples				4			
		Number of fish measured each month				200	-	220	
		Mean length of fish (cm) each month				15.8	-	18.2	
		Mean weight of fish (kg) each month				-	-	-	
		Total weight caught or landed (tons) each month				-	-	-	
		Estimated number caught or landed (whole numbers) each month				-	-	-	
		Range of depths (m) each month				-	-	-	
		Mesh size (mm)				S	-	S	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y(NORTH) - 1969 (1ST QUARTER)

COUNTRY		Canada (Maritimes)				
CATCHES/LANDINGS		Catches				
COMMERCIAL/RESEARCH		Research				
STRUCTURES USED IN AGE DETERMINATION		Otoliths				
Year- Class Length Age Group (cm)	1967 1966		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	2	3		Months Within Quarter		
				Jan	Feb	Mar
8	4	-	4	-	17	8
9	27	-	27	80	90	87
10	64	-	64	164	203	210
11	86	-	86	228	201	263
12	117	-	117	224	241	238
13	75	-	75	208	195	167
14	16	-	16	20	44	25
15	2	-	2	12	7	2
16	-	2	2	16	2	-
17	-	2	2	12	-	-
18	-	3	3	16	-	-
19	-	2	2	16	-	-
20	-	-	-	4	-	-
Total No. of Ages Read			391	9	400	
Serial Numbers			No. of Age Samples			4
Number of fish measured each month			250	523	600	
Mean length of fish (cm) each month			12.4	11.9	11.7	
Mean weight of fish (kg) each month			-	-	-	
Total weight caught or landed (tons) each month			-	-	-	
Estimated number caught or landed (whole numbers) each month			-	-	-	
Range of depths (m) each month			-	-	-	
Mesh size (mm)			T	T	T	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (1ST QUARTER)

COUNTRY		United States							
CATCHES/LANDINGS		Catches							
COMMERCIAL/RESEARCH		Commercial							
STRUCTURES USED IN AGE DETERMINATION		Otoliths							
Year- Class Length Group (cm)	Age	1967		1966		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		2	3	2	3		Months Within Quarter		
							Jan	Feb	Mar
5		-	-			-	-	-	3
6		-	-			-	-	-	-
7		-	-			-	-	-	-
8		-	-			-	-	-	3
9		2	-			2	-	120	23
10		10	-			10	5	147	49
11		27	-			27	75	240	106
12		46	-			46	205	347	111
13		43	1			44	175	146	66
14		10	4			14	45	-	54
15		1	17			18	20	-	74
16		-	33			33	120	-	117
17		-	39			39	105	-	140
18		-	27			27	135	-	120
19		-	11			11	95	-	80
20		-	4			4	20	-	37
21		-	-			-	-	-	14
22		-	-			-	-	-	3
							1000	1000	1000
Total No. of Ages Read		139	136			275			
Serial Numbers		No. of Age Samples				11			
		Number of fish measured each month					200	75	350
		Mean length of fish (cm) each month					15.4	11.8	15.5
		Mean weight of fish (kg) each month					-	-	-
		Total weight caught or landed (tons) each month					-	763	1519
		Estimated number caught or landed (whole numbers) each month					-	-	-
		Range of depths (m) each month					-	-	-
		Mesh size (mm)					-	-	-

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)						
CATCHES/LANDINGS		Catches						
COMMERCIAL/RESEARCH		Commercial						
STRUCTURES USED IN AGE DETERMINATION		Otoliths						
Year- Class Length Age Group (cm)	1967	1966	1965	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
					Months Within Quarter			
	2	3	4		Apr	May	Jun	
9	2	-	-	2	-	13	-	
10	8	-	-	8	50	63	-	
11	10	1	-	11	60	77	-	
12	28	-	-	28	250	181	-	
13	22	1	-	23	230	211	-	
14	11	2	-	13	80	100	-	
15	2	4	-	6	10	53	-	
16	1	9	-	10	20	67	-	
17	1	13	-	14	120	57	-	
18	-	12	-	12	50	67	-	
19	2	12	-	14	60	67	-	
20	-	5	-	5	40	30	-	
21	-	2	-	2	20	7	-	
22	-	1	1	2	10	7	-	
Total No. of Ages Read	87	62	1	150	1000	1000	-	
Serial Numbers	No. of Age Samples			2				
	Number of fish measured each month				100	299	-	
	Mean length of fish (cm) each month				14.8	14.6	-	
	Mean weight of fish (kg) each month				-	-	-	
	Total weight caught or landed (tons) each month				-	-	-	
	Estimated number caught or landed (whole numbers) each month				-	-	-	
	Range of depths (m) each month				-	-	-	
	Mesh size (mm)				S	W	-	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Research									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year- Class Length Group (cm)	Age	1967		1966		Total No. of Ages Read	LENGTH COMPOSITION PER MILE				
		2	3	2	3		Months Within Quarter				
								Apr	May	Jun	
11		8	-			8	80				
12		25	-			25	250				
13		40	-			40	400				
14		20	-			20	200				
15		1	-			1	10				
16		-	3			3	30				
17		-	2			2	20				
18		-	-			-	-				
19		-	-			-	-				
20		-	1			1	10				
Total No. of Ages Read		94	6			100	1000				
Serial Numbers		No. of Age Samples				1					
		Number of fish measured each month					100				
		Mean length of fish (cm) each month					13.6				
		Mean weight of fish (kg) each month					-				
		Total weight caught or landed (tons) each month					-				
		Estimated number caught or landed (whole numbers) each month					-				
		Range of depths (m) each month					-				
		Mesh size (mm)					T				

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (2ND QUARTER)

