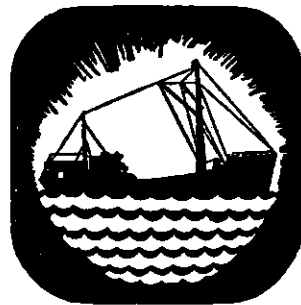


INTERNATIONAL COMMISSION

FOR THE

NORTHWEST ATLANTIC FISHERIES



SAMPLING YEARBOOK

VOLUME 16

for the year 1971

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

November, 1972

PREFACE

This volume of the Sampling Yearbook contains length, age and weight data for cod, haddock, redfish, silver hake, American plaice, Greenland halibut, witch, yellowtail, pollock, red hake, white hake, herring and mackerel, and a listing of available data for *Gadus ogac*, *G. axida*, Arctic char, argentine, butterfish, squid and sea scallops, all having been collected during the calendar year 1971 in the ICNAF Area. These data were contributed by Canada (Maritimes), Canada (Newfoundland), Denmark (Greenland), France (Metropolitan), France (St. Pierre and Miquelon), Federal Republic of Germany, Japan, Poland, Portugal, Spain, Union of Soviet Socialist Republics, United Kingdom and United States.

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 length composition data be reported as numbers per mille by month, division, gear and vessel category, and that they be broken down by sex for redfish and species of flounders and also by 50-fathom depth zones for redfish. Other items of relevant information should be reported and published in accordance with earlier recommendations (*Redbook* 1962, Pt. I, p.39-41). The importance of continuing to supply data 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 be reported and published in the form of age-length keys on actual numbers basis, grouped by quarters, division, gear and vessel category. For other species, age composition data should be reported as numbers per mille as in the past.
- c) that when both length and age composition data are available for cod and haddock, they should be reported and published in a composite, tabular form called 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, and
 - (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. I, p.50):

- a) that herring length data be published by country and by month for all ICNAF divisions, except Division 5Y for which the data be presented for a northern subdivision (from the Maine/New Brunswick border to the Maine/New Hampshire border) and for a southern subdivision (from Maine/New Hampshire border to Cape Cod);
- b) that herring lengths be published in cm to the cm below;
- c) that the herring sampling data not be reported by gear or vessel category;
- d) that the herring age-length keys be published by quarters for Divisions 4X, 5Y and 5Z only, on a trial basis, with frequent review.

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

The Appendix contains a table showing, for each major species, division, country and gear, the numbers of fish sampled for length and age in relation to total catch for the year 1971. A single asterisk indicates inadequate sampling, relative to the minimum requirement of 200 fish measurements per 1,000 tons of a species caught, and two asterisks indicate that no sampling was carried out even though catches were large enough to warrant some sampling.

The Secretariat is grateful to those scientists who have continued to support the Commission's needs for more and adequate sampling of the Northwest Atlantic 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.

This volume of the Sampling Yearbook was produced in the Secretariat largely through the efforts of Mrs E. R. Cornford and Mr G. Moulton who compiled and prepared the tabular material and to Messrs H. Champion and R. Myers who did the multigraphing.

V. M. Hodder

Assistant Executive Secretary

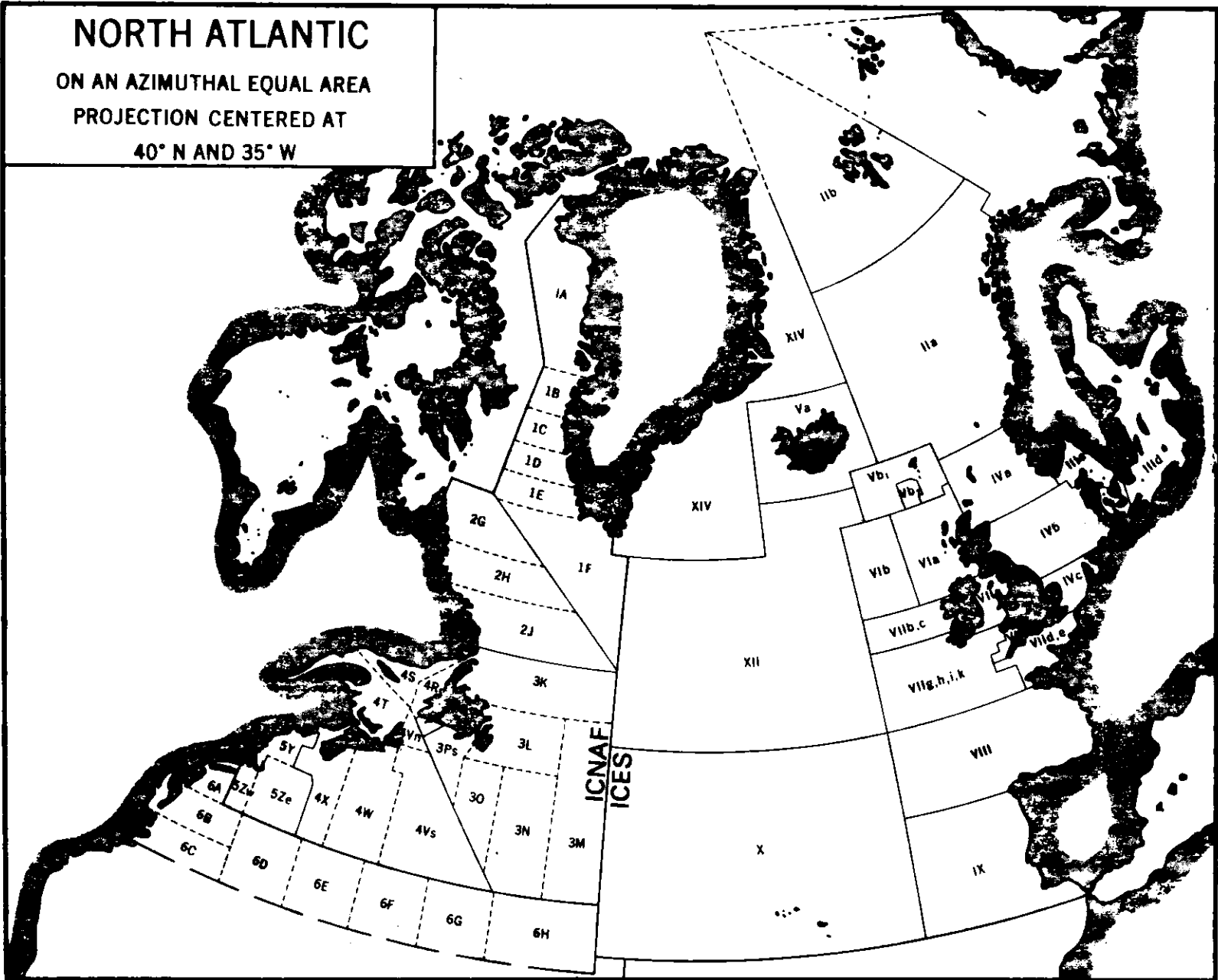
November 1972

NORTH ATLANTIC

ON AN AZIMUTHAL EQUAL AREA

PROJECTION CENTERED AT

40° N AND 35° W



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NOTES ON SAMPLING DATA, 1971

The following notes on sampling, contributed by the reporting countries, contain information relating to the methods of collection and presentation of the length and age data. The notes also contain tabular information on length and age data which were collected by some countries but not reported on ICNAF sampling forms.

CANADA (Maritimes)A. Groundfish

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 catches and landings are reported to ICNAF. Age-frequency data are collected for most species but are not reported. Length frequencies by sex are usually given for redfish, American plaice, yellowtail, witch and winter flounder.

Landings of cod and haddock are normally culled by market category. Cod are divided into large (over 10 pounds, fresh gutted weight) and medium (2½ to 10 pounds). Small (scord) cod and haddock are mainly less than 2½ pounds. Small round haddock are sometimes landed in a separate market category. These market categories are usually sampled approximately in proportion to the relative numbers of each in the landed catch. When the weighout of the landed catch becomes available, the length frequency of the landing is determined by applying weighing factors to each category. Other species reported are not usually culled by market category.

Length frequencies of haddock landings from the Bay of Fundy part of Division 4X differ markedly from those from the offshore banks, and these are reported separately as follows: (1) the area north of latitude 44°00'N, 4V (north), and (2) the area south of latitude of 44°00'N, 4V (south).

Fork length measurements are recorded to the nearest centimetre. These are reported by 3-cm groups for cod, pollock, white hake and cusk; 2-cm groups for haddock, and 1-cm groups for redfish and flounders.

Actual mesh sizes of codends used by trawlers on the trips sampled are not available. The usual designation of mesh size for trips sampled is "large" for sizes of approximately 114 mm and "small" for sizes of approximately 76mm, the latter being used for redfish trips only. Various brands and kinds of synthetics are used. Manila otter trawls have become obsolete. Hook size is given by number, No. 6/0 being the smallest commercial groundfish hook and No. 14 being the largest hook used on longlines by Quebec fishermen. Combined samples by tonnage classes of vessels are unweighted.

B. Herring

Reported by: C.D. Burnett, D.S. Miller

CANADA (Newfoundland)A. Groundfish

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

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

Measurements are recorded to the nearest centimetre for fork lengths of cod, haddock and redfish, and for total lengths of flounders (American plaice, witch and yellowtail). Measurements are made on shore before appreciable culling has occurred in the processing plants. Samples of landing after discard indicate that some of the catch was discarded 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, except the usual grouping into 3-cm length groups for cod, and 2-cm length groups for haddock.

For trawls the mesh sizes are difficult to determine since different types of twines may be used on the same trip, and the fish length frequencies which are taken on shore cannot always be separated according to type of twine and size of mesh. Also, the mesh size recorded is often the size dry before use, the only size that fishermen generally know. Thus the mesh size for trawls is designated by "large" or "small", the latter being permitted only for redfish fishing in the southern part of Subarea 3 and westward. For gillnets and traps the approximate sizes are given in mm. For handlines and longlines, hook sizes are given by number.

The following table gives the number of pairs of otoliths collected for ageing during the course of sampling the commercial landings of groundfish in 1971. Length frequencies, corresponding to the listed age samples, are included in the length frequency tables.

Div	Gear	Month	No. of Otoliths
<u>COD (Commercial)</u>			
2H	Trap	Aug	268
2J	Trap	Jul	368
	Gillnet	Sep	477
3K	Trap	Jun-Jul	295
	Gillnet	Jun-Jul	333
	Longline	Jun-Jul	148
3L	Trap	Jun-Jul	367
	Handline	Jul	120
	Gillnet	Jun-Jul	866
	OT	Feb	200
	OT	May	113
	OT	Aug	42
3Ps	Trap	Jun-Jul	552
	Gillnet	May	154
	Gillnet	Jun-Jul	314

Div	Gear	Month	No. of Otoliths ¹
<u>AMERICAN PLAICE (Commercial)</u>			
3L	OT	Feb	465
	OT	Mar	49
	OT	May	298
	OT	Aug	121
	OT	Nov	29
<u>YELLOWTAIL (Commercial)</u>			
3L	OT	May	199
3N	OT	Mar	43
	OT	May	142
<u>GREENLAND HALIBUT</u>			
3K	Gillnet	Jul	189
<u>SALMON</u>			
3L	Gillnet	Jun-Jul	1361

¹ Number of lengths and scales for salmon

B. Herring

Reported by: G.H. Winters, R. Chalk

Length frequencies for 1971 are based on the sampling of commercial catches from inshore waters of southern and western Newfoundland using purse seines about 325 fathoms long and 45 fathoms deep with 30-mm mesh.

In Subdivision 3Ps there are two or more distinct stocks of herring, and consequently the length compositions are reported by areas as follows: Subdivision 3Ps (1) is the inshore area between Burgeo and Pass Island, and 3Ps (2) is Fortune Bay.

In Division 4R there are two or more distinct stocks of herring and the length compositions are reported as follows: Division 4R (1) is Port au Port Bay area, 4R (2) is Bay of Islands, 4R (3) is Bonne Bay, and 4R (4) is St. John Bay.

Measurements of herring are total lengths tabulated to the half centimetre below, *e.g.* all fish whose actual total length falls within 30.0 and 30.9 cm are reported as 30 cm. Mean lengths are calculated directly from the length groups and frequencies as reported.

Otoliths for age determination are collected routinely during the course of sampling for length, but these data are not reported to ICNAF.

DENMARK (Greenland)

Reported by: Sv.Aa. Horsted

Length measurements are made of total length (end of tail lobes) and are reported to the centimetre below. The follow table presents data on the measurement of capelin, Atlantic salmon, Queen crab and deep sea prawn in 1971:

Div	Gear	Month	Number Measured ¹
<u>CAPELIN (<i>Mallotus villosus</i>)</u>			
1B	LN	Jul	122
1C	LN	Jun	141
	ST	Aug	1
1D	ST	Jan	11
	ST	May-Jun	19
	LN	May-Jun	575
	LN	Jul-Aug	400
	ST	Aug	7
	MT	Aug	694
<u>SHRIMP (<i>Pandalus borealis</i>)</u>			
1A	ST	Jul-Aug	4
1B	ST	Jul-Aug	4
1C	ST	May-Jun	2
	ST	Aug	1
1D	ST	Jan	1
	ST	May-Jun	2
	ST	Aug	2
1E	ST	Feb	1

¹ Number of samples for shrimp.

FRANCE (St. Pierre and 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: A. Meyer, K. Schubert

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

ICELAND

No data submitted.

ITALY

No fishing in ICNAF Area.

JAPAN

Reported by: I. Ikeda

Samples were collected from commercial catches and measured on the deck of trawlers before discard.

Length measurements are made of the fork length to nearest centimetre for fishes with forked caudal fin and the total length for others. For squid the mantle length was measured.

Data on cod, haddock, redfish, silver hake, red hake, white hake, argentine, butterfish, herring, mackerel and common American squid are reported.