COUNTRY		United States												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Group (cm)	Age	1968	1967	1966	1965	1964	1963	1962	1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		1	2	3	4	5	6	7	8		Months Within Quarter			
											Apr	May	Jun	
3		2	-	-	-	-	-	-	-	2	-	3	-	
4		65	-	-	-	-	-	-	-	65	-	126	13	
5		283	-	-	-	-	-	-	-	283	-	252	88	
6		144	-	-	-	-	-	-	-	144	-	-	58	
7		6	-	-	-	-	-	-	-	6	-	-	3	
8		-	-	-	-	-	-	-	-	-	-	8	-	
9		-	2	-	-	-	-	-	-	2	-	80	-	
10		-	14	-	-	-	-	-	-	14	27	65	8	
11		-	14	-	-	-	-	-	-	14	33	31	24	
12		-	71	-	-	-	-	-	-	71	221	69	80	
13		-	166	1	-	-	-	-	-	167	215	153	142	
14		-	176	1	-	-	-	-	-	177	54	80	145	
15		-	156	9	-	-	-	-	-	165	101	19	112	
16		-	81	11	-	-	-	-	-	92	101	15	59	
17		-	25	36	1	-	-	-	-	62	114	19	34	
18		-	2	43	-	-	-	-	-	45	67	8	29	
19		-	-	48	-	-	-	-	-	48	27	15	34	
20		-	-	56	-	-	-	-	-	56	33	34	42	
21		-	-	55	-	-	-	-	-	55	7	23	37	
22		-	-	41	1	-	-	-	-	42	-	-	36	
23		-	-	31	1	-	-	-	-	32	-	-	22	
24		-	-	13	5	-	-	-	-	18	-	-	11	
25		-	-	6	9	-	-	-	-	15	-	-	9	
26		-	-	-	6	-	-	-	-	6	-	-	5	
27		-	-	2	5	-	-	-	-	7	-	-	4	
28		-	-	-	-	-	-	-	-	-	-	-	1	
29		-	-	-	-	2	-	-	-	2	-	-	1	
30		-	-	-	-	-	3	-	-	3	-	-	2	
31		-	-	-	-	-	2	1	-	3	-	-	1	
32		-	-	-	-	-	-	1	-	1	-	-	-	
33		-	-	-	-	-	-	-	1	1	-	-	-	
34		-	-	-	-	-	-	1	-	1	-	-	-	
Total No. of Ages Read		500	707	353	28	2	5	3	1	1599				
Serial Numbers		No. of Age Samples									50			
		Number of fish measured each month									149	262	2472	
		Mean length of fish (cm) each month									14.9	10.4	14.7	
		Mean weight of fish (kg) each month									-	-	-	
		Total weight caught or landed (tons) each month									390	72	2485	
		Estimated number caught or landed (whole numbers) each month									-	-	-	
		Range of depths (m) each month									-	-	-	
		Mesh size (mm)									-	-	-	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (2ND QUARTER)

COUNTRY		United States										
CATCHES/LANDINGS		Landings										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	> 8		Months Within Quarter		
									Apr	May	Jun	
24		2	-	-	-	-	-	-	2			30
25		1	-	-	-	-	-	-	1			15
26		-	2	-	-	-	-	-	2			30
27		-	1	2	-	-	-	-	3			46
28		-	-	2	3	-	-	-	5			77
29		-	-	-	12	1	-	-	13			200
30		-	-	1	4	4	-	-	9			139
31		-	-	-	4	11	2	-	17			262
32		-	-	-	-	1	5	-	6			92
33		-	-	-	-	-	1	2	3			46
34		-	-	-	-	-	-	4	4			62
Total No. of Ages Read									65	999		
Serial Numbers		3	3	5	23	17	8	6	No. of Age Samples		3	
		Number of fish measured each month										65
		Mean length of fish (cm) each month										30.3877
		Mean weight of fish (kg) each month										-
		Total weight caught or landed (tons) each month										-
		Estimated number caught or landed (whole numbers) each month										-
		Range of depths (m) each month										-
		Mesh size (mm)										-

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (3RD QUARTER)

COUNTRY		Canada (Maritimes)							
CATCHES/LANDINGS		Catches							
COMMERCIAL/RESEARCH		Commercial							
STRUCTURES USED IN AGE DETERMINATION		Otoliths							
Year- Class Length Age Group (cm)	1967		1966		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2	3	2	3		Months Within Quarter			
						Jul	Aug	Sep	
13	2	-			2			4	
14	10	-			10			20	
15	16	-			16			39	
16	20	-			20			77	
17	8	-			8			126	
18	3	-			3			201	
19	14	2			16			170	
20	12	3			15			136	
21	2	2			4			87	
22	1	3			4			53	
23	-	1			1			51	
24	-	1			1			20	
25	-	-			-			14	
26	-	-			-			2	
Total No. of Ages Read					88	12			1000
Serial Numbers					No. of Age Samples			1	
Number of fish measured each month								507	
Mean length of fish (cm) each month								19.4	
Mean weight of fish (kg) each month								-	
Total weight caught or landed (tons) each month								-	
Estimated number caught or landed (whole numbers) each month								-	
Range of depths (m) each month								-	
Mesh size (mm)								S-W	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (3RD QUARTER)

COUNTRY		United States									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Commercial									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year- Class Length Group (cm)	Age	1968	1967	1966	1965	1964	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		1	2	3	4	5		Months Within Quarter			
								Jul	Aug	Sep	
4		2	-	-	-	-	2	1	-	-	
5		30	-	-	-	-	30	9	-	-	
6		147	-	-	-	-	147	43	-	-	
7		106	-	-	-	-	106	26	3	7	
8		86	-	-	-	-	86	9	1	32	
9		27	-	-	-	-	27	2	3	21	
10		13	1	-	-	-	14	12	3	13	
11		12	9	-	-	-	21	33	10	11	
12		2	31	-	-	-	33	58	45	5	
13		1	103	-	-	-	104	105	82	25	
14		1	190	-	-	-	191	132	88	59	
15		2	324	-	-	-	326	115	82	107	
16		-	329	2	-	-	331	85	80	105	
17		-	266	6	-	-	272	46	67	83	
18		-	160	19	-	-	179	30	46	61	
19		-	90	41	-	-	131	25	40	53	
20		-	48	89	-	-	137	31	40	46	
21		-	14	126	-	-	140	41	49	48	
22		-	-	192	-	-	192	55	74	65	
23		-	-	234	3	-	237	65	96	103	
24		-	-	185	3	-	188	46	105	80	
25		-	1	80	11	-	92	17	59	52	
26		-	-	31	10	-	41	8	19	20	
27		-	-	1	5	-	6	3	3	3	
28		-	-	-	3	-	3	2	2	1	
29		-	-	-	-	-	-	-	1	-	
30		-	-	-	-	1	1	1	1	-	
31		-	-	-	-	1	1	-	1	-	
32		-	-	-	-	1	1	-	-	-	
Total No. of Ages Read		429	1566	1006	35	3	3039	1000	1000	1000	
Serial Numbers		No. of Age Samples					110				
	Number of fish measured each month							3858	2961	2586	
	Mean length of fish (cm) each month							16.5	19.2	18.8	
	Mean weight of fish (kg) each month							-	-	-	
	Total weight caught or landed (tons) each month							4822	6772	5301	
	Estimated number caught or landed (whole numbers) each month							-	-	-	
	Range of depths (m) each month							-	-	-	
	Mesh size (mm)							-	-	-	