Div	Gear	Month	Number Measured
<u>SALMON (<i>Salmo Salar</i>)</u>			
1B	DN	Aug-Sep	202
1C	DN	Aug	19
	DN	Aug-Sep	35
	GN	Aug-Sep	43
<u>QUEEN CRAB (<i>Chionecetes opilio</i>)</u>			
1A	ST	Jul	48
	OT	Jul	447
1D	ST	Jan	39
	ST	May-Jun	183
	CT	May-Jun	25
	CT	Aug-Sep	149
	CT	Oct	97

LN = landing net

DN = drift

GN = set gillnet

ST = shrimp trawl (18-21 mm mesh)

OT = otter trawl (32-35 mm mesh)

MT = midwater trawl

CT = crab trap

NORWAY

No data submitted.

POLAND

Reported by: E. Stanek, B. Draganik

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.

Data are reported for cod and herring.

PORTUGAL

Reported by: R. Monteiro

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

ROMANIA

No data submitted.

SPAIN

Reported by: M.G. Larrañeta, J. Rucabado

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

UNION OF SOVIET SOCIALIST REPUBLICS

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

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

UNITED KINGDOM

No data submitted.

UNITED STATES

Reported by: H.C. Boyar, F.A. Dreyer

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

TABLE 1 LENGTH FREQUENCIES - COD - 1B, 1C, 1D - 1971

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

DIVISION	1B		1C		1D	
	Handline	Pound Net	Handline	Pound Net	Handline	Pound Net
GEAR	Research	Commercial	Research	Commercial	Research	Commercial
CATCHES/LANDINGS	Catches		Landings		Catches	
MONTH	Aug	Jun	Jun	Jun	Jun	Jul
COUNTRY	Den(G)	Den(G)	Den(G)	Den(G)	Den(G)	Den(G)
TONNAGE	151-500	0-50	151-500	0-50	151-500	0-50
30	2	2	-	159	105	
33	-	2	-	277	268	
36	9	7	-	280	379	
39	26	41	-	197	168	
42	35	117	9	73	58	
45	65	212	-	14	21	
48	63	153	9	1	-	
51	50	156	27	-	-	
54	63	124	45	-	-	
57	113	51	80	-	-	
60	105	46	80	-	-	
63	91	27	89	-	-	
66	81	29	170	-	-	
69	46	7	116	-	-	
72	72	12	116	-	-	
75	68	7	89	-	-	
78	33	2	45	-	-	
81	9	-	54	-	-	
84	22	-	27	-	-	
87	7	2	27	-	-	
90	13	-	-	-	-	
93	13	-	9	-	-	
96	9	-	9	-	-	
99	7	-	-	-	-	
Total \circ/∞	1002	997	1001	1001	999	
Serial Numbers	-	-	-	-	-	
Number of Samples	2	1	1	4	1	
Number of Fish Measured	459	411	112	1255	190	
Mean Length (cm)	62.5	51.1	68.9	36.4	36.6	
Mean Weight (kg)	-	1.33	-	-	-	
Total Weight Landed (tons)	-	5	-	-	-	
Estimated Number Landed	-	3700	-	-	-	
Mesh(mm) or Hook(no) Size	-	-	-	-	-	
Range of Depths (fm)	11-30	0-10	83	0-10	0-10	

TABLE 2 LENGTH FREQUENCIES - COD - 2H, 2J - 1971

(FREQUENCIES IN %/oo - 3 CM GROUPS)

DIVISION	2H		2J		
	Otter Trawl	Cod Trap	Otter Trawl		
GEAR	Commercial	Commercial	Commercial		
CATCHES/LANDINGS	Catches	Landings	Catches		
MONTH	Jan	Aug	Jan	Feb	Mar
COUNTRY	Poland	Can(N)	Poland		
TONNAGE	>1800	0-50	>1800		
21	-	-	12	3	-
24	-	-	23	7	-
27	2	2	47	13	-
30	11	5	96	32	6
33	53	18	117	47	17
36	101	108	129	60	47
39	145	151	132	83	58
42	135	137	119	96	78
45	110	157	99	112	122
48	107	141	75	113	160
51	75	115	56	103	144
54	60	66	35	92	116
57	53	53	21	68	59
60	55	18	13	62	57
63	34	16	9	44	48
66	22	7	7	28	39
69	11	5	4	17	26
72	8	1	2	12	12
75	6	-	1	5	7
78	5	-	1	2	4
81	3	-	1	1	-
84	2	-	1	-	-
87	2	1	-	-	-
Total %/oo	1000	1001	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	4	5	14	19	2
Number of Fish Measured	1749	1116	5998	8302	810
Mean Length (cm)	47.9	46.6	41.2	49.1	51.6
Mean Weight (kg)	-	0.87	-	-	-
Total Weight Landed (tons)	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no) Size	114	75-100	114	114	114
Range of Depths (fm)	-	10-20	-	-	-

TABLE 2 LENGTH FREQUENCIES - COD - 2J - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl				Cod Trap	Gillnet
	Research Catches				Commercial Landings	
CATCHES/LANDINGS						
MONTH	Jan	Feb	Apr	Dec	Jul	Sep
COUNTRY	USSR				Can(N)	
TONNAGE	>1800				0-50	
21	-	1	-	-	-	-
24	4	6	-	-	-	-
27	18	29	3	-	1	-
30	66	86	10	6	7	-
33	101	121	39	14	38	-
36	107	96	64	55	63	2
39	102	80	70	112	105	14
42	129	86	100	113	124	21
45	142	106	150	154	128	23
48	125	107	127	153	136	21
51	66	66	138	127	110	14
54	39	58	97	101	92	10
57	42	56	82	69	72	23
60	25	42	53	43	44	18
63	15	26	28	26	34	51
66	11	16	21	14	23	35
69	5	9	6	7	12	82
72	2	5	5	3	4	109
75	1	2	2	2	4	93
78	-	2	4	1	2	54
81	-	-	1	-	2	72
84	-	-	-	-	-	58
87	-	-	-	-	-	51
90	-	-	-	-	-	43
93	-	-	-	-	-	27
96	-	-	-	-	-	31
99	-	-	-	-	-	51
102	-	-	-	-	-	14
105	-	-	-	-	-	19
108	-	-	-	-	-	18
111	-	-	-	-	-	18
114	-	-	-	-	-	10
117	-	-	-	-	-	6
120	-	-	-	-	-	4
123	-	-	-	-	-	6
126	-	-	-	-	-	2
135	-	-	-	-	-	2
Total ‰	1000	1000	1000	1000	1001	1002
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	1	-	6	4
Number of Fish Measured	12186	7771	2198	51873	2235	514
Mean Length (cm)	44.11	44.86	49.45	48.92	48.98	78.68
Mean Weight (kg)	-	-	1.04	-	1.02	4.40
Total Weight Landed (tons)	6941	7360	869	745	947	307
Estimated Number Landed	-	-	839	-	929	70
Mesh(mm) or Hook(no) Size	110	110	110	110	-	150-200
Range of Depths (fm)	195-216	162-189	124-227	116-168	6-9	14-30

¹ Numbers in thousands

TABLE 3 LENGTH FREQUENCIES - COD - 3K - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl			Cod Trap		Longline	
	Commercial		Research	Commercial			
CATCHES/LANDINGS	Catches		Catches	Landings			
MONTH	Mar	Apr	Feb	Jun	Jul	Jun	Jul
COUNTRY	Poland		USSR	Can(N)			
TONNAGE	>1800			0-50			
21	1	1	-	-	-	-	-
24	2	6	1	-	-	-	-
27	7	23	3	-	-	-	-
30	35	40	19	-	-	-	-
33	58	51	44	-	2	-	-
36	65	55	78	25	23	6	-
39	100	61	88	104	114	4	4
42	71	83	114	141	142	20	9
45	122	111	120	169	132	45	23
48	119	106	136	121	115	79	49
51	73	81	98	88	97	84	80
54	69	70	72	70	94	126	87
57	75	65	74	73	89	122	122
60	50	72	58	78	66	126	140
63	41	68	32	46	55	86	157
66	34	54	24	54	33	86	104
69	28	23	13	24	19	77	87
72	19	12	9	5	13	73	40
75	13	9	5	3	5	31	43
78	9	5	5	-	2	12	21
81	6	3	3	-	1	8	11
84	3	1	1	-	1	4	6
87	-	-	1	-	-	4	4
90	-	-	1	-	-	2	2
93	-	-	-	-	-	-	5
96	-	-	1	-	-	2	4
99	-	-	-	-	-	-	2
102	-	-	-	-	-	-	1
111	-	-	-	-	-	2	2
Total ‰	1000	1000	1000	1001	1003	999	1003
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	4	4	1	3	11	2	6
Number of Fish Measured	1590	1592	11716	1233	4053	491	1052
Mean Length (cm)	50.50	48.90	49.24	51.04	51.20	60.54	62.65
Mean Weight (kg)	-	-	1.62	1.38	1.39	2.22	2.40
Total Weight Landed (tons)	-	-	7807	3897	3561	-	-
Estimated Number Landed ¹	-	-	4807	2826	2556	-	-
Mesh(mm) or Hook(no) Size	114	114	110	80-100	80-100	6/0	6/0
Range of Depths (fm)	-	-	173-324	9-16	12-16	140-145	145-150

¹ Numbers in thousands

TABLE 3 LENGTH FREQUENCIES - COD - 3K, 3L - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

DIVISION	3K		3L			
	Gillnet		Otter Trawl (Stern)			
GEAR	Commercial		Commercial			
CATCHES/LANDINGS	Landings		Landings			
MONTH	Jun	Jul	Feb	May	Aug	Nov
COUNTRY	Can(N)		Can(N)			
TONNAGE	0-50		501-900			
30	-	-	1	-	-	-
33	-	1	3	-	-	1
36	6	2	5	14	-	2
39	15	10	16	36	3	15
42	8	11	52	64	7	41
45	22	13	80	78	24	91
48	52	19	104	74	55	123
51	96	20	96	46	86	123
54	45	21	128	59	105	140
57	74	49	104	73	115	106
60	111	87	95	65	103	76
63	96	161	66	84	119	51
66	156	193	72	82	92	57
69	96	150	52	63	53	38
72	37	109	41	54	59	34
75	15	60	36	48	38	20
78	37	32	19	39	30	18
81	8	21	9	15	13	11
84	15	12	9	16	11	10
87	30	6	3	7	7	6
90	22	5	3	8	7	3
93	22	5	-	9	4	5
96	8	3	1	9	8	6
99	7	3	2	6	10	3
102	7	1	-	9	9	5
105	-	1	1	5	3	4
108	7	1	-	5	10	2
111	-	2	-	11	4	1
114	7	1	-	7	6	3
117	-	-	-	8	4	2
120	-	1	-	2	7	1
123	7	1	-	4	3	-
126	-	-	-	1	1	1
129	-	1	-	1	-	1
132	-	-	-	-	2	-
135	-	-	-	-	1	-
Total ‰	1000	1002	998	1002	999	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	40	2	2	3	3
Number of Fish Measured	135	3883	1169	1024	1567	1809
Mean Length (cm)	66.41	67.27	58.32	63.70	65.66	58.83
Mean Weight (kg)	2.92	3.11	1.92	2.98	3.06	1.80
Total Weight Landed (tons)	2662	3854	906	1853	684	465
Estimated Number Landed	911	917	471	623	224	259
Mesh(mm) or Hook(no) Size	6-8	6-8	Large	Large	Large	Large
Range of Depths (fm)	5-160	5-190	105-125	80-85	35-95	35-120

¹ Numbers in thousands

TABLE 3 LENGTH FREQUENCIES - COD - 3L - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Gillnet			Cod Trap		Handline
	Commercial					
CATCHES/LANDINGS	Landings					
MONTH	Feb	Jun	Jul	Jun	Jul	Jul
COUNTRY	Can(N)					
TONNAGE	0-50					
30	-	-	-	3	3	2
33	-	-	1	21	37	18
36	-	-	7	70	130	80
39	6	-	14	111	172	118
42	3	-	19	125	184	116
45	6	-	25	144	160	101
48	-	1	30	132	122	114
51	22	4	30	109	76	109
54	64	3	35	95	49	78
57	105	16	31	76	30	75
60	197	54	48	52	16	62
63	201	106	68	27	9	48
66	188	128	84	18	6	36
69	131	134	86	9	2	18
72	25	130	63	5	1	12
75	25	100	63	1	1	6
78	16	70	52	1	-	2
81	-	60	51	1	-	2
84	3	36	42	-	-	-
87	-	35	37	-	-	1
90	3	27	39	-	-	-
93	-	17	28	-	-	-
96	-	16	25	-	-	-
99	-	13	21	-	-	-
102	-	11	16	-	-	-
105	3	10	18	-	-	-
108	-	8	15	-	-	-
111	-	6	14	-	-	-
114	-	5	10	-	-	-
117	-	1	9	-	-	-
120	-	4	7	-	-	-
123	-	1	4	-	-	-
126	-	-	4	-	-	-
129	-	-	2	-	-	-
132	-	-	-	-	-	-
135	-	-	1	-	-	-
138	-	-	1	-	-	-
Total ‰	998	996	1000	1000	998	998
Serial Numbers	-	-	-	-	-	-
Number of Samples	4	4	22	4	12	12
Number of Fish Measured	314	2018	3908	1874	4317	2416
Mean Length (cm)	61.06	75.33	75.15	48.90	45.03	50.26
Mean Weight (kg)	2.45	4.19	4.60	1.15	.88	1.28
Total Weight Landed (tons)	196	2987	4089	9482	3813	564
Estimated Number Landed ¹	80	713	889	8274	4318	442
Mesh(mm) or Hook(no) Size	160-175	160-175	160-175	85-250	85-250	3020, 3021
Range of Depths (fm)	80-97	10-30	20-170	9.5-10.5	10-14	7-40

¹ Numbers in thousands

TABLE 4 LENGTH FREQUENCIES - COD - 3Ps - 1971

(FREQUENCIES IN %/oo - 3 CM GROUPS)

GEAR	Otter Trawl (Stern)		Otter Trawl	
	Commercial		Research	
CATCHES/LANDINGS	Landings		Catches	
MONTH	Nov	Jan	Jul	Nov
COUNTRY	Can(M)		France(SP)	
TONNAGE	501-900		850-1500	
15	-	-	2	1
18	-	3	12	2
21	-	9	35	44
24	-	32	80	105
27	-	62	78	134
30	-	79	89	99
33	-	47	94	63
36	-	35	76	37
39	34	47	48	68
42	82	82	57	47
45	136	103	37	40
48	122	97	60	47
51	107	76	51	53
54	100	76	51	53
57	103	73	48	59
60	84	47	39	50
63	71	29	28	32
66	60	26	34	28
69	27	18	16	12
72	33	15	11	6
75	16	23	11	3
78	11	6	7	1
81	-	9	9	3
84	-	6	5	5
87	5	-	5	1
90	-	-	2	4
93	3	-	5	-
96	1	-	-	-
99	1	-	4	-
102	1	-	2	1
105	-	-	-	1
108	2	-	-	-
111	1	-	-	1
114	1	-	-	-
117	1	-	-	1
120	-	-	2	-
123	1	-	2	-
--	-	-	-	-
135	-	-	-	1
Total %/oo	1003	1000	1000	1002
Serial Numbers	-	-	-	-
Number of Samples	1	1	9	12
Number of Fish Measured	326	341	564	1053
Mean Length (cm)	55.8	-	-	-
Mean Weight (kg)	1.72	-	-	-
Total Weight Landed (tons)	87	-	-	-
Estimated Number Landed ¹	51	-	-	-
Mesh(mm) or Book(no) Size	114	50	50	50
Range of Depths (fm)	42	135-185	40-190	40-200

¹ Numbers in thousands

TABLE 4 LENGTH FREQUENCIES - COD - 3Ps - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Gillnet			God Trap	
	Commercial Landings				
CATCHES/LANDINGS					
MONTH	May	Jun	Jul	Jun	Jul
COUNTRY	Can(N)				
TONNAGE	0-50				
24	-	-	-	1	-
27	-	-	-	1	19
30	-	-	-	26	102
33	-	-	1	53	163
36	1	1	-	97	154
39	-	1	-	122	118
42	5	1	1	145	103
45	9	3	6	143	96
48	13	3	9	135	74
51	21	1	9	100	61
54	32	16	27	74	40
57	76	20	39	45	27
60	119	98	83	26	18
63	170	158	141	14	8
66	186	183	156	12	6
69	142	158	160	2	4
72	83	136	123	1	3
75	49	90	91	1	-
78	32	57	63	1	-
81	21	34	28	-	-
84	11	10	24	-	-
87	6	14	14	-	-
90	11	6	12	-	-
93	4	3	3	-	-
96	4	1	3	-	-
99	1	-	2	-	-
102	2	3	2	-	-
105	1	-	2	-	-
108	1	-	-	-	-
111	-	-	1	-	-
114	-	1	-	-	-
117	-	-	-	-	-
120	-	-	1	-	-
123	1	-	1	-	-
Total ‰	1001	998	1002	999	996
Serial Numbers	-	-	-	-	-
Number of Samples	6	7	11	6	8
Number of Fish Measured	1009	701	1805	2457	2692
Mean Length (cm)	66.93	69.52	69.65	46.20	41.80
Mean Weight (kg)	2.84	3.04	3.13	1.12	0.86
Total Weight Landed (tons)	666	2086	2230	6331	2456
Estimated Number Landed ¹	235	686	713	5658	2849
Mesh(mm) or Hook(no) Size	160-175	160-175	160-175	100-250	100-250
Range of Depths (fm)	30-70	30-60	30-70	11-12	-

¹ Numbers in thousands

TABLE 5 LENGTH FREQUENCIES - COD - 4R, 4S, 4T - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

DIVISION	4R		4S	4T			
	Gillnet	Cod Trap	OT (Side)	Otter Trawl (Side)			
GEAR	Commercial		Commercial	Commercial			
CATCHES/LANDINGS	Landings		Landings	Landings			
MONTH	Jun	Jun	May	Jun	Jul	Aug	Oct
COUNTRY	Can(N)		Can(M)	Can(M)			
TONNAGE	0-50		51-150	51-150			
33	-	10	-	-	-	-	-
36	-	30	-	-	-	-	-
39	-	129	-	5	18	15	-
42	8	199	6	59	107	120	130
45	8	159	78	114	137	150	205
48	-	149	108	196	226	165	230
51	-	104	138	164	131	198	155
54	-	60	120	146	125	125	120
57	-	50	132	109	89	80	60
60	-	55	96	64	60	60	25
63	33	20	66	32	48	40	20
66	67	20	42	18	-	13	20
69	50	10	48	27	6	5	10
72	117	5	30	14	30	3	5
75	117	-	30	9	-	-	5
78	158	-	30	-	-	-	-
81	75	-	22	-	-	3	5
84	100	-	19	12	-	-	-
87	83	-	11	18	-	8	-
90	42	-	4	-	6	5	-
93	17	-	7	-	12	-	-
96	25	-	4	6	-	-	-
99	33	-	-	-	-	3	-
102	-	-	-	6	6	-	-
105	33	-	-	-	-	-	5
108	-	-	7	-	-	3	-
111	8	-	-	-	-	-	-
114	17	-	4	-	-	3	-
117	8	-	-	-	-	-	-
120	-	-	-	-	-	-	5
123	-	-	-	-	-	-	-
126	-	-	-	-	-	3	-
Total ‰	999	1000	1002	999	1001	1002	1000
Serial Numbers	-	-	60	90	96	108,109	158
Number of Samples	1	1	1	1	1	2	1
Number of Fish Measured	120	201	184	217	168	399	200
Mean Length (cm)	81.20	48.42	60.60	55.10	53.10	52.90	51.60
Mean Weight (kg)	4.84	0.98	2.26	1.67	1.49	1.48	1.37
Total Weight Landed (tons)	860	1240	262	1079	857	346	343
Estimated Number Landed	178	1261	116	646	575	234	250
Mesh(mm) or Hook(no) Size	160-175	100	114	114	114	114	114
Range of Depths (fm)	30-40	5-6	145	35	41	40-43	41

¹ Numbers in thousands

TABLE 5 LENGTH FREQUENCIES - COD - 4T - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Danish Seine					Gillnet	
	Commercial					Commercial	
CATCHES/LANDINGS	Landings					Landings	
MONTH	May	Jun	Jul	Aug	Oct	Sep	Oct
COUNTRY	Can(M)					Can(M)	
TONNAGE	26-50					0-25	
36	32	-	-	-	-	-	-
39	226	1	28	25	18	-	-
42	213	96	185	311	145	-	-
45	197	182	317	221	192	-	-
48	139	214	209	117	141	30	13
51	94	145	100	117	125	51	13
54	39	120	64	68	101	30	-
57	29	85	52	52	67	10	-
60	26	52	16	33	52	40	-
63	3	32	4	11	54	10	-
66	3	21	12	14	37	10	38
69	-	16	-	8	11	10	76
72	-	9	4	5	15	91	25
75	-	12	-	3	8	81	139
78	-	5	-	5	15	141	165
81	-	1	4	3	7	131	165
84	-	-	-	3	7	162	139
87	-	-	4	-	2	81	76
90	-	2	-	3	-	51	38
93	-	2	-	3	-	20	38
96	-	-	-	-	-	20	38
99	-	2	-	-	2	10	-
102	-	-	-	-	-	-	-
105	-	-	-	-	2	10	25
108	-	-	-	-	-	-	13
111	-	-	-	-	-	-	-
114	-	-	-	-	-	10	-
127	-	-	-	-	2	-	-
Total ‰	1001	997	999	1002	1003	999	1001
Serial Numbers	58	89,91,92	95	110,111	155-157	159	154
Number of Samples	1	3	1	2	3	1	1
Number of Fish Measured	310	743	249	367	615	99	79
Mean Length (cm)	45.90	52.60	48.70	49.30	53.30	78.10	81.30
Mean Weight (kg)	0.91	1.41	1.09	1.17	1.51	4.59	5.02
Total Weight Landed (tons)	123	359	3821	272	216	1717	304
Estimated Number Landed ¹	135	255	3505	232	143	374	61
Mesh(mm) or Hook(no) Size	114	114	140	114	114	-	-
Range of Depths (fm)	38	17-41	37	36-39	20-26	22	26

¹ Numbers in thousands

TABLE 6 LENGTH FREQUENCIES - COD - 4Vn - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Stern)			Otter Trawl (Side)			
				Commercial			
CATCHES/LANDINGS				Landings			
MONTH	Jan	Apr	Sep	Mar	Apr	Jul	Sep
COUNTRY				Can(M)			
TONNAGE	151-500	501-900		151-500			
36	-	6	-	-	-	-	3
39	-	-	21	5	-	10	6
42	13	69	53	49	69	13	197
45	27	161	132	105	145	53	215
48	54	270	148	184	344	116	97
51	94	224	180	161	166	162	112
54	126	31	156	148	141	162	127
57	189	50	141	92	52	139	103
60	117	65	64	77	22	92	74
63	90	40	77	54	27	89	32
66	67	36	12	32	12	53	11
69	49	11	4	18	9	40	11
72	31	25	-	19	3	13	7
75	35	2	-	12	3	13	-
78	29	4	-	13	5	10	-
81	15	3	4	8	2	13	-
84	20	2	-	7	-	3	1
87	17	2	-	4	-	3	-
90	3	1	2	7	-	3	1
93	10	-	-	2	-	-	1
96	-	-	-	2	-	7	1
99	7	-	-	1	-	3	-
102	-	-	-	-	-	3	-
105	-	-	1	-	-	-	-
108	-	-	2	-	-	-	-
111	-	-	1	-	-	-	-
114	3	-	-	-	-	-	-
117	3	-	-	-	-	-	-
Total ‰	999	1002	998	1000	1000	1000	999
Serial Numbers	32	42	120	-	71	141	121
Number of Samples	1	1	1	3	1	1	1
Number of Fish Measured	229	283	302	945	323	303	323
Mean Length (cm)	62.40	52.70	53.50	55.60	51.40	58.00	51.20
Mean Weight (kg)	2.42	1.41	1.51	1.71	1.28	1.91	1.29
Total Weight Landed (tons)	72	996	520	284	1015	16	379
Estimated Number Landed ¹	30	706	344	166	793	8	294
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	114
Range of Depths (fm)	100	65	84	118-135	82	108	133

¹ Numbers in thousands

TABLE 6 LENGTH FREQUENCIES - COD - 4Vn - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl			Longline		
	Research			Commercial		
CATCHES/LANDINGS	Catches			Landings		
MONTH	Jan	Jul	Nov	Jul	Aug	Oct
COUNTRY	France(SP)			Can(M)		
TONNAGE	850-1500			0-25		
18	-	-	1	-	-	-
21	-	-	2	-	-	-
24	2	3	7	-	-	-
27	-	6	11	-	-	-
30	-	41	20	-	-	-
33	7	59	62	-	-	-
36	22	80	134	-	12	-
39	60	93	104	11	-	23
42	154	112	92	33	12	31
45	183	125	81	77	113	84
48	161	120	74	94	203	159
51	107	83	62	123	114	153
54	96	83	54	133	120	68
57	58	70	56	124	108	45
60	40	32	38	111	70	51
63	29	23	34	79	70	61
66	25	13	28	47	35	51
69	18	10	14	29	51	51
72	9	12	19	20	24	48
75	7	1	14	12	16	50
78	7	5	13	15	11	30
81	4	4	15	12	8	27
84	4	8	10	20	-	29
87	2	4	10	26	5	10
90	2	3	7	6	5	11
93	-	1	6	1	1	8
96	-	1	4	9	4	2
99	-	1	5	6	6	2
102	-	1	4	-	2	-
105	-	-	2	3	2	2
108	-	1	2	-	1	-
111	-	3	1	3	-	2
114	-	-	2	3	2	-
117	-	-	3	1	1	-
120	-	-	2	-	1	-
123	-	-	2	3	-	-
126	-	-	2	-	1	-
129	-	-	-	-	-	-
132	-	-	1	-	-	-
141	-	-	1	-	-	-
Total ‰	997	998	999	1001	998	998
Serial Numbers	-	-	-	140	142	144
Number of Samples	1	7	9	1	1	1
Number of Fish Measured	447	774	1625	380	326	312
Mean Length (cm)	-	-	-	60.00	57.30	60.20
Mean Weight (kg)	-	-	-	2.26	1.92	2.26
Total Weight Landed (tons)	-	-	-	242	408	400
Estimated Number Landed ¹	-	-	-	107	212	177
Mesh(mm) or Hook(no) Size	50	50	50	-	-	-
Range of Depths (fm)	80	25-100	27-90	32	33	50

¹ Numbers in thousands

TABLE 7 LENGTH FREQUENCIES - COD - 4Vs - 1971

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

GEAR	Otter Trawl (Side)					
	Commercial					
CATCHES/LANDINGS	Landings					
MONTH	Jan	Feb	Mar	Apr	Sep	Dec
COUNTRY	Can(M)					
TONNAGE	501-900					
27	-	-	-	-	-	1
30	-	-	-	-	-	2
33	-	-	-	-	-	2
36	-	1	-	-	6	8
39	-	-	2	28	20	27
42	-	20	16	71	66	34
45	9	32	46	72	123	39
48	17	98	63	95	138	117
51	67	134	87	138	120	90
54	111	146	135	169	117	135
57	111	115	153	115	135	98
60	128	86	120	102	106	82
63	149	52	66	54	57	57
66	82	66	69	26	37	49
69	93	44	66	21	32	39
72	55	37	36	33	14	49
75	67	32	33	18	6	30
78	44	14	36	10	9	33
81	29	22	25	15	-	31
84	6	18	15	4	-	25
87	17	11	6	11	-	20
90	9	22	6	6	3	9
93	6	13	6	4	-	6
96	-	14	-	1	3	6
99	-	13	4	2	-	3
102	-	3	2	1	-	5
105	-	3	-	2	6	2
108	-	2	-	1	-	-
111	-	-	2	1	3	1
114	-	-	2	1	-	-
-	-	-	-	-	-	-
126	-	-	-	1	-	-
129	-	-	-	-	-	-
132	-	-	2	-	-	-
Total $\circ/\circ\circ$	1000	998	998	1002	1001	1000
Serial Numbers	33	-	39	-	143	-
Number of Samples	1	3	1	2	1	2
Number of Fish Measured	343	924	308	619	349	608
Mean Length (cm)	65.0	62.3	62.0	57.2	55.3	61.0
Mean Weight (kg)	2.62	2.50	2.39	1.88	1.67	2.35
Total Weight Landed (tons)	233	340	745	342	20	133
Estimated Number Landed ¹	89	136	312	182	12	57
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114
Range of Depths (fm)	80	120-158	153	42-108	88	58-73