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (3RD QUARTER)

COUNTRY		United States							Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Landings							No. of	PER MILLE		
COMMERCIAL/RESEARCH		Commercial							Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths							Read	Jul	Aug	Sep
Year- Class	Length Age Group (cm)	1966	1965	1964	1963	1962	1961	<1961				
		3	4	5	6	7	8	> 8		Jul	Aug	Sep
17		1	-	-	-	-	-	-	1	3	-	-
18		-	-	-	-	-	-	-	-	-	-	-
19		1	-	-	-	-	-	-	1	-	3	-
20		5	-	-	-	-	-	-	5	8	5	-
21		4	-	-	-	-	-	-	4	8	3	-
22		9	-	-	-	-	-	-	9	20	5	-
23		11	-	-	-	-	-	-	11	17	-	82
24		17	-	-	-	-	-	-	17	22	-	148
25		24	2	-	-	-	-	-	26	17	3	312
26		15	32	-	-	-	-	-	47	76	11	262
27		2	41	4	-	-	-	-	47	101	16	82
28		-	13	41	-	-	-	-	54	112	27	66
29		-	-	55	37	-	-	-	92	146	104	16
30		-	-	19	112	3	-	-	134	165	200	-
31		-	-	-	70	52	9	-	131	106	245	16
32		-	-	-	-	59	52	2	113	132	176	-
33		-	-	-	-	3	37	22	62	53	162	-
34		-	-	-	-	-	1	16	17	11	35	-
35		-	-	-	-	-	-	4	4	3	5	16
										1000	1000	1000
Total No. of Ages Read		89	88	119	219	117	99	44	775			
Serial Numbers		No. of Age Samples							8			
		Number of fish measured each month								357	375	61
		Mean length of fish (cm) each month								29.3557	31.3147	26.0344
		Mean weight of fish (kg) each month								-	-	-
		Total weight caught or landed (tons) each month								-	-	-
		Estimated number caught or landed (whole numbers) each month								-	-	-
		Range of depths (m) each month								-	-	-
		Mesh size (mm)								-	-	-

TABLE 139
(continued)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1969 (4TH QUARTER)

COUNTRY		United States					
CATCHES/LANDINGS		Catches					
COMMERCIAL/RESEARCH		Commercial					
STRUCTURES USED IN AGE DETERMINATION		Otoliths					
Year- Class Length Age Group (cm)	1968	1967	1966	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
					Months Within Quarter		
	1	2	3		Oct	Nov	Dec
7	-	-	-	-	2	-	-
8	1	-	-	1	27	-	-
9	11	-	-	11	61	-	-
10	19	-	-	19	51	-	-
11	10	-	-	10	23	-	-
12	5	-	-	5	9	20	-
13	1	7	-	8	11	40	-
14	4	27	-	31	45	440	-
15	6	41	1	48	82	380	-
16	-	80	-	80	104	60	-
17	-	47	-	47	70	40	-
18	-	36	-	36	62	-	-
19	-	40	-	40	71	-	-
20	-	28	7	35	61	20	-
21	-	17	27	44	58	-	-
22	-	6	30	36	55	-	-
23	-	1	30	31	67	-	-
24	-	-	36	36	71	-	-
25	-	-	26	26	51	-	-
26	-	-	6	6	16	-	-
27	-	-	-	-	2	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-
34	-	-	-	-	-	-	-
35	-	-	-	-	1	-	-
36	-	-	-	-	-	-	-
Total No. of Ages Read	57	330	163	550	1000	1000	-
Serial Numbers	No. of Age Samples			22			
	Number of fish measured each month				1275	50	-
	Mean length of fish (cm) each month				18.2	15.2	-
	Mean weight of fish (kg) each month				-	-	-
	Total weight caught or landed (tons) each month				2129	33	304
	Estimated number caught or landed (whole numbers) each month				-	-	-
	Range of depths (m) each month				-	-	-
	Mesh size (mm)				-	-	-

TABLE 140

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (1ST QUARTER)

COUNTRY		United States											
CATCHES/LANDINGS		Landings											
COMMERCIAL/RESEARCH		Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter			
		3	4	5	6	7	8	> 8		Jan	Feb	Mar	
29		-	-	-	-	2	-	-	2				
30		-	-	-	-	3	1	-	4			333	
31		-	-	-	-	-	-	-	-			500	
												167	
Total No. of Ages Read		-	-	-	-	5	1	-	6	1000			
Serial Numbers		No. of Age Samples 1											
		Number of fish measured each month											6
		Mean length of fish (cm) each month											30.4333
		Mean weight of fish (kg) each month											-
		Total weight caught or landed (tons) each month											-
		Estimated number caught or landed (whole numbers) each month											-
		Range of depths (m) each month											-
		Mesh size (mm)											-

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (2ND QUARTER)

COUNTRY		United States							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
CATCHES/LANDINGS		Landings								Months Within Quarter	Apr	May	Jun
COMMERCIAL/RESEARCH		Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	<1961					
		3	4	5	6	7	8	> 8		Apr	May	Jun	
18		2	-	-	-	-	-	-	2	-	3	-	
19		5	-	-	-	-	-	-	5	-	6	-	
20		10	-	-	-	-	-	-	10	-	13	-	
21		5	-	-	-	-	-	-	5	-	6	-	
22		12	-	-	-	-	-	-	12	-	15	-	
23		6	3	-	-	-	-	-	9	-	11	-	
24		4	7	-	-	-	-	-	11	-	14	-	
25		1	23	-	-	-	-	-	24	-	31	-	
26		-	33	12	-	-	-	-	45	-	57	-	
27		-	18	75	-	-	-	-	93	-	119	-	
28		-	2	49	32	-	-	-	83	2	105	-	
29		-	-	6	57	13	-	-	76	34	78	-	
30		-	-	1	26	71	18	-	116	98	93	-	
31		-	-	-	4	131	135	6	276	279	195	-	
32		-	-	-	-	9	174	60	243	277	154	-	
33		-	-	-	-	-	21	127	148	197	78	-	
34		-	-	-	-	-	-	53	53	88	18	-	
35		-	-	-	-	-	-	10	10	18	3	-	
36		-	-	-	-	-	-	4	4	7	1	-	
Total No. of Ages Read		45	86	143	119	224	348	260	1184		1000	1000	-
Serial Numbers		No. of Age Samples							13				
		Number of fish measured each month							441	784			
		Mean length of fish (cm) each month							32.3429	29.6782			
		Mean weight of fish (kg) each month							-	-			
		Total weight caught or landed (tons) each month							-	-			
		Estimated number caught or landed (whole numbers) each month							-	-			
		Range of depths (m) each month							-	-			
		Mesh size (mm)							-	-			