¹ Numbers in thousands

TABLE 7 LENGTH FREQUENCIES - COD - 4Va, 4W - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

DIVISION	4Va				4W		
	Commercial	Otter Trawl (Stern)			OT (Stern)	OT (Side)	Longline
CATCHES/LANDINGS		Landings	Catches			Landings	
	Feb		Jan	Nov	Sep	Feb	Dec
MONTH	Can(M)	France(SP)	Japan	Japan	Can(M)	Can(M)	Can(M)
TONNAGE	501-900	850-1500	>1800	501-900	151-500	0-25	
27	-	6	4	-	-	-	-
30	-	110	4	-	-	-	-
33	-	403	37	-	-	5	-
36	-	243	41	-	-	41	-
39	-	83	137	-	-	92	-
42	12	22	214	-	21	157	13
45	63	28	170	-	36	184	37
48	115	6	166	-	57	142	97
51	196	11	41	99	88	142	121
54	160	17	33	180	79	92	158
57	149	28	48	90	68	48	151
60	87	17	26	27	55	29	148
63	76	-	18	9	117	18	114
66	24	6	22	54	75	11	67
69	28	-	11	90	85	11	40
72	38	-	7	117	49	7	20
75	7	-	-	180	49	7	7
78	7	-	7	144	69	-	5
81	19	-	4	9	33	4	7
84	7	6	-	-	28	4	5
87	6	-	4	-	35	1	5
90	2	-	-	-	42	4	2
93	3	11	-	-	7	1	3
96	-	-	4	-	-	-	-
99	-	6	-	-	7	-	-
-	-	-	-	-	-	-	-
136	-	-	4	-	-	-	-
Total ‰	999	1003	1002	999	1000	1000	1000
Serial Numbers	35	-	-	-	31	162	125
Number of Samples	1	1	2	1	1	1	1
Number of Fish Measured	322	181	271	111	337	374	304
Mean Length (cm)	57.50	-	-	67.38	66.10	49.50	58.70
Mean Weight (kg)	1.83	-	-	-	2.90	1.20	1.92
Total Weight Landed (tons)	417	-	-	-	761	404	639
Estimated Number Landed	228	-	-	-	262	337	333
Mesh(mm) or Hook(no) Size	114	50	-	-	114	114	-
Range of Depths (fm)	51	45-50	30-65	100	90	25	48

¹ Numbers in thousands

TABLE 8 LENGTH FREQUENCIES - COD - 4X (SOUTH) - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl (Side)				
	Commercial				
CATCHES/LANDINGS	Landings				
MONTH	Jan	Feb	Jun	Oct	Aug
COUNTRY	Can(M)				
TONNAGE	151-500			51-150	
36	-	-	12	16	-
39	20	7	80	70	-
42	40	53	12	86	-
45	10	40	61	91	42
48	61	79	73	70	-
51	30	59	86	43	42
54	30	33	80	48	42
57	50	20	86	70	42
60	81	86	86	48	-
63	40	66	86	97	-
66	50	26	98	54	83
69	40	26	73	64	42
72	61	72	68	59	42
75	59	65	43	70	-
78	71	78	23	32	-
81	57	129	15	24	125
84	34	32	4	9	42
87	68	51	-	13	-
90	17	13	2	9	125
93	51	45	4	9	42
96	17	-	2	4	42
99	43	-	-	7	125
102	-	6	2	-	83
105	17	6	-	-	-
108	17	-	2	-	42
111	9	-	-	4	-
114	9	-	-	2	-
117	-	6	2	-	-
120	9	-	-	-	-
123	9	-	-	-	42
Total ‰	1000	998	1000	999	1003
Serial Numbers	29	30	85	186	138
Number of Samples	1	1	1	1	1
Number of Fish Measured	105	153	183	202	24
Mean Length (cm)	74.00	69.00	59.90	60.40	84.20
Mean Weight (kg)	4.34	3.42	2.17	2.35	6.17
Total Weight Landed (tons)	171	223	182	158	11
Estimated Number Landed ¹	39	65	84	67	2
Mesh(mm) or Hook(no) Size	114	114	114	114	114
Range of Depths (fm)	48	50	69	73	85

¹ Numbers in thousands

TABLE 8 LENGTH FREQUENCIES - COD - 4X (SOUTH), 4X (NORTH) - 1971 (FREQUENCIES IN ‰ - 3 CM GROUPS)
(CONT'D)

DIVISION	4X (SOUTH)			4X (NORTH)	
	Longline			Shrimp Trawl	OT (Stern)
GEAR	Commercial			Commercial	
CATCHES/LANDINGS	Landings			Landings	
MONTH	Aug	Sep	Sep	Apr	Sep
COUNTRY	Can(M)			Can(M)	
TONNAGE	51-150		26-50	51-150	26-50
27	-	-	-	-	6
30	-	-	-	-	12
33	-	-	-	13	93
36	-	-	7	26	117
39	-	7	64	39	173
42	-	13	99	13	179
45	-	39	50	-	105
48	-	39	42	-	62
51	-	39	78	39	25
54	-	85	92	-	12
57	-	92	127	13	31
60	-	138	90	53	19
63	-	72	71	26	25
66	-	85	57	13	25
69	34	33	64	66	25
72	-	52	35	79	19
75	9	57	35	53	19
78	34	59	7	118	43
81	43	15	-	66	-
84	85	35	9	92	6
87	60	15	12	39	-
90	103	20	19	66	-
93	94	20	19	66	-
96	94	20	-	39	6
99	51	10	-	13	-
102	94	25	5	39	-
105	51	5	5	-	-
108	51	5	5	-	-
111	34	-	-	13	-
114	34	15	-	-	-
117	43	-	9	-	-
120	51	-	-	13	-
123	17	-	-	-	-
126	9	5	-	-	-
129	9	-	-	-	-
Total ‰	1000	1000	1001	997	1002
Serial Numbers	118	135	126	56	127
Number of Samples	1	1	1	1	1
Number of Fish Measured	117	162	147	76	162
Mean Length (cm)	98.20	68.60	59.90	77.00	47.70
Mean Weight (kg)	8.93	3.40	2.32	4.73	1.23
Total Weight Landed (tons) ¹	88	210	143	4	101
Estimated Number Landed	10	62	62	1	82
Mesh(mm) or Hook(no) Size	-	-	-	-	114
Range of Depths (fm)	170	54	58	50	35

¹ Numbers in thousands

TABLE 9 LENGTH FREQUENCIES - COD - 5Y, 5Ze - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

DIVISION	5Y	5Ze					
	OT (Side)	Otter Trawl					
GEAR	Commercial	Commercial					
CATCHES/LANDINGS	Landings	Landings					
MONTH	Nov	Jan	Feb	Mar	Apr	May	Jun
COUNTRY	Can(M)	USA					
TONNAGE	151-500	0-458					
33	4	-	-	-	-	-	-
36	7	-	-	-	-	-	3
39	7	-	-	-	4	-	8
42	22	8	39	3	15	2	25
45	89	16	39	19	46	39	90
48	246	32	29	19	87	91	120
51	205	88	77	6	63	117	96
54	164	256	47	31	61	70	73
57	67	152	77	44	92	77	79
60	19	136	38	32	109	117	90
63	22	88	68	60	64	115	85
66	34	64	29	54	62	68	62
69	26	72	39	75	24	76	73
72	15	32	87	70	73	39	48
75	19	24	67	75	39	30	56
78	15	16	67	43	62	44	30
81	8	-	101	69	45	32	24
84	5	-	67	44	42	16	24
87	5	8	29	70	34	19	9
90	4	-	10	57	14	10	4
93	4	-	67	49	18	12	-
96	3	8	19	64	26	15	-
99	1	-	-	36	5	5	1
102	3	-	-	33	3	3	-
105	1	-	-	28	12	3	-
108	1	-	-	15	-	-	-
111	2	-	-	4	-	-	-
114	1	-	-	-	-	-	-
Total ‰	999	1000	1000	1000	1000	1000	1000
Serial Numbers	161	-	-	-	-	-	-
Number of Samples	1	1	1	3	4	3	5
Number of Fish Measured	288	120	104	389	474	440	613
Mean Length (cm)	55.30	60.28	69.68	78.96	66.68	63.63	60.73
Mean Weight (kg)	1.71	2.12	4.04	5.68	3.20	3.15	2.69
Total Weight Landed (tons)	44	436	1022	1560	1230	1609	1565
Estimated Number Landed ¹	26	2053	2527	2743	3842	5101	5824
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	114
Range of Depths (fm)	80	32-34	28-32	23-32	25-32	18-32	20-46

¹ Numbers in thousands for Can(M) and in hundreds for USA

TABLE 9 LENGTH FREQUENCIES - COD - 52e - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 3 CM GROUPS)

GEAR	Otter Trawl						OT (Stern)
	Commercial						Commercial
CATCHES/LANDINGS	Landings						Catches
MONTH	Jul	Aug	Sep	Oct	Nov	Dec	Aug
COUNTRY	USA						Japan
TONNAGE	0-458						>1800
39	-	2	2	-	38	-	-
42	1	25	2	-	75	9	-
45	10	30	20	10	80	18	-
48	41	63	68	73	73	78	-
51	43	94	69	93	64	105	37
54	27	105	102	144	139	90	148
57	83	106	72	135	125	166	37
60	140	112	104	77	93	60	111
63	173	85	99	83	51	93	148
66	98	70	99	71	32	84	-
69	119	79	79	47	30	36	-
72	106	70	80	83	36	39	-
75	72	45	60	46	39	42	74
78	52	42	52	40	43	42	111
81	22	33	47	47	29	12	-
84	4	6	15	24	17	30	37
87	6	13	5	7	18	42	259
90	-	8	10	7	3	18	37
93	-	7	7	6	3	-	-
96	-	5	8	-	3	24	-
99	1	-	-	7	-	6	-
102	1	-	-	-	6	6	-
105	1	-	-	-	3	-	-
Total ‰	1000	1000	1000	1000	1000	1000	999
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	2	5	3	2	3	2	1
Number of Fish Measured	276	695	420	288	344	201	27
Mean Length (cm)	65.85	62.67	65.06	63.81	59.64	64.61	72.83
Mean Weight (kg)	3.24	2.95	3.21	3.05	2.64	3.24	-
Total Weight Landed (tons)	684	561	1556	1670	958	704	3
Estimated Number Landed ¹	2110	1909	4849	5469	3633	2173	-
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	-
Range of Depths (fm)	24-30	18-30	25-50	25-36	28-80	28-32	120

¹ Numbers in hundreds

TABLE 9 LENGTH FREQUENCIES - COD - 52w - 1971
(CONT'D)

(FREQUENCIES IN % - 3 CM GROUPS)

GEAR	Otter Trawl	Otter Trawl (Stern)
	Commercial Landings	Commercial Catches
CATCHES/LANDINGS	Landings	Catches
MONTH	Apr	Aug
COUNTRY	USA	Japan
TONNAGE	0-150	>1800
42	-	56
45	-	111
48	-	278
51	-	-
54	-	56
57	34	-
60	50	-
63	81	-
66	97	-
69	164	-
72	130	56
75	211	-
78	97	-
81	34	-
84	34	278
87	34	167
90	17	-
99	17	-
Total %	1000	1002
Serial Numbers	-	-
Number of Samples	1	1
Number of Fish Measured	61	18
Mean Length (cm)	73.27	66.78
Mean Weight (kg)	4.30	-
Total Weight Landed (tons)	128	-
Estimated Number Landed ¹	298	-
Mesh(mm) or Hook(no) Size	114	-
Range of Depths (fm)	26	115

¹ Numbers in hundreds

TABLE 10

AGE/LENGTH TABLE - COD - 1B - 1971 (3rd QUARTER)

GEAR		Pound Net (Commercial)												
CATCHES OR LANDINGS		Landings												
COUNTRY		Denmark (G)												
TONNAGE		0-50												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
													Months Within Quarter	Jul
39		3	5	-	-	-	-	-	-	-	8	11	-	-
42		2	14	-	-	-	-	-	-	-	16	58	-	-
45		-	14	1	-	-	-	-	-	-	15	132	-	-
48		-	18	2	-	-	-	-	-	-	20	193	-	-
51		-	22	8	-	-	-	-	-	-	30	198	-	-
54		-	14	15	1	-	-	-	-	-	30	137	-	-
57		-	12	14	3	1	-	-	-	-	30	102	-	-
60		-	2	20	7	1	-	-	-	-	30	65	-	-
63		-	-	13	9	2	-	-	-	-	24	31	-	-
66		-	-	14	2	-	-	-	-	-	16	20	-	-
69		-	-	4	2	1	1	-	-	-	8	10	-	-
72		-	-	-	2	2	1	-	-	-	5	6	-	-
75		-	-	-	1	-	1	1	-	-	3	4	-	-
78		-	-	-	-	-	-	1	1	-	2	3	-	-
81		-	-	-	-	-	9	-	-	-	9	11	-	-
84		-	-	-	-	-	2	2	1	-	5	6	-	-
87		-	-	-	-	-	1	2	2	-	5	6	-	-
90		-	-	-	-	-	1	-	2	-	3	4	-	-
93		-	-	-	-	-	-	-	1	-	1	1	-	-
96		-	-	-	-	-	-	-	1	-	1	1	-	-
--		-	-	-	-	-	-	-	-	-	-	-	-	-
105		-	-	-	-	-	-	-	-	1	1	1	-	-
Total No. of Ages Read		5	101	91	27	7	16	6	8	1	262	1000		
Serial Numbers		No. of Age Samples 2												
X	Number of fish measured each month											812	-	-
	Mean length of fish (cm) each month											53.7	-	-
	Mean weight of fish (kg) each month											1.731	-	-
	Total weight caught or landed (tons) each month											-	-	-
	Estimated number caught or landed (whole numbers) each month											-	-	-
	Range of depths (m) each month											0-10	-	-
Mesh size (mm)											50	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)											
Month	3	4	5	6	7	8	9	10	11	Total	
Jul	11	609	280	50	12	20	8	10	1	1001	
Aug	-	-	-	-	-	-	-	-	-	-	
Sep	-	-	-	-	-	-	-	-	-	-	

TABLE 11
(CONT'D)

AGE/LENGTH TABLE - COD - 1C - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)																						
CATCHES OR LANDINGS		Catches																						
COUNTRY		Germany, Fed. Rep.																						
TONNAGE		900-1800																						
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													
											Apr	May	Jun											
39		-	-	-	-	-	-	-	-	-	-	-	-	1										
42		-	-	-	-	-	-	-	-	-	-	-	-	4										
45		-	1	-	-	-	-	-	-	1	-	-	-	9										
48		1	2	-	-	-	-	-	-	3	-	-	-	21										
51		-	9	-	-	-	-	-	-	9	-	-	-	34										
54		-	11	-	1	-	-	-	-	12	-	-	-	46										
57		-	6	2	1	-	-	-	-	9	-	-	-	62										
60		-	9	5	3	4	-	-	-	21	-	-	-	89										
63		-	2	9	6	4	-	-	-	21	-	-	-	134										
66		-	-	9	5	6	-	1	-	21	-	-	-	136										
69		-	-	4	2	9	2	-	-	17	-	-	-	124										
72		-	-	4	3	11	2	2	-	22	-	-	-	108										
75		-	-	1	-	8	5	-	1	15	-	-	-	69										
78		-	-	-	2	7	2	3	-	14	-	-	-	51										
81		-	-	-	2	3	2	-	-	7	-	-	-	34										
84		-	-	-	-	4	3	-	2	9	-	-	-	28										
87		-	-	-	-	2	-	2	2	6	-	-	-	17										
90		-	-	-	-	-	-	4	-	4	-	-	-	12										
93		-	-	-	-	-	-	1	3	4	-	-	-	9										
96		-	-	-	-	-	-	-	1	1	-	-	-	7										
99		-	-	-	-	-	-	-	1	1	-	-	-	3										
102		-	-	-	-	-	-	-	1	1	-	-	-	1										
105		-	-	-	-	-	-	1	-	1	-	-	-	1										
Total No. of Ages Read											1	40	34	25	58	16	14	11	199	1000				
Serial Numbers											No. of Age Samples													
X											Number of fish measured each month											-	-	1511
											Mean length of fish (cm) each month											-	-	68.8
											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											-	-	130-180
Mesh size (mm)											-	-	130											

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	Total
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	12	191	204	141	293	75	49	35	1000

TABLE 11
(CONT'D)

AGE/LENGTH TABLE - COD - 1C - 1971 (4th QUARTER)

GEAR		Otter Trawl (Research)													Total	LENGTH COMPOSITION		
CATCHES OR LANDINGS		Catches													No. of	PER MILLE		
COUNTRY		Germany, Fed. Rep.													Ages	Months Within Quarter		
TONNAGE		>1800													Read	Oct Nov Dec		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	2	3	4	5	6	7	8	9	10	11	12	13	14	Total No. of Ages Read	PER MILLE		
																Months	Within	Quarter
																Oct	Nov	Dec
21		-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	3
24		-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3
27		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30		1	3	-	-	-	-	-	-	-	-	-	-	-	4	-	-	7
33		1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3
36		-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	5
39		-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	-	15
42		-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	-	7
45		-	3	3	1	-	-	-	-	-	-	-	-	-	7	-	-	12
48		-	1	5	-	-	-	-	-	-	-	-	-	-	6	-	-	12
51		-	1	5	3	-	-	-	-	-	-	-	-	-	9	-	-	24
54		-	-	2	3	-	-	-	-	-	-	-	-	-	5	-	-	27
57		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
60		-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	25
63		-	-	-	4	-	-	-	-	-	-	-	-	-	4	-	-	59
66		-	-	-	4	1	-	-	-	-	-	-	-	-	5	-	-	61
69		-	-	-	3	1	-	-	-	-	-	-	-	-	4	-	-	61
72		-	-	-	3	9	1	3	-	-	-	-	-	-	16	-	-	96
75		-	-	-	3	11	-	4	-	1	-	-	-	-	19	-	-	113
78		-	-	-	-	5	1	5	3	3	-	-	-	-	17	-	-	96
81		-	-	-	-	3	1	3	1	1	1	-	-	-	10	-	-	78
84		-	-	-	-	-	-	3	5	4	1	-	-	-	13	-	-	67
87		-	-	-	-	1	-	3	3	1	-	-	-	-	8	-	-	71
90		-	-	-	-	-	-	-	-	3	1	-	-	-	4	-	-	27
93		-	-	-	-	-	-	-	-	1	4	-	-	1	6	-	-	24
96		-	-	-	-	-	-	-	-	1	3	-	-	-	4	-	-	27
99		-	-	-	-	-	-	-	-	3	1	-	-	-	4	-	-	28
102		-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	13
117		-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	12
Total No. of Ages Read		2	21	15	25	31	3	21	12	18	13	-	-	1	162	1000		
Serial Numbers		No. of Age Samples													5			
X		Number of fish measured each month													-	-	593	
		Mean length of fish (cm) each month													-	-	75.2	
		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													-	-	20-240	
Mesh size (mm)															-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Oct	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	5	48	39	265	206	20	135	77	113	88	-	-	4	1000

TABLE 12
(CONT'D)

AGE/LENGTH TABLE - COD - 1D - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings													Months Within Quarter		
COUNTRY		Denmark (G)															
TONNAGE		500-900															
STRUCTURES USED IN AGE DETERMINATION		Otoliths															
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14		Apr	May	Jun
	36	1	-	-	-	-	-	-	-	-	-	-	-				
39	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
42	-	8	2	-	-	-	-	-	-	-	-	-	-	10	-	-	14
45	-	6	9	-	-	-	-	-	-	-	-	-	-	15	-	-	29
48	-	5	15	-	-	-	-	-	-	-	-	-	-	20	-	-	46
51	-	3	25	-	-	-	-	-	-	-	-	-	-	28	-	-	49
54	-	-	28	1	1	-	-	-	-	-	-	-	-	30	-	-	97
57	-	-	21	7	2	-	-	-	-	-	-	-	-	30	-	-	96
60	-	-	12	8	9	1	-	-	-	-	-	-	-	30	-	-	111
63	-	-	8	12	5	4	-	1	-	-	-	-	-	30	-	-	84
66	-	-	-	15	10	4	-	1	-	-	-	-	-	30	-	-	99
69	-	-	-	8	8	11	1	1	1	-	-	-	-	30	-	-	99
72	-	-	-	12	3	12	2	1	-	-	-	-	-	30	-	-	78
75	-	-	-	8	4	11	6	1	-	-	-	-	-	30	-	-	60
78	-	-	-	4	3	16	3	3	-	-	-	-	-	29	-	-	45
81	-	-	-	-	1	4	5	7	2	-	-	-	-	19	-	-	26
84	-	-	-	-	-	3	1	4	4	-	1	-	-	13	-	-	18
87	-	-	-	-	-	-	-	3	3	2	-	-	1	9	-	-	13
90	-	-	-	-	-	-	-	-	3	1	-	-	1	5	-	-	7
93	-	-	-	-	-	-	-	2	4	2	-	1	1	10	-	-	14
96	-	-	-	-	-	-	-	-	2	-	1	1	1	5	-	-	7
99	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	3
102	-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	3
Total No. of Ages Read		1	23	120	75	46	66	23	31	16	1	3	4	409	1000		
Serial Numbers		No. of Age Samples												1			
X		Number of fish measured each month												-	-	718	
		Mean length of fish (cm) each month												-	-	65.2	
		Mean weight of fish (kg) each month												-	-	2.7	
		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	3	4	5	6	7	8	9	10	11	12	13	14	Total
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	1	41	323	218	138	152	41	51	25	1	4	6	1001

TABLE 12
(CONT'D)

AGE/LENGTH TABLE - COD - 1D - 1971 (2nd QUARTER)

GEAR		Longline (Research)											Total No. of Ages Read		LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches													Months Within Quarter		
COUNTRY		Denmark (G)															
TONNAGE		151-500															
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	PER MILLE			
														Apr	May	Jun	
42		1	-	-	-	-	-	-	-	-	-	1	-	-	4		
45		1	-	-	-	-	-	-	-	-	-	1	-	-	4		
48		1	3	-	-	-	-	-	-	-	-	4	-	-	16		
51		-	9	-	-	-	-	-	-	-	-	9	-	-	35		
54		1	17	2	-	-	-	-	-	-	-	20	-	-	79		
57		-	18	1	-	-	-	-	-	-	-	19	-	-	75		
60		-	18	14	1	1	-	-	-	-	-	34	-	-	134		
63		-	7	16	1	3	1	-	-	-	-	28	-	-	110		
66		-	3	19	2	5	-	-	-	-	-	29	-	-	114		
69		-	-	17	1	6	-	-	-	-	-	24	-	-	94		
72		-	1	18	2	4	3	1	-	-	-	29	-	-	114		
75		-	-	5	2	4	3	1	1	-	-	16	-	-	63		
78		-	-	1	1	2	-	3	1	-	-	8	-	-	31		
81		-	-	-	-	3	-	1	1	-	-	5	-	-	20		
84		-	-	-	-	-	-	1	2	-	-	4	-	-	16		
87		-	-	-	-	-	1	5	2	-	1	9	-	-	35		
90		-	-	-	-	1	-	-	2	-	-	3	-	-	12		
93		-	-	-	-	-	1	1	2	-	-	4	-	-	16		
96		-	-	-	-	-	-	-	-	-	3	3	-	-	12		
99		-	-	-	-	-	-	-	1	-	-	1	-	-	4		
102		-	-	-	-	-	-	-	1	1	-	2	-	-	8		
114		-	-	-	-	-	-	-	1	-	-	1	-	-	4		
Total No. of Ages Read		4	76	93	10	29	9	13	14	1	1	4	254	1000			
Serial Numbers		No. of Age Samples											2				
X	Number of fish measured each month												-	-	254		
	Mean length of fish (cm) each month												-	-	68.2		
	Mean weight of fish (kg) each month												-	-	2.728		
	Total weight caught or landed (tons) each month												-	-	-		
	Estimated number caught or landed (whole numbers) each month												-	-	-		
	Range of depths (m) each month												-	-	270-330		
Mesh size (mm)												-	-	-			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	Total
Apr	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-
Jun	16	299	366	39	114	35	51	56	4	4	16	1000

TABLE 12
(CONT'D)

AGE/LENGTH TABLE - COD - 1D - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		Catches														
COUNTRY		Germany, Fed. Rep.														
TONNAGE		900-1800														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
												Months Within Quarter				
											Apr	May	Jun			
30		1	-	-	-	-	-	-	-	-	1	-	-	-		
33		1	-	-	-	-	-	-	-	-	1	-	-	-		
36		-	-	1	-	-	-	-	-	-	1	-	-	2		
39		1	-	-	-	-	-	-	-	-	1	-	-	1		
42		-	3	-	-	-	-	-	-	-	3	-	-	3		
45		1	3	2	-	-	-	-	-	-	6	-	-	11		
48		-	6	3	-	-	-	-	-	-	9	-	-	18		
51		-	2	6	-	-	-	-	-	-	8	-	-	30		
54		-	3	6	-	-	-	-	-	-	9	-	-	47		
57		-	-	13	1	1	-	-	-	-	15	-	-	74		
60		-	-	14	3	2	-	-	-	-	19	-	-	101		
63		-	-	6	12	2	4	1	-	-	25	-	-	138		
66		-	-	-	14	4	5	1	-	-	24	-	-	149		
69		-	-	-	6	8	2	2	1	-	19	-	-	121		
72		-	-	-	3	3	4	2	1	-	13	-	-	92		
75		-	-	-	3	2	5	1	-	-	11	-	-	66		
78		-	-	-	-	-	2	3	1	-	6	-	-	45		
81		-	-	-	-	1	1	-	-	1	3	-	-	34		
84		-	-	-	-	-	1	-	-	1	2	-	-	22		
87		-	-	-	-	-	-	-	-	1	1	-	-	17		
90		-	-	-	-	-	-	-	-	2	2	-	-	10		
93		-	-	-	-	-	-	-	-	-	1	-	-	8		
96		-	-	-	-	-	-	-	-	-	-	-	-	6		
99		-	-	-	-	-	-	-	-	1	1	-	-	5		
											-	-	1000			
Total No. of Ages Read		4	17	51	42	23	24	10	7	3	181	X				
Serial Numbers												No. of Age Samples	1	X		
X	Number of fish measured each month											-	-	1319		
	Mean length of fish (cm) each month											-	-	68.2		
	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											-	-	180-260		
Mesh size (mm)											-	-	130			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	Total
Apr	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-
Jun	3	43	237	251	148	162	68	58	30	1000

TABLE 12
(CONT'D)

AGE/LENGTH TABLE - COD - 1D - 1971 (4th QUARTER)