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (3RD QUARTER)

COUNTRY		Canada (Maritimes)									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Commercial									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year- Class Length Age Group(cm)	1965 1964 1963 1962 1961 1960						Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	4	5	6	7	8	9		Months Within Quarter Jul Aug Sep			
20	-	-	-	-	-	-	-				1
21	-	-	-	-	-	-	-				1
22	-	-	-	-	-	-	-				2
23	-	-	-	-	-	-	-				9
24	-	-	-	-	-	-	-				32
25	-	-	-	-	-	-	-				41
26	-	-	-	-	-	-	-				38
27	-	-	-	-	-	-	-				45
28	1	-	-	-	-	-	-	1			63
29	1	3	-	-	-	-	-	4			102
30	-	7	3	-	-	-	-	10			134
31	-	4	15	-	-	-	-	19			190
32	-	1	17	10	-	-	-	28			192
33	-	1	8	13	1	-	-	23			105
34	-	-	1	4	5	-	-	10			35
35	-	-	-	1	-	2	-	3			8
36	-	-	-	-	-	1	-	1			2
Total No. of Ages Read	2	16	44	28	6	3		99			1000
Serial Numbers	No. of Age Samples										1
	Number of fish measured each month										854
	Mean length of fish (cm) each month										30.6
	Mean weight of fish (kg) each month										-
	Total weight caught or landed (tons) each month										-
	Estimated number caught or landed (whole numbers) each month										-
	Range of depths (m) each month										-
	Mesh size (mm)										8

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (3RD QUARTER)

COUNTRY		Germany, Federal Republic													
CATCHES/LANDINGS		NK													
COMMERCIAL/RESEARCH		NK													
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths													
Year- Class Length Group (cm)	Age	1968	1967	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		1	2	3	4	5	6	7	8	9	> 9		Months Within Quarter		
												Jul	Aug	Sep	
22		-	-	1	-	-	-	-	-	-	-	1	4	-	-
23		-	-	3	-	-	-	-	-	-	-	3	4	2	1
24		-	-	3	-	-	-	-	-	-	-	3	12	1	-
25		-	-	9	2	-	-	-	-	-	-	11	36	6	-
26		-	-	1	12	-	-	-	-	-	-	13	20	19	4
27		-	-	3	23	2	-	-	-	-	-	28	40	24	14
28		-	-	-	30	15	2	-	-	-	-	47	32	61	29
29		-	-	-	20	38	12	-	-	-	-	70	74	89	55
30		-	-	-	3	40	47	4	9	2	-	105	113	131	92
31		-	-	-	-	16	72	34	40	27	1	190	207	200	169
32		-	-	-	-	9	35	46	79	94	7	270	266	254	266
33		-	-	-	-	1	5	20	43	81	12	162	145	143	223
34		-	-	-	-	-	-	1	13	25	23	62	43	58	106
35		-	-	-	-	-	-	-	1	1	5	7	-	7	27
36		-	-	-	-	-	-	-	-	-	7	7	4	5	13
37		-	-	-	-	-	-	-	-	-	1	1	-	-	1
Total No. of Ages Read		-	-	20	90	121	173	105	185	230	56	980	1000	1000	1000
Serial Numbers		No. of Age Samples													
		Number of fish measured each month											255	932	707
		Mean length of fish (cm) each month											31.23	31.52	33.31
		Mean weight of fish (kg) each month											-	-	-
		Total weight caught or landed (tons) each month											-	-	-
		Estimated number caught or landed (whole numbers) each month											-	-	-
		Range of depths (m) each month											-	-	-
		Mesh size (mm)											-	-	-

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (3RD QUARTER)

COUNTRY		United States										
CATCHES/LANDINGS		Landings										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class	Length Age Group (cm)	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	> 8		Months Jul	Within Aug	Quarter Sep
21		7	-	-	-	-	-	-	7	-	2	21
22		42	-	-	-	-	-	-	42	38	2	102
23		64	1	-	-	-	-	-	65	56	16	133
24		99	2	-	-	-	-	-	101	101	44	153
25		80	21	-	-	-	-	-	101	115	66	95
26		16	40	-	-	-	-	-	56	49	44	51
27		-	40	3	-	-	-	-	43	28	43	31
28		-	12	41	-	-	-	-	53	28	46	58
29		-	-	66	28	-	-	-	94	59	97	61
30		-	-	18	124	3	-	-	145	87	146	105
31		-	-	-	71	83	4	-	158	146	156	71
32		-	-	-	-	100	70	3	173	178	169	65
33		-	-	-	-	5	55	49	109	94	114	44
34		-	-	-	-	-	-	34	34	21	43	7
35		-	-	-	-	-	-	6	6	-	8	3
36		-	-	-	-	-	-	2	2	-	3	-
Total No. of Ages Read		308	116	128	223	191	129	94	1189	1000	999	1000
Serial Numbers		No. of Age Samples 11										
		Number of fish measured each month							287	608	294	
		Mean length of fish (cm) each month							29.047730	270927	0340	
		Mean weight of fish (kg) each month							-	-	-	
		Total weight caught or landed (tons) each month							-	-	-	
		Estimated number caught or landed (whole numbers) each month							-	-	-	
		Range of depths (m) each month							-	-	-	
		Mesh size (mm)							-	-	-	

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - SY (SOUTH) - 1969 (4TH QUARTER)