GEAR		Otter Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings													Months Within Quarter		
COUNTRY		Denmark (G)															
TONNAGE		151-500															
STRUCTURES USED IN AGE DETERMINATION		Otoliths															
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14		PER MILLE		
															Oct	Nov	Dec
36		3	1	-	-	-	-	-	-	-	-	-	-	4	-	-	5
39		10	2	-	-	-	-	-	-	-	-	-	-	12	13	-	7
42		19	9	-	-	-	-	-	-	-	-	-	-	28	28	-	23
45		10	18	-	-	-	-	-	-	-	-	-	-	28	31	-	25
48		-	26	9	-	-	-	-	-	-	-	-	-	35	28	-	19
51		-	23	23	-	-	-	-	-	-	-	-	-	46	33	-	28
54		-	11	36	3	1	-	-	-	-	-	-	-	51	66	-	31
57		-	7	47	3	-	-	-	-	-	-	-	-	57	63	-	56
60		-	5	45	4	5	1	-	-	-	-	-	-	60	65	-	49
63		-	-	36	13	5	5	-	-	-	-	-	-	59	63	-	92
66		-	-	21	19	9	11	-	-	-	-	-	-	60	63	-	72
69		-	-	5	27	14	14	-	-	-	-	-	-	60	104	-	88
72		-	-	1	18	13	26	1	1	-	-	-	-	60	110	-	131
75		-	-	-	18	10	26	4	2	-	-	-	-	60	109	-	110
78		-	-	-	21	10	24	3	1	-	-	-	-	59	72	-	84
81		-	-	-	6	8	32	8	5	-	-	-	-	59	63	-	52
84		-	-	-	3	7	29	11	3	1	-	-	-	54	47	-	44
87		-	-	-	-	3	21	4	6	1	-	-	-	35	17	-	30
90		-	-	-	1	-	11	6	3	4	-	-	-	25	8	-	23
93		-	-	-	-	-	5	2	5	6	-	1	-	19	8	-	16
96		-	-	-	-	-	1	-	2	1	-	-	1	5	-	-	6
99		-	-	-	-	-	2	1	-	3	-	-	-	6	6	-	2
102		-	-	-	-	-	-	-	1	1	-	1	1	4	2	-	3
105		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
108		-	-	-	-	-	-	1	1	1	-	-	-	3	-	-	3
Total No. of Ages Read		42	102	223	136	85	208	41	30	18	-	2	2	889	999 - 999		
Serial Numbers		No. of Age Samples												2			
X		Number of fish measured each month												635	-	878	
		Mean length of fish (cm) each month												68.0	-	70.1	
		Mean weight of fish (kg) each month												3.4	-	3.9	
		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	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	Total
Oct	41	96	242	193	116	244	37	21	9	-	1	1	1001
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	34	75	215	202	120	267	42	30	15	-	2	2	1004

TABLE 12
(CONT'D)

AGE/LENGTH TABLE - COD - 1D - 1971 (4th QUARTER)

GEAR		Otter Trawl (Research)														
CATCHES OR LANDINGS		Catches														
COUNTRY		Germany, Fed. Rep.														
TONNAGE		>1800														
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	LENGTH COMPOSITION PER MILLE		
														Months Within Quarter	Oct	Nov
24		1	-	-	-	-	-	-	-	-	-	1	-	-	1	
27		4	-	-	-	-	-	-	-	-	-	4	-	-	6	
30		8	-	-	-	-	-	-	-	-	-	8	-	-	27	
33		12	-	-	-	-	-	-	-	-	-	12	-	-	53	
36		20	1	-	-	-	-	-	-	-	-	21	-	-	78	
39		20	2	-	-	-	-	-	-	-	-	22	-	-	74	
42		16	5	1	-	-	-	-	-	-	-	22	-	-	63	
45		14	8	-	-	-	-	-	-	-	-	22	-	-	70	
48		6	12	1	-	-	-	-	-	-	-	19	-	-	46	
51		-	16	3	-	-	-	-	-	-	-	19	-	-	47	
54		-	17	12	1	-	-	-	-	-	-	30	-	-	67	
57		-	6	28	1	-	-	-	-	-	-	35	-	-	69	
60		-	1	45	2	-	-	-	-	-	-	48	-	-	75	
63		-	-	34	1	-	-	-	-	-	-	35	-	-	66	
66		-	-	17	6	1	1	-	-	-	-	25	-	-	48	
69		-	-	16	20	5	2	-	-	-	-	43	-	-	60	
72		-	-	5	9	1	5	1	-	-	-	21	-	-	40	
75		-	-	2	7	2	7	3	-	-	-	21	-	-	31	
78		-	-	-	5	1	2	1	-	-	-	9	-	-	30	
81		-	-	-	6	1	4	1	-	-	-	12	-	-	18	
84		-	-	-	1	1	1	-	-	-	-	3	-	-	7	
87		-	-	-	1	-	1	-	-	-	1	3	-	-	8	
90		-	-	-	-	-	-	-	2	2	1	5	-	-	9	
93		-	-	-	1	-	-	-	-	-	-	1	-	-	2	
96		-	-	-	-	-	1	-	-	1	-	3	-	-	2	
99		-	-	-	-	-	-	-	1	1	-	2	-	-	2	
102		-	-	-	-	-	-	-	-	1	-	2	-	-	1	
Total No. of Ages Read		101	68	164	61	12	24	6	3	5	1	3	448			
Serial Numbers		No. of Age Samples											5			
	Number of fish measured each month												-	-	2127	
	Mean length of fish (cm) each month												-	-	55.6	
	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												-	-	170-310	
Mesh size (mm)												-	-	130		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	Total
Oct	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-
Dec	334	170	297	109	21	43	11	5	7	1	2	1000

TABLE 13
(CONT'D)

AGE/LENGTH TABLE - COD - 1E - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)												
CATCHES OR LANDINGS		Catches												
COUNTRY		Germany, Fed. Rep.												
TONNAGE		900-1800												
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		Months Within Quarter	Apr	May	Jun		
39	-	-	-	-	-	-	-	-	-	-	-	2		
42	-	-	-	-	-	-	-	-	-	-	-	2		
45	2	-	1	-	-	-	-	3	-	-	-	9		
48	-	1	1	1	-	-	-	3	-	-	-	17		
51	1	2	6	1	-	-	-	10	-	-	-	23		
54	-	1	11	2	-	-	-	14	-	-	-	35		
57	1	-	10	7	-	-	-	18	-	-	-	54		
60	-	3	6	11	2	2	-	24	-	-	-	84		
63	-	1	7	22	4	1	-	35	-	-	-	130		
66	-	-	5	24	4	2	-	35	-	-	-	168		
69	-	-	2	14	5	1	-	22	-	-	-	144		
72	-	-	4	8	3	1	-	16	-	-	-	110		
75	-	1	-	5	5	-	-	11	-	-	-	77		
78	-	-	-	2	3	1	-	6	-	-	-	49		
81	-	-	-	1	2	-	-	3	-	-	-	31		
84	-	-	-	2	-	-	-	2	-	-	-	24		
87	-	-	-	-	-	1	-	1	-	-	-	15		
90	-	-	-	-	-	-	-	-	-	-	-	11		
93	-	-	-	-	-	-	-	-	-	-	-	6		
96	-	-	-	-	-	-	-	-	-	-	-	3		
99	-	-	-	-	-	-	-	-	-	-	-	2		
102	-	-	-	-	-	-	-	-	-	-	-	2		
105	-	-	-	-	-	-	-	-	-	-	-	1		
108	-	-	-	-	-	-	-	-	-	-	-	1		
Total No. of Ages Read		4	9	53	100	28	9	203	1000					
Serial Numbers	No. of Age Samples 1													
X	Number of fish measured each month											-	-	910
	Mean length of fish (cm) each month											-	-	69.1
	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											-	-	330-380
Mesh size (mm)											-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	5	6	7	8	9	10	Total
Apr	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
Jun	14	32	195	501	176	82	1000

TABLE 13
(CONT'D)

AGE/LENGTH TABLE - COD - 1E - 1971 (3rd QUARTER)

GEAR		Otter Trawl (Research)										
CATCHES OR LANDINGS		Catches										
COUNTRY		Denmark (G)										
TONNAGE		151-500										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age	3	4	5	6	7	8	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
									Months Within Quarter			
								Jul	Aug	Sep		
27		7	-	-	-	-	-	7	-	54	-	
30		3	-	-	-	-	-	3	-	23	-	
33		2	-	-	-	-	-	2	-	16	-	
36		5	2	-	-	-	-	7	-	54	-	
39		4	3	-	-	-	-	7	-	54	-	
42		-	2	-	-	-	-	2	-	16	-	
45		-	1	4	1	-	-	6	-	47	-	
48		-	2	12	-	-	-	14	-	109	-	
51		-	-	7	-	-	-	7	-	54	-	
54		-	-	15	3	1	-	19	-	147	-	
57		-	-	3	4	3	1	11	-	85	-	
60		-	-	3	3	2	1	9	-	70	-	
63		-	-	-	6	-	2	8	-	62	-	
66		-	-	-	4	3	3	10	-	78	-	
69		-	-	-	3	2	5	10	-	78	-	
72		-	-	-	-	-	2	2	-	16	-	
75		-	-	-	-	-	4	4	-	31	-	
78		-	-	-	-	-	-	-	-	-	-	
81		-	-	-	-	-	1	1	-	8	-	
Total No. of Ages Read		21	10	44	24	11	19	129	- 1002 -			
Serial Numbers		No. of Age Samples 1										
X		Number of fish measured each month								-	129	-
		Mean length of fish (cm) each month								-	53.8	-
		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								-	310-320	-
		Mesh size (mm)								-	36	-

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	Total
Jul	-	-	-	-	-	-	-
Aug	163	78	341	186	86	148	1000
Sep	-	-	-	-	-	-	-

TABLE 13
(CONT'D)

AGE/LENGTH TABLE - COD - 1E - 1971 (4th QUARTER)

GEAR		Otter Trawl (Research)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter			
CATCHES OR LANDINGS		Catches													Oct	Nov	Dec	
COUNTRY		Germany, Fed. Rep.																
TONNAGE		>1800																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	Total No. of Ages Read	PER MILLE			
															Oct	Nov	Dec	
30		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
33		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
36		5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
39		3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
42		3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	22
45		2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
48		-	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	62
51		-	2	16	1	-	-	-	-	-	-	-	-	-	-	-	-	74
54		-	-	24	1	1	-	-	-	-	-	-	-	-	-	-	-	103
57		-	1	31	-	-	-	-	-	-	-	-	-	-	-	-	-	135
60		-	-	23	4	2	-	-	-	-	-	-	-	-	-	-	-	114
63		-	-	13	6	2	-	-	-	-	-	-	-	-	-	-	-	71
66		-	1	2	6	2	1	-	-	-	-	-	-	-	-	-	-	58
69		-	-	2	8	1	6	-	-	-	-	-	-	-	-	-	-	60
72		-	-	-	6	3	1	1	-	-	-	-	-	-	-	-	-	56
75		-	-	-	3	2	5	-	-	-	-	-	-	-	-	-	-	47
78		-	-	-	3	1	3	-	-	-	1	-	-	-	-	-	-	36
81		-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	25
84		-	-	-	-	1	2	-	-	1	-	-	-	-	-	-	-	16
87		-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	16
90		-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	15
93		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	11
Total No. of Ages Read		14	13	118	39	15	21	1	2	2	1	-	1	227	1000			
Serial Numbers		No. of Age Samples																
X	Number of fish measured each month													-	-	1349		
	Mean length of fish (cm) each month													-	-	62.3		
	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													-	-	185-360		
Mesh size (mm)													-	-	130			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	Total
Oct	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	65	58	496	184	65	89	5	12	15	4	-	7	1000

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)													
CATCHES OR LANDINGS		Landings													
COUNTRY		Denmark (G)													
TONNAGE		151-500													
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	10	11	Months Within Quarter		Apr	May	Jun	
45		1	1	1	1	-	-	-	-		4	-	-	5	
48		-	2	1	6	2	-	-	-		11	-	-	13	
51		-	3	2	11	5	-	-	-		21	-	-	26	
54		-	1	3	20	5	1	-	-		30	-	-	58	
57		-	1	-	25	4	-	-	-		30	-	-	118	
60		-	-	2	22	5	1	-	-		30	-	-	174	
63		-	-	-	11	19	-	-	-		30	-	-	199	
66		-	-	-	10	15	5	-	-		30	-	-	180	
69		-	-	-	6	18	6	-	-		30	-	-	110	
72		-	-	-	4	17	5	4	-		30	-	-	67	
75		-	-	-	2	13	7	2	-		24	-	-	29	
78		-	-	-	-	6	5	1	1		13	-	-	15	
81		-	-	-	-	2	2	-	-		4	-	-	5	
84		-	-	-	-	-	-	2	-		2	-	-	2	
Total No. of Ages Read		1	8	9	118	111	32	9	1		289	1001			
Serial Numbers		No. of Age Samples 1													
X		Number of fish measured each month											-	-	856
		Mean length of fish (cm) each month											-	-	64.2
		Mean weight of fish (kg) each month											-	-	2.2
		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 MILE)

Month	4	5	6	7	8	9	10	11	Total
Apr	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-
Jun	1	13	22	453	408	88	15	1	1001

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)									
CATCHES OR LANDINGS		Landings									
COUNTRY		Denmark (G)									
TONNAGE		500-900									
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	Months Within Quarter		Apr	May	Jun
45	1	-	-	-	-	-	1	-	-	2	
48	1	-	-	1	-	-	2	-	-	3	
51	1	-	2	1	-	-	4	-	-	6	
54	1	1	11	3	1	-	17	-	-	26	
57	2	1	18	8	1	-	30	-	-	78	
60	1	2	10	16	1	-	30	-	-	133	
63	-	1	9	18	1	-	29	-	-	187	
66	-	2	4	20	3	1	30	-	-	229	
69	-	1	3	23	2	1	30	-	-	172	
72	-	-	2	18	6	4	30	-	-	78	
75	-	-	-	16	10	1	27	-	-	50	
78	-	-	1	7	4	4	16	-	-	24	
81	-	-	-	3	2	1	6	-	-	9	
84	-	-	-	1	-	1	2	-	-	3	
Total No. of Ages Read		7	8	60	135	31	13	254	1000		
Serial Numbers								No. of Age Samples 1			
X		Number of fish measured each month						-	-	663	
		Mean length of fish (cm) each month						-	-	66.3	
		Mean weight of fish (kg) each month						-	-	2.6	
		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	9	10	Total
Apr	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
Jun	15	40	223	593	92	35	998

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
CATCHES OR LANDINGS		Catches														Months Within Quarter	Apr	May	Jun	
COUNTRY		Germany, Fed. Rep.																		
TONNAGE		>1800																		
STRUCTURES USED IN AGE DETERMINATION		Otoliths																		
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	1609					
																Apr	May	Jun		
24		2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-		
27		2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-		
30		3	1	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1		
33		-	4	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1		
36		2	2	3	-	-	-	-	-	-	-	-	-	-	7	-	-	3		
39		-	1	3	1	-	-	-	-	-	-	-	-	-	5	1	-	5		
42		-	1	11	1	2	-	-	-	-	-	-	-	-	15	3	-	10		
45		-	-	14	3	5	1	-	-	-	-	-	-	-	23	9	-	18		
48		-	1	20	4	21	-	-	-	-	-	-	-	-	46	30	-	26		
51		-	-	13	10	48	14	1	-	-	-	-	-	-	86	57	-	38		
54		-	-	8	3	77	20	1	-	-	-	-	-	-	109	81	-	53		
57		-	-	4	3	88	44	6	2	1	-	-	-	-	148	114	-	75		
60		-	-	1	11	83	82	9	1	-	-	-	-	-	187	158	-	100		
63		-	-	2	7	95	116	8	5	-	-	-	-	-	233	185	-	127		
66		-	-	1	7	56	142	34	3	-	-	-	-	-	243	149	-	144		
69		-	-	-	2	21	119	23	6	-	-	-	-	-	171	88	-	116		
72		-	-	-	1	10	68	28	3	-	-	-	-	-	110	63	-	90		
75		-	-	-	1	7	60	10	6	-	-	-	-	-	84	33	-	64		
78		-	-	-	-	3	36	10	11	-	-	-	-	-	60	17	-	45		
81		-	-	-	-	-	18	5	5	-	-	1	-	-	29	6	-	30		
84		-	-	-	-	-	5	6	6	1	-	-	-	1	19	4	-	21		
87		-	-	-	-	-	-	1	6	2	-	-	-	-	9	1	-	14		
90		-	-	-	-	-	-	-	6	-	-	1	-	-	7	1	-	9		
93		-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	4		
96		-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-	3		
99		-	-	-	-	-	-	-	-	1	-	1	-	-	2	-	-	2		
102		-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	1		
Total No. of Ages Read		9	10	80	54	516	725	142	63	6	-	3	-	1	1609	1000 - 1000				
Serial Numbers		No. of Age Samples													9					
X		Number of fish measured each month													971			8253		
		Mean length of fish (cm) each month													63.7			66.9		
		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													230-360			130-320		
		Mesh size (mm)													130			130		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Apr	-	4	120	89	291	467	23	-	6	-	-	-	-	1000
May	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	2	4	44	26	287	463	101	64	5	-	3	-	1	1000

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)																
CATCHES OR LANDINGS		Landings																
COUNTRY		Germany, Fed. Rep.																
TONNAGE		945																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		Months Within Quarter			Jul	Aug	Sep											
39		1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	
42		-	1	1	-	-	-	-	-	-	-	-	-	2	-	3	6	
45		-	-	1	-	-	-	-	-	-	-	-	-	1	-	3	6	
48		-	1	2	-	2	-	-	-	-	-	-	-	5	-	26	6	
51		-	-	3	1	4	1	-	-	-	-	-	-	9	-	52	29	
54		-	-	1	2	12	5	-	-	-	-	-	-	20	-	108	34	
57		-	-	-	1	20	5	-	-	-	-	-	-	26	-	157	66	
60		-	-	-	2	26	10	1	-	-	-	-	-	39	-	138	143	
63		-	-	-	-	31	17	1	-	-	-	-	-	49	-	166	165	
66		-	-	-	-	12	23	2	1	-	-	-	-	38	-	119	219	
69		-	-	-	-	7	24	5	1	-	-	-	-	37	-	91	146	
72		-	-	-	-	6	22	1	-	-	-	-	-	29	-	60	81	
75		-	-	-	-	1	10	3	2	-	-	-	-	16	-	28	58	
78		-	-	-	-	2	9	1	1	-	-	-	-	13	-	25	19	
81		-	-	-	-	-	1	2	1	-	-	-	-	4	-	10	19	
84		-	-	-	-	1	4	-	1	-	-	-	-	6	-	8	-	
87		-	-	-	-	-	4	-	1	-	-	-	-	5	-	5	-	
90		-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	
93		-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	
96		-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	
99		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
102		-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
Total No. of Ages Read		1	2	8	6	124	136	16	10	-	-	-	-	1	304	X		
Serial Numbers		No. of Age Samples																
X	Number of fish measured each month														-	470	306	
	Mean length of fish (cm) each month														-	63.7	66.2	
	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)														-	130	130		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	29	21	458	432	31	29	-	-	-	-	-	1000
Sep	3	15	25	20	454	409	68	6	-	-	-	-	-	1000

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (3rd QUARTER)

GEAR		Misc. (Commercial)												
CATCHES OR LANDINGS		Landings												
COUNTRY		Denmark (G)												
TONNAGE		<50												
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		Months Within Quarter					
								Jul	Aug	Sep				
51		-	-	2	2	-	-	4	-	-	20			
54		-	-	4	3	-	-	7	-	-	35			
57		-	-	6	4	-	-	10	-	-	50			
60		1	2	15	16	3	1	38	-	-	192			
63		-	1	11	21	1	-	34	-	-	172			
66		-	1	7	22	3	-	33	-	-	167			
69		-	-	3	22	4	1	30	-	-	152			
72		-	1	2	12	4	2	21	-	-	107			
75		-	-	1	7	-	1	9	-	-	45			
78		-	-	-	5	1	2	8	-	-	40			
81		-	-	-	2	-	-	2	-	-	10			
84		-	-	-	-	-	-	-	-	-	-			
87		-	-	-	-	-	-	-	-	-	-			
90		-	-	-	1	-	-	1	-	-	5			
93		-	-	-	-	-	1	1	-	-	5			
Total No. of Ages Read		1	5	51	117	16	8	198	1000					
Serial Numbers		No. of Age Samples 1												
X		Number of fish measured each month										-	-	199
		Mean length of fish (cm) each month										-	-	66.2
		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	5	6	7	8	9	10	Total
Jul	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-
Sep	5	25	258	591	81	40	1000

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (4th QUARTER)

GEAR		Otter Trawl (Commercial)													
CATCHES OR LANDINGS		Landings													
COUNTRY		Germany, Fed. Rep.													
TONNAGE		724													
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	Oct	Nov	Dec
45		-	-	1	-	-	-	-	-	-	1	-	-	-	
48		1	1	3	-	-	-	-	-	-	5	-	-	3	
51		-	-	2	1	6	-	-	-	-	9	-	-	7	
54		-	-	1	-	5	-	-	-	-	6	-	-	12	
57		-	-	1	-	12	4	-	-	-	17	-	-	16	
60		-	-	-	-	9	2	-	-	-	11	-	-	56	
63		-	-	-	1	11	4	-	-	-	16	-	-	27	
66		-	-	-	-	17	9	3	-	-	29	-	-	76	
69		-	-	1	-	7	13	-	-	-	21	-	-	181	
72		-	-	-	-	2	13	3	-	-	18	-	-	157	
75		-	-	-	-	2	21	3	-	-	26	-	-	108	
78		-	-	-	-	1	11	7	-	-	19	-	-	138	
81		-	-	-	-	-	5	-	-	-	5	-	-	136	
84		-	-	-	-	-	2	-	-	-	2	-	-	25	
87		-	-	-	-	-	1	-	2	1	4	-	-	23	
90		-	-	-	-	-	1	-	-	-	1	-	-	25	
93		-	-	-	-	-	-	-	-	-	-	-	-	10	
Total No. of Ages Read		1	1	9	2	72	86	16	2	1	190	1000			
Serial Numbers		No. of Age Samples													
X		Number of fish measured each month											-	-	500
		Mean length of fish (cm) each month											-	-	71.7
		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)											-	-	130

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	Total
Oct	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-
Dec	1	1	24	6	322	524	103	13	6	1000

TABLE 14
(CONT'D)

AGE/LENGTH TABLE - COD - 1F - 1971 (4th QUARTER)

GEAR		Otter Trawl (Research)																
CATCHES OR LANDINGS		Catches																
COUNTRY		Germany, Fed. Rep.																
TONNAGE		>1800																
STRUCTURES USED IN AGE DETERMINATION		Otoliths																
Length Group (3 cm)	Age	1	2	3	4	5	6	7	8	9	10	11	12	13	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
																Months Within Quarter		
														Oct	Nov	Dec		
15		1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	5
18		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21		-	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	10
24		-	-	2	-	-	-	-	-	-	-	-	-	-	2	-	-	10
27		-	-	8	-	-	-	-	-	-	-	-	-	-	8	-	-	39
30		-	1	8	-	-	-	-	-	-	-	-	-	-	9	-	-	44
33		-	-	18	-	-	-	-	-	-	-	-	-	-	18	-	-	89
36		-	-	23	5	-	-	-	-	-	-	-	-	-	28	-	-	144
39		-	-	14	7	-	-	-	-	-	-	-	-	-	21	-	-	114
42		-	-	8	7	-	-	-	-	-	-	-	-	-	15	-	-	79
45		-	-	1	6	2	-	-	-	-	-	-	-	-	9	-	-	44
48		-	-	-	2	8	-	2	1	-	-	-	-	-	13	-	-	64
51		-	-	-	-	5	1	1	-	1	-	-	-	-	8	-	-	39
54		-	-	-	-	1	-	3	1	1	-	-	-	-	6	-	-	30
57		-	-	-	-	-	-	3	-	-	-	-	-	-	3	-	-	15
60		-	-	-	-	1	-	3	1	-	1	-	-	-	6	-	-	30
63		-	-	-	-	-	-	3	2	1	-	-	-	-	6	-	-	30
66		-	-	-	-	-	-	3	3	-	1	-	-	-	7	-	-	35
69		-	-	-	-	-	-	5	2	-	-	-	-	-	7	-	-	40
72		-	-	-	-	-	-	1	5	2	1	-	-	-	9	-	-	44
75		-	-	-	-	-	-	-	4	1	-	-	-	-	5	-	-	25
78		-	-	-	-	-	-	1	4	-	-	1	-	-	6	-	-	30
81		-	-	-	-	-	-	-	-	2	1	-	-	-	3	-	-	20
84		-	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	10
87		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90		-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	5
93		-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	5
Total No. of Ages Read		1	2	83	27	17	1	25	23	8	8	1	-	-	196	1000		
Serial Numbers		No. of Age Samples													1			
X		Number of fish measured each month													-	-	201	
		Mean length of fish (cm) each month													-	-	49.3	
		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)													-	-	50	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
Oct	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dec	5	9	424	140	83	5	129	115	43	42	-	-	5	1000

TABLE 15

AGE/LENGTH TABLE - COD - SOUTHEAST GREENLAND - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)										
CATCHES OR LANDINGS		Landings										
COUNTRY		Germany, Fed. Rep.										
TONNAGE		945										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Length Group (3 cm)	Age							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		6	7	8	9	10	11		Months Within Quarter			
									Jan	Feb	Mar	
54	-	1	-	-	-	-	1	4	-	-		
57	-	-	1	-	-	-	1	4	-	4		
60	-	2	1	1	-	-	4	19	-	15		
63	-	1	5	4	1	-	11	20	-	64		
66	-	5	15	4	-	-	24	65	-	112		
69	1	6	16	4	6	-	33	91	-	124		
72	-	1	20	11	4	-	36	116	-	180		
75	-	2	30	11	7	-	50	144	-	183		
78	-	-	18	13	11	-	42	135	-	132		
81	-	3	25	14	13	1	56	162	-	89		
84	-	-	15	6	15	2	38	114	-	49		
87	-	-	3	5	13	2	23	58	-	27		
90	-	-	-	-	7	1	8	40	-	4		
93	-	-	-	-	4	-	4	18	-	4		
96	-	-	-	-	-	-	-	4	-	7		
99	-	-	-	-	1	-	1	-	-	3		
102	-	-	-	-	1	1	2	2	-	3		
105	-	-	-	-	-	-	-	2	-	-		
108	-	-	-	-	-	-	-	2	-	-		
Total No. of Ages Read		1	21	149	73	83	7	334				
Serial Numbers								No. of Age Samples	2			
X	Number of fish measured each month							348	-	397		
	Mean length of fish (cm) each month							78.6	-	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							-	-	-		
	Mesh size (mm)							130	-	130		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	6	7	8	9	10	11	Total
Jan	-	89	360	221	311	19	1000
Feb	-	-	-	-	-	-	-
Mar	7	53	573	217	141	9	1000

TABLE 15
(CONT'D)

AGE/LENGTH TABLE - COD - SOUTHEAST GREENLAND - 1971 (4th QUARTER)

GEAR		Otter Trawl (Commercial)												
CATCHES OR LANDINGS		Landings												
COUNTRY		Germany, Fed. Rep.												
TONNAGE		500-900												
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	Months Within Quarter					
										Oct	Nov	Dec		
42	1	-	-	-	-	-	-	-	1	-	-	-		
45	-	2	-	-	-	-	-	-	2	-	-	1		
48	-	3	2	-	-	-	-	-	5	-	-	2		
51	-	-	4	-	2	-	-	-	6	-	-	6		
54	-	1	6	-	6	2	-	-	15	-	-	31		
57	-	-	7	-	6	1	-	-	14	-	-	31		
60	-	-	3	1	6	5	-	-	15	-	-	46		
63	-	-	1	-	14	4	-	-	19	-	-	82		
66	-	-	-	-	4	4	-	-	8	-	-	75		
69	-	-	-	-	6	10	2	-	18	-	-	127		
72	-	-	-	-	6	10	1	-	17	-	-	153		
75	-	-	-	1	4	17	-	-	22	-	-	135		
78	-	-	-	-	3	18	2	1	24	-	-	132		
81	-	-	-	-	-	11	2	1	14	-	-	81		
84	-	-	-	-	-	8	5	4	17	-	-	51		
87	-	-	-	-	-	5	4	-	9	-	-	28		
90	-	-	-	-	-	2	1	-	3	-	-	18		
93	-	-	-	-	-	-	1	-	1	-	-	1		
Total No. of Ages Read		1	6	23	2	57	97	18	6	210			1000	
Serial Numbers		No. of Age Samples 1												
X	Number of fish measured each month											-	-	458
	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)											-	-	130	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	Total
Oct	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-
Dec	-	4	47	9	281	557	79	23	1000