COUNTRY		Germany, Federal Republic												
CATCHES/LANDINGS		NK												
COMMERCIAL/RESEARCH		NK												
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths												
Year- Class Length Age Group (cm)	1968	1967	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
												Months Within Quarter		
	1	2	3	4	5	6	7	8	9	> 9		Oct	Nov	Dec
16	1	-	-	-	-	-	-	-	-	-	1	1	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	3
18	-	-	-	-	-	-	-	-	-	-	-	-	-	6
19	-	-	-	-	-	-	-	-	-	-	-	-	-	3
20	-	-	-	-	-	-	-	-	-	-	-	-	-	20
21	-	2	2	-	-	-	-	-	-	-	4	4	-	17
22	-	-	5	-	-	-	-	-	-	-	5	4	10	45
23	-	-	27	-	-	-	-	-	-	-	27	31	30	104
24	-	-	32	-	-	-	-	-	-	-	32	29	70	164
25	-	-	35	1	-	-	-	-	-	-	36	47	50	109
26	-	-	23	5	-	-	-	-	-	-	28	40	90	110
27	-	-	9	14	1	-	-	-	-	-	24	57	110	93
28	-	-	1	14	3	1	-	-	-	-	19	92	80	99
29	-	-	-	12	11	1	1	-	-	-	25	145	40	76
30	-	-	-	1	9	19	3	3	1	-	36	137	70	69
31	-	-	-	1	5	18	9	9	6	-	48	145	90	45
32	-	-	-	-	1	5	7	15	20	2	50	134	110	27
33	-	-	-	-	-	1	7	6	19	9	42	98	190	10
34	-	-	-	-	-	-	1	-	2	5	8	26	50	-
35	-	-	-	-	-	-	-	-	-	1	1	9	10	-
36	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	-	-	-	-	-	-	-	-	-	1	1	1	-	-
Total No. of Ages Read	1	2	134	48	30	45	28	33	48	18	387	1000	1000	1000
Serial Numbers	No. of Age Samples													
	Number of fish measured each month											885	100	287
	Mean length of fish (cm) each month											29.97	29.76	27.52
	Mean weight of fish (kg) each month											-	-	-
	Total weight caught or landed (tons) each month											-	-	-
	Estimated number caught or landed (whole numbers) each month											-	-	-
	Range of depths (m) each month											-	-	-
	Mesh size (mm)											-	-	-

TABLE 140
(continued)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1969 (4TH QUARTER)

COUNTRY		United States							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Landings								Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Age Group (cm)	1966 1965 1964 1963 1962 1961 <1961							Total No. of Ages Read	PER MILLE			
	3	4	5	6	7	8	> 8		Oct	Nov	Dec	
21	3	-	-	-	-	-	-	3	4	-	-	
22	19	-	-	-	-	-	-	19	18	14	48	
23	86	-	-	-	-	-	-	86	80	88	-	
24	240	-	-	-	-	-	-	240	206	273	190	
25	233	15	-	-	-	-	-	248	198	313	285	
26	129	33	-	-	-	-	-	162	105	269	143	
27	18	27	1	-	-	-	-	46	45	40	-	
28	-	15	20	-	-	-	-	35	42	3	95	
29	-	-	20	9	-	-	-	29	37	-	48	
30	-	-	13	36	-	-	-	49	65	-	-	
31	-	-	1	36	30	1	-	68	86	-	143	
32	-	-	-	-	31	23	-	54	70	-	48	
33	-	-	-	-	-	7	14	21	28	-	-	
34	-	-	-	-	-	-	10	10	13	-	-	
35	-	-	-	-	-	-	2	2	3	-	-	
Total No. of Ages Read								1072	1000	1000	1000	
Serial Numbers								No. of Age Samples	12			
Number of fish measured each month									754	297	21	
Mean length of fish (cm) each month									27.1932	25.3172	26.8619	
Mean weight of fish (kg) each month									-	-	-	
Total weight caught or landed (tons) each month									-	-	-	
Estimated number caught or landed (whole numbers) each month									-	-	-	
Range of depths (m) each month									-	-	-	
Mesh size (mm)									-	-	-	

TABLE 141

AGE/LENGTH KEY - HERRING - 5Z - 1969 (2ND QUARTER)

COUNTRY		Canada (Maritimes)										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	1965	1964	1963	1962	1961	1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter			
		4	5	6	7	8	9		Apr	May	Jun	
19		-	-	-	-	-	-	-				3
20		-	-	-	-	-	-	-				11
21		-	-	-	-	-	-	-				7
22		-	-	-	-	-	-	-				7
23		-	-	-	-	-	-	-				3
24		-	-	-	-	-	-	-				11
25		-	-	-	-	-	-	-				3
26		-	-	-	-	-	-	-				11
27		1	-	-	-	-	-	1				56
28		-	1	-	-	-	-	1				73
29		3	8	-	-	-	-	11				188
30		1	21	3	1	-	-	26				233
31		-	4	7	-	-	-	11				129
32		-	2	10	4	-	-	16				136
33		-	1	2	4	-	-	7				73
34		-	-	-	2	1	-	3				35
35		-	-	-	-	-	-	-				14
36		-	-	-	-	-	1	1				7
Total No. of Ages Read		5	37	22	11	1	1	77				1000
Serial Numbers		No. of Age Samples										1
		Number of fish measured each month										287
		Mean length of fish (cm) each month										30.5
		Mean weight of fish (kg) each month										-
		Total weight caught or landed (tons) each month										-
		Estimated number caught or landed (whole numbers) each month										-
		Range of depths (m) each month										-
		Mesh size (mm)										S-T

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (2ND QUARTER)

COUNTRY		USSR										Total No. of Ages Read	LENGTH COMPOSITION PER MILE				
CATCHES/LANDINGS		Catches											Apr	May	Jun		
COMMERCIAL/RESEARCH		Commercial															
STRUCTURES USED IN AGE DETERMINATION		Otoliths															
Year- Class Length Age Group (cm)		1965	1964	1963	1962	1961	1960	1959									
		4	5	6	7	8	9	10									
18		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
19		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
20		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
21		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18
22		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	58
23		-	-	-	-	-	-	-	-	-	-	-	-	-	+	5	99
24		7	-	-	-	-	-	-	-	-	-	-	-	7	1	13	112
25		9	6	-	-	-	-	-	-	-	-	-	-	15	8	18	90
26		3	17	-	-	-	-	-	-	-	-	-	-	20	13	17	56
27		4	44	4	-	-	-	-	-	-	-	-	-	52	34	37	50
28		4	78	22	-	-	-	-	-	-	-	-	-	104	44	85	75
29		2	60	34	2	-	-	-	-	-	-	-	-	98	52	117	90
30		-	26	52	11	-	-	-	-	-	-	-	-	89	59	142	80
31		-	6	76	52	10	-	-	-	-	-	-	-	144	144	144	86
32		-	-	27	38	25	1	-	-	-	-	-	-	91	256	182	85
33		-	-	9	46	61	2	-	-	-	-	-	-	118	245	150	67
34		-	-	1	20	41	6	1	-	-	-	-	-	69	111	73	22
35		-	-	-	-	4	5	1	-	-	-	-	-	10	27	14	5
36		-	-	-	-	-	-	1	-	-	-	-	-	1	6	2	1
37		-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+
38		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
39		-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+
40		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Total No. of Ages Read		29	237	225	169	141	15	2				818					
Serial Numbers		No. of Age Samples										40					
		Number of fish measured each month										1600	5013	5862			
		Mean length of fish (cm) each month										31.7	30.6	27.5			
		Mean weight of fish (kg) each month										0.235	0.162	0.152			
		Total weight caught or landed (tons) each month										1526	1506	2834			
		Estimated number caught or landed (whole numbers) each month										-	-	-			
		Range of depths (m) each month										91	55-110	55-128			
		Mesh size (mm)										40	40	40			

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - SZ - 1969 (2ND QUARTER)

COUNTRY		United States													
CATCHES/LANDINGS		Catches													
COMMERCIAL/RESEARCH		Research													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Group (cm)	Age	1967	1966	1965	1964	1963	1962	1961	<1961	Total No. of Ages Read	LENGTH COMPOSITION PER MILE				
		2	3	4	5	6	7	8	> 8		Months Within Quarter	Apr	May	Jun	
14		-	-	-	-	-	-	-	-	-	-	-	-	-	-
15		1	-	-	-	-	-	-	-	1	-	-	-	6	
22		-	1	-	-	-	-	-	-	1	-	-	-	6	
23		-	4	-	-	-	-	-	-	4	-	-	-	23	
24		-	-	2	-	-	-	-	-	2	-	-	-	11	
25		-	-	8	-	-	-	-	-	8	-	-	-	46	
26		-	-	7	4	-	-	-	-	11	-	-	-	63	
27		-	-	7	19	1	-	-	-	27	-	-	-	155	
28		-	-	-	15	2	-	-	-	17	-	-	-	98	
29		-	-	-	3	16	-	-	-	19	-	-	-	109	
30		-	-	-	1	17	13	-	-	31	-	-	-	178	
31		-	-	-	-	2	25	5	-	32	-	-	-	184	
32		-	-	-	-	-	4	12	4	20	-	-	-	115	
33		-	-	-	-	-	-	1	-	1	-	-	-	6	
Total No. of Ages Read		1	5	24	42	38	42	18	4	174	999				
Serial Numbers		No. of Age Samples								6					
Number of fish measured each month											174				
Mean length of fish (cm) each month											29.1063				
Mean weight of fish (kg) each month											-				
Total weight caught or landed (tons) each month											-				
Estimated number caught or landed (whole numbers) each month											-				
Range of depths (m) each month											-				
Mesh size (mm)											-				

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (3RD QUARTER)

COUNTRY		Germany, Federal Republic											
CATCHES/LANDINGS		NK											
COMMERCIAL/RESEARCH		NK											
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths											
Year- Class Length Age Group (cm)	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
										Months Within Quarter			
	3	4	5	6	7	8	9	> 9		Jul	Aug	Sep	
20	-	-	-	-	-	-	-	-	-	3	-	-	
21	-	-	-	-	-	-	-	-	-	-	-	-	
22	1	-	-	-	-	-	-	-	1	-	3	-	
23	4	-	-	-	-	-	-	-	4	7	7	-	
24	6	1	-	-	-	-	-	-	7	14	13	1	
25	22	16	1	-	-	-	-	-	39	66	66	8	
26	11	38	2	-	-	-	-	-	51	104	46	24	
27	3	99	14	-	-	-	-	-	116	212	153	52	
28	1	88	38	4	-	-	-	-	131	200	207	96	
29	-	38	39	18	1	-	-	-	96	160	134	116	
30	-	3	26	47	6	7	3	-	92	104	148	91	
31	-	-	6	39	7	24	15	-	91	80	140	142	
32	-	-	1	9	7	17	25	5	64	44	67	194	
33	-	-	-	1	1	5	12	6	25	3	13	160	
34	-	-	-	-	-	-	3	10	13	3	3	71	
35	-	-	-	-	-	1	-	7	8	-	-	29	
36	-	-	-	-	-	-	-	3	3	-	-	14	
37	-	-	-	-	-	-	-	-	-	-	-	2	
Total No. of Ages Read	48	283	127	118	22	54	58	31	741				
Serial Numbers	No. of Age Samples												
	Number of fish measured each month									300	300	1889	
	Mean length of fish (cm) each month									28.57	29.15	31.43	
	Mean weight of fish (kg) each month									-	-	-	
	Total weight caught or landed (tons) each month									-	-	-	
	Estimated number caught or landed (whole numbers) each month									-	-	-	
	Range of depths (m) each month									-	-	-	
	Mesh size (mm)									-	-	-	

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (3RD QUARTER)

COUNTRY		USSR										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial										Total No. of Ages Read	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths											Months Within Quarter		
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957	Total No. of Ages Read	PER MILLE		
		3	4	5	6	7	8	9	10	11	12		Jul	Aug	Sep
21		-	-	-	-	-	-	-	-	-	-	-	+	+	+
22		3	-	-	-	-	-	-	-	-	-	3	2	2	1
23		5	-	-	-	-	-	-	-	-	-	5	9	8	3
24		12	-	-	-	-	-	-	-	-	-	12	17	22	9
25		8	12	-	-	-	-	-	-	-	-	20	24	40	28
26		-	27	4	-	-	-	-	-	-	-	31	34	68	52
27		-	18	24	-	-	-	-	-	-	-	42	75	113	83
28		-	13	44	4	-	-	-	-	-	-	61	109	184	132
29		-	1	38	15	-	-	-	-	-	-	54	78	155	124
30		-	-	22	22	1	-	-	-	-	-	45	82	125	133
31		-	-	9	49	15	-	-	-	-	-	73	107	103	114
32		-	-	-	25	36	17	-	-	-	-	78	215	106	162
33		-	-	-	4	37	25	2	-	-	-	68	167	55	108
34		-	-	-	-	13	17	4	-	-	-	34	55	17	35
35		-	-	-	-	7	15	6	1	-	-	29	14	2	13
36		-	-	-	-	-	-	3	-	-	-	3	8	+	3
37		-	-	-	-	-	-	-	-	1	-	1	3	-	+
38		-	-	-	-	-	-	-	-	-	-	-	1	-	-
39		-	-	-	-	-	-	-	-	-	-	-	+	-	-
Total No. of Ages Read		28	71	14	119	109	74	15	1	-	1	559			
Serial Numbers		No. of Age Samples										173			
		Number of fish measured each month										6933	11100	39700	
		Mean length of fish (cm) each month										30.4	29.0	29.9	
		Mean weight of fish (kg) each month										0.230	0.217	0.226	
		Total weight caught or landed (tons) each month										4330	4878	5949	
		Estimated number caught or landed (whole numbers) each month										-	-	-	
		Range of depths (m) each month										64-91	37-192	37-91	
		Mesh size (mm)										40	40	40	

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (3RD QUARTER)

COUNTRY		United States							Total No. of Ages Read	LENGTH COMPOSITION PER MILE		
CATCHES/LANDINGS		Catches								Months Within Quarter		
COMMERCIAL/RESEARCH		Research								Jul	Aug	Sep
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	<1961				
		3	4	5	6	7	8	> 8				
22		1	-	-	-	-	-	-	1	43		
23		-	-	-	-	-	-	-	-	-		
24		1	-	-	-	-	-	-	1	43		
25		3	-	-	-	-	-	-	3	131		
26		-	4	-	-	-	-	-	4	174		
27		-	8	-	-	-	-	-	8	348		
28		-	1	2	-	-	-	-	3	131		
29		-	-	1	-	-	-	-	1	43		
30		-	-	-	-	-	-	-	-	-		
31		-	-	-	-	-	1	-	1	43		
32		-	-	-	-	-	-	1	1	43		
Total No. of Ages Read		5	13	3	-	-	1	1	23	999		
Serial Numbers		No. of Age Samples							1			
		Number of fish measured each month							23			
		Mean length of fish (cm) each month							27.2066			
		Mean weight of fish (kg) each month							-			
		Total weight caught or landed (tons) each month							-			
		Estimated number caught or landed (whole numbers) each month							-			
		Range of depths (m) each month							-			
		Mesh size (mm)							-			

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (4TH QUARTER)

COUNTRY		Germany, Federal Republic											
CATCHES/LANDINGS		NY											
COMMERCIAL/RESEARCH		NK											
STRUCTURES USED IN AGE DETERMINATION		Scales and Otoliths											
Year- Class Length Age Group (cm)	1967	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter		
											2	3	4
20	1	-	-	-	-	-	-	-	-	1	-	-	10
21	-	-	-	-	-	-	-	-	-	-	1	-	-
22	-	1	-	-	-	-	-	-	-	1	5	-	20
23	-	4	-	-	-	-	-	-	-	4	22	-	30
24	-	19	1	-	-	-	-	-	-	20	63	-	120
25	-	32	1	-	-	-	-	-	-	33	116	2	120
26	-	25	14	-	-	-	-	-	-	39	129	-	190
27	-	9	29	4	-	-	-	-	-	42	90	-	160
28	-	1	33	10	-	-	-	-	-	44	72	4	70
29	-	-	24	28	5	-	-	-	-	57	69	14	130
30	-	-	8	25	24	5	6	2	-	70	63	81	50
31	-	-	-	13	25	13	17	19	1	88	83	258	20
32	-	-	-	2	8	21	23	27	2	83	96	376	30
33	-	-	-	-	1	5	9	23	6	44	87	185	-
34	-	-	-	-	-	-	1	11	7	19	67	64	-
35	-	-	-	-	-	-	-	2	1	3	26	16	-
36	-	-	-	-	-	-	-	-	2	2	10	-	-
37	-	-	-	-	-	-	-	-	-	-	1	-	-
Total No. of Ages Read	1	91	110	82	63	44	56	84	19	550	1000	1000	950
Serial Numbers	No. of Age Samples										1776	508	100
	Number of fish measured each month										29.34	32.42	27.36
	Mean length of fish (cm) each month										-	-	-
	Mean weight of fish (kg) each month										-	-	-
	Total weight caught or landed (tons) each month										-	-	-
	Estimated number caught or landed (whole numbers) each month										-	-	-
	Range of depths (m) each month										-	-	-
	Mesh size (mm)										-	-	-

TABLE 141
(continued)

AGE/LENGTH KEY - HERRING - 5Z - 1969 (4TH QUARTER)

COUNTRY		USSR									Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches										Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial									Otoliths			
STRUCTURES USED IN AGE DETERMINATION														
Year- Class Length Age Group (cm)	1965 1964 1963 1962 1961 1960 1959 1958									Total No. of Ages Read	PER MILLE			
	4	5	6	7	8	9	10	11	Oct		Nov	Dec		
20	-	-	-	-	-	-	-	-	-	-	-	+	6	
21	-	-	-	-	-	-	-	-	-	-	-	+	13	
22	-	-	-	-	-	-	-	-	-	-	-	8	33	
23	-	-	-	-	-	-	-	-	-	-	-	10	38	
24	-	-	-	-	-	-	-	-	-	-	-	42	46	
25	1	-	-	-	-	-	-	-	-	-	1	77	80	
26	3	3	-	-	-	-	-	-	-	-	6	48	130	
27	5	9	-	-	-	-	-	-	-	-	14	104	172	
28	1	24	-	-	-	-	-	-	-	-	25	98	124	
29	-	23	3	-	-	-	-	-	-	-	26	95	112	
30	-	21	11	-	-	-	-	-	-	-	32	110	108	
31	-	4	18	10	1	-	-	-	-	-	33	100	76	
32	-	-	23	23	13	-	-	-	-	-	59	161	69	
33	-	-	4	17	18	5	-	-	-	-	44	122	35	
34	-	-	-	6	19	11	-	-	-	-	36	82	14	
35	-	-	-	-	1	10	2	-	-	-	13	41	3	
36	-	-	-	-	-	-	2	-	-	-	2	10	+	
37	-	-	-	-	-	-	-	1	-	-	1	2	-	
Total No. of Ages Read	10	84	59	56	52	26	4	1			292	1000	1000	1000
Serial Numbers	No. of Age Samples									52				
	Number of fish measured each month									2163	3000	10500		
	Mean length of fish (cm) each month									30.5	28.1	27.6		
	Mean weight of fish (kg) each month									0.232	0.153	0.149		
	Total weight caught or landed (tons) each month									1096	419	1062		
	Estimated number caught or landed (whole numbers) each month									-	-	-		
	Range of depths (m) each month									55-91	18-91	27-101		
	Mesh size (mm)									40	40	40		

TABLE 142

AGE/LENGTH KEY - HERRING - 52e - 1969 (3rd QUARTER)

COUNTRY		Poland											
CATCHES/LANDINGS		NK											
COMMERCIAL/RESEARCH		Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	1966	1965	1964	1963	1962	1961	1960	-	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		3	4	5	6	7	8	9	9+		Months Within Quarter		
											Aug-Sep		
25		7	3	-	-	-	-	-	-	10		5	
26		18	18	-	-	-	-	-	-	36		28	
27		12	46	-	-	-	-	-	-	58		63	
28		1	81	4	1	-	-	-	-	87		102	
29		-	86	43	2	-	-	-	-	131		127	
30		-	25	64	6	-	-	-	-	95		101	
31		-	2	47	63	4	6	4	-	126		106	
32		-	-	5	59	43	49	23	-	179		177	
33		-	-	-	6	31	63	83	2	185		175	
34		-	-	-	1	7	16	73	16	113		78	
35		-	-	-	-	-	3	34	25	62		27	
36		-	-	-	-	-	1	6	28	35		9	
37		-	-	-	-	-	-	-	12	12		2	
38		-	-	-	-	-	-	-	-	-		-	
Total No. of Ages Read		38	261	163	138	85	138	223	83	1129	1000		
Serial Numbers										No. of Age Samples 12			
		Number of fish measured each month									11805		
		Mean length of fish (cm) each month									30.59		
		Mean weight of fish (kg) each month											
		Total weight caught or landed (tons) each month											
		Estimated number caught or landed (whole numbers) each month											
		Range of depths (m) each month											
		Mesh size (mm)											

TABLE 143

AGE/LENGTH KEY - HERRING - 52w - 1969 (3RD QUARTER)

COUNTRY		Poland												
CATCHES/LANDINGS		NK												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Age Group (cm)		1967	1966	1965	1964	1963	1962	1961	1960	<1960	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		2	3	4	5	6	7	8	9	> 9		Months	Within	Quarter
												Jul	Aug	Sep
20		10	2	-	-	-	-	-	-	-	12		2	
21		8	9	-	-	-	-	-	-	-	17		9	
22		3	18	-	-	-	-	-	-	-	21		12	
23		-	34	-	-	-	-	-	-	-	34		45	
24		-	41	-	-	-	-	-	-	-	41		114	
25		-	59	4	-	-	-	-	-	-	63		150	
26		-	32	21	-	-	-	-	-	-	53		148	
27		-	10	39	-	-	-	-	-	-	49		103	
28		-	2	50	7	-	-	-	-	-	59		98	
29		-	-	47	34	1	-	-	-	-	82		88	
30		-	-	10	34	4	1	-	-	-	49		55	
31		-	-	1	13	32	3	3	1	-	53		66	
32		-	-	-	1	13	15	32	14	-	75		56	
33		-	-	-	-	-	5	19	32	1	57		42	
34		-	-	-	-	-	-	4	18	-	22		10	
35		-	-	-	-	-	-	-	-	2	2		1	
36		-	-	-	-	-	-	-	-	1	1		1	
Total No. of Ages Read		21	207	172	89	50	24	58	65	4	690	1000		
Serial Numbers		No. of Age Samples												
		Number of fish measured each month										5147		
		Mean length of fish (cm) each month										26.98		
		Mean weight of fish (kg) each month										-		
		Total weight caught or landed (tons) each month										-		
		Estimated number caught or landed (whole numbers) each month										-		
		Range of depths (m) each month										-		
		Mesh size (mm)										-		

TABLE 144
(continued)

AGE/LENGTH KEY - HERRING - 6 - 1969 (2ND QUARTER)

COUNTRY		USSR							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE								
CATCHES/LANDINGS		Catches								Months Within Quarter								
COMMERCIAL/RESEARCH		Commercial							168	Apr			May			Jun		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Year- Class	1966	1965	1964	1963	1962	1961	1960											
Length Age Group (cm)	3	4	5	6	7	8	9											
20	-	-	-	-	-	-	-	-										
21	3	-	-	-	-	-	-	-										
22	5	1	-	-	-	-	-	-										
23	6	6	-	-	-	-	-	-										
24	-	11	1	-	-	-	-	-										
25	-	6	7	-	-	-	-	-										
26	-	1	6	-	-	-	-	-										
27	-	1	6	-	-	-	-	-										
28	-	1	9	2	-	-	-	-										
29	-	-	9	7	-	-	-	-										
30	-	-	5	4	-	-	-	-										
31	-	-	1	9	6	1	-	-										
32	-	-	-	5	8	11	-	-										
33	-	-	-	2	10	13	-	-										
34	-	-	-	-	-	3	1	-										
35	-	-	-	-	-	-	1	-										
36	-	-	-	-	-	-	-	-										
Total No. of Ages Read								168	1000									
Serial Numbers								No. of Age Samples										
Number of fish measured each month								3348										
Mean length of fish (cm) each month								29.0										
Mean weight of fish (kg) each month								0.172										
Total weight caught or landed (tons) each month								4575										
Estimated number caught or landed (whole numbers) each month								-										
Range of depths (m) each month								66-73										
Mesh size (mm)								40										

APPENDIX

Corrections to the Sampling Yearbook, Volume 12,
for the year 1967

- Page 17. In the heading opposite Catches/Landings, should read "Landings before Discards" under Line Trawl, Longline and Handline.
- Pages 18 and 25. In the heading opposite Catches/Landings, should read "Landings before Discards".

Corrections to the Sampling Yearbook, Volume 13, Part I,
for the year 1968

- Pages 12 and 13. In the heading opposite Catches/Landings, should read "Landings before Discards".
- Page 17. In the heading opposite Catches/Landings, should read "Landings before Discards" under Line Trawl.
- Page 18. In the heading opposite Catches/Landings, should read "Landings before Discards".