TABLE 16

AGE/LENGTH TABLE - COD - EAST GREENLAND - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Landings													Months Within Quarter	Jan	Feb
COUNTRY		Germany, Fed. Rep.															
TONNAGE		900-1800															
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	PER MILLE			
														Jan	Feb	Mar	
48	-	1	-	-	-	-	-	-	-	-	-	-	1	-	2	-	
51	2	-	2	1	-	-	-	-	-	-	-	-	5	-	8	2	
54	2	6	1	3	-	-	-	-	-	-	-	-	12	-	13	3	
57	5	7	1	3	2	-	-	-	-	-	-	-	18	-	23	9	
60	-	8	2	7	6	1	-	1	-	-	-	-	25	-	27	20	
63	-	5	2	12	13	3	2	-	-	-	-	-	37	-	44	31	
66	-	3	1	14	31	10	4	-	-	-	-	-	63	-	55	62	
69	-	-	2	16	45	21	5	1	-	-	-	-	90	-	103	105	
72	-	-	-	3	43	25	17	-	-	-	-	-	88	-	118	158	
75	-	-	1	7	44	36	13	1	-	-	-	-	102	-	120	160	
78	-	-	-	4	38	38	20	1	-	-	-	-	101	-	120	148	
81	-	-	-	2	39	14	34	1	-	-	-	1	91	-	118	112	
84	-	-	-	-	24	29	40	-	1	-	-	-	94	-	102	75	
87	-	-	-	-	13	25	27	1	-	1	-	-	67	-	64	59	
90	-	-	-	-	13	11	23	1	-	-	-	-	48	-	43	26	
93	-	-	-	-	3	3	17	1	-	-	-	-	24	-	20	16	
96	-	-	-	-	4	2	7	3	-	-	-	-	16	-	16	6	
99	-	-	-	-	-	2	2	-	-	-	-	-	4	-	3	3	
102	-	-	-	-	-	1	1	2	-	-	-	-	4	-	1	3	
105	-	-	-	-	-	-	1	-	-	-	1	-	2	-	-	1	
108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total No. of Ages Read		9	30	12	72	318	221	213	13	1	2	1	892	X			
Serial Numbers													No. of Age Samples 5				
X		Number of fish measured each month											-	1272	845		
		Mean length of fish (cm) each month											-	77.5	79.3		
		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	130		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-
Feb	12	46	9	110	354	202	250	12	2	1	2	1000
Mar	4	8	17	43	411	328	176	12	-	1	-	1000

TABLE 17
(CONT'D)

AGE/LENGTH TABLE - COD - 2J - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)																				
CATCHES OR LANDINGS		Catches																				
COUNTRY		Portugal																				
TONNAGE		2302																				
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	18	19	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		Months Within Quarter			Apr	May	Jun															
33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	6
36	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	45	11
39	-	11	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	7	99	48
42	1	28	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	56	132	93
45	-	34	46	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86	83	142	135
48	-	10	69	21	1	-	-	-	-	-	-	-	-	-	-	-	-	-	101	102	144	169
51	-	2	51	30	8	-	-	-	-	-	-	-	-	-	-	-	-	-	91	123	135	172
54	-	1	22	40	16	2	-	-	-	-	-	-	-	-	-	-	-	-	81	119	90	109
57	-	-	23	43	18	-	-	-	-	-	-	-	-	-	-	-	-	-	84	157	69	86
60	-	-	2	34	16	10	-	-	-	1	-	-	-	-	-	-	-	-	63	104	50	60
63	-	-	3	18	19	7	2	1	1	-	-	1	-	-	-	-	-	-	52	105	25	39
66	-	-	1	4	9	11	4	2	2	2	-	-	-	-	-	-	-	-	35	63	32	23
69	-	-	-	3	7	2	2	2	-	2	-	-	-	-	-	-	-	-	16	31	3	20
72	-	-	-	-	3	5	2	1	1	-	2	-	-	-	-	-	-	-	14	23	10	11
75	-	-	-	-	1	1	1	-	-	-	2	1	-	-	-	-	1	-	7	9	-	8
78	-	-	-	-	-	-	1	1	1	-	1	-	-	-	-	-	-	-	4	9	2	5
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2
84	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	2
87	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-
90	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	2	4	-	2
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
-																						
120	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-
																				1001	1002	1001
Total No. of Ages Read		2	86	235	201	99	38	13	6	7	4	6	2	-	-	-	1	700	X			
Serial Numbers		No. of Age Samples																	9			
X		Number of fish measured each month																	975	599	1325	
		Mean length of fish (cm) each month																	56.9	49.6	52.3	
		Mean weight of fish (kg) each month																				
		Total weight caught or landed (tons) each month																	6808	836	3975	
		Estimated number caught or landed (whole numbers) each month																				
		Range of depths (m) each month																	280-400	260-290	250-320	
		Mesh size (mm)																	114	114	114	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
Apr	1	88	289	314	173	67	24	11	13	7	9	3	-	-	-	1	1000
May	48	225	366	213	79	28	7	4	4	3	2	1	-	-	-	-	980
Jun	13	167	384	256	106	32	12	4	7	3	5	2	-	-	-	1	992

TABLE 19

AGE/LENGTH TABLE - COD - 3L - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES OR LANDINGS		Catches													Months Within Quarter		
COUNTRY		Spain															
TONNAGE		901-1800															
STRUCTURES USED IN AGE DETERMINATION		Otoliths															
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	Jan	Feb	Mar	
		24	1	-	-	-	-	-	-	-	-	-	-				-
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7		
30	1	2	2	-	-	-	-	-	-	-	-	-	-	-	33		
33	1	1	1	-	-	-	-	-	-	-	-	-	-	-	46		
36	-	4	2	-	-	-	-	-	-	-	-	-	-	-	75		
39	-	-	-	4	2	-	-	-	-	-	-	-	-	-	96		
42	-	1	4	2	-	-	-	-	-	-	-	-	-	-	95		
45	-	1	5	3	1	-	-	-	-	-	-	-	-	-	116		
48	-	1	3	4	1	-	-	-	-	-	-	-	-	-	99		
51	-	-	3	5	1	1	-	-	-	-	-	-	-	-	78		
54	-	-	3	5	-	-	-	-	-	-	-	-	-	-	76		
57	-	-	1	4	-	-	-	-	-	-	-	-	-	-	82		
60	-	-	1	3	-	1	-	-	-	-	-	-	-	-	52		
63	-	-	-	-	3	1	-	1	-	-	-	-	-	-	49		
66	-	-	-	2	3	-	-	-	-	-	-	-	-	-	34		
69	-	-	-	1	1	1	1	-	-	-	-	-	-	-	27		
72	-	-	-	-	2	-	-	-	-	-	-	-	-	-	11		
75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3		
84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
87	-	-	-	-	-	-	1	-	-	-	-	-	-	-	5		
90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
93	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4		
99	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
105	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-		
Total No. of Ages Read		3	10	25	33	14	4	2	1	-	-	-	1	93	999		
Serial Numbers		No. of Age Samples															
X		Number of fish measured each month												-	-	2145	
		Mean length of fish (cm) each month												-	-	49.7	
		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												-	-	190-220	
Mesh size (mm)														-	-	-	

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	27	115	278	374	130	35	12	10	-	-	-	-	981

TABLE 19
(CONT'D)

AGE/LENGTH TABLE - COD - 3L - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)													
CATCHES OR LANDINGS		Catches													
COUNTRY		Portugal													
TONNAGE		2302													
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	
24	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
30	1	1	-	-	-	-	-	-	-	-	-	8	-	-	
33	-	-	-	-	-	-	-	-	-	-	-	17	-	3	
36	-	3	1	-	-	-	-	-	-	-	-	46	6	14	
39	1	12	6	3	-	-	-	-	-	-	-	92	27	43	
42	-	15	45	2	-	-	-	-	-	-	-	164	101	106	
45	-	7	49	24	-	-	-	-	-	-	-	170	133	146	
48	-	4	49	47	6	-	-	-	-	-	-	130	180	135	
51	-	1	42	44	6	-	-	-	-	-	-	113	180	135	
54	-	-	26	46	10	1	-	-	-	-	-	80	127	116	
57	-	-	5	54	16	1	-	-	-	-	-	64	86	82	
60	-	-	1	12	26	3	-	-	-	-	-	29	53	69	
63	-	-	-	7	24	5	-	-	-	-	-	25	46	49	
66	-	-	-	4	17	3	-	-	-	-	-	19	27	28	
69	-	-	-	1	13	8	-	-	-	-	-	15	7	22	
72	-	-	-	-	7	6	1	-	-	-	-	8	13	17	
75	-	-	-	-	4	7	1	1	-	1	-	8	7	11	
78	-	-	-	-	3	5	5	-	-	-	-	4	-	9	
81	-	-	-	-	-	1	1	1	-	-	-	2	7	4	
84	-	-	-	-	-	1	-	-	1	-	-	1	-	2	
87	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
90	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
93	-	-	-	-	-	-	-	1	-	-	-	-	-	1	
96	-	-	-	-	-	-	-	-	1	-	-	-	-	1	
108	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
111	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
114	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
117	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
120	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total No. of Ages Read		2	43	224	244	132	41	8	3	2	1	700			
Serial Numbers		No. of Age Samples										10			
X	Number of fish measured each month											1450	150	1650	
	Mean length of fish (cm) each month											49.1	52.4	54.7	
	Mean weight of fish (kg) each month											-	-	-	
	Total weight caught or landed (tons) each month											6797	5992	7327	
	Estimated number caught or landed (whole numbers) each month											-	-	-	
	Range of depths (m) each month											200-265	250	190-240	
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	8	149	401	287	102	26	4	1	1	1	980
May	1	64	378	372	150	30	4	3	-	1	1000
Jun	2	79	348	334	170	44	7	3	2	1	990

TABLE 20

AGE/LENGTH TABLE - COD - 3Ps - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)																
CATCHES OR LANDINGS		Catches																
COUNTRY		Spain																
TONNAGE		901-1800																
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	LENGTH COMPOSITION PER MILLE				
		Months Within Quarter			Jan	Feb	Mar											
24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26	2
27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	19
30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	35
33	2	9	3	-	-	-	-	-	-	-	-	-	-	-	-	14	101	58
36	-	1	7	-	-	-	-	-	-	-	-	-	-	-	-	8	142	127
39	-	-	4	3	1	-	-	-	-	-	-	-	-	-	-	8	141	127
42	-	1	-	4	2	-	-	-	-	-	-	-	-	-	-	7	134	164
45	-	1	3	3	5	1	-	-	-	-	-	-	-	-	-	13	87	136
48	-	-	2	4	4	4	-	-	-	-	-	-	-	-	-	10	76	113
51	-	-	-	8	2	-	-	-	-	-	-	-	-	-	-	10	54	87
54	-	1	1	3	6	1	-	-	-	-	-	-	-	-	-	12	53	61
57	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	4	38	41
60	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	21	22
63	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	3	12	2
66	-	-	-	1	-	-	1	-	-	-	-	1	-	-	-	3	7	5
69	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Total No. of Ages Read		2	13	21	27	25	3	1	-	-	1	1	94					
Serial Numbers		No. of Age Samples																
X		Number of fish measured each month											-	1513	946			
		Mean length of fish (cm) each month											-	42.1	44.3			
		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)											-	-	-			

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-
Feb	14	113	266	248	196	21	2	-	-	4	2	866
Mar	8	92	256	315	242	26	2	-	-	1	2	944

TABLE 21

AGE/LENGTH TABLE - COD - 4Vs - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)																	
CATCHES OR LANDINGS		Catches																	
COUNTRY		Spain																	
TONNAGE		901-1800																	
STRUCTURES USED IN AGE DETERMINATION		Otoliths																	
Length Group (3 cm)	Age	3	4	5	6	7	8	9	10	11	12	13	14	15	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
																	Months Within Quarter		
															Jan	Feb	Mar		
24		2	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	10	
27		9	5	-	-	-	-	-	-	-	-	-	-	-	14	-	-	43	
30		3	6	1	-	-	-	-	-	-	-	-	-	-	10	-	-	55	
33		1	8	2	-	-	-	-	-	-	-	-	-	-	11	-	-	66	
36		2	2	4	2	-	-	-	-	-	-	-	-	-	10	-	-	108	
39		-	3	7	1	-	-	-	-	-	-	-	-	-	11	-	-	142	
42		-	1	6	9	1	-	-	-	-	-	-	-	-	17	-	-	140	
45		-	-	1	7	5	-	-	-	-	-	-	-	-	13	-	-	132	
48		-	-	3	5	2	1	-	-	-	-	-	-	-	11	-	-	111	
51		-	-	-	7	3	1	-	-	-	-	-	-	-	11	-	-	92	
54		-	-	-	7	5	-	-	-	-	-	-	-	-	12	-	-	44	
57		-	-	-	4	6	2	-	-	-	-	-	-	-	12	-	-	20	
60		-	-	-	2	2	2	-	-	-	-	-	-	-	6	-	-	14	
63		-	-	-	1	4	-	1	-	-	-	-	-	1	7	-	-	12	
66		-	-	-	-	-	3	-	-	-	-	-	-	-	3	-	-	6	
69		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
72		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
75		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
															-	-	1000		
Total No. of Ages Read		17	26	24	45	28	9	1	-	-	-	-	-	1	151	X			
Serial Numbers		No. of Age Samples																	
X		Number of fish measured each month															-	-	2587
		Mean length of fish (cm) each month															-	-	43.3
		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															-	-	110-130
		Mesh size (mm)															-	-	-

AGE COMPOSITIONS OF LANDINGS (PER MILLE)

Month	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Jan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mar	78	168	241	327	144	32	2	2	-	-	-	-	-	994

TABLE 22 LENGTH FREQUENCIES - HADDOCK - 3Ps, 4V - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	3Ps		4V
	Otter Trawl Research		Otter Trawl (Stern) Commercial
CATCHES/LANDINGS	Catches		Catches
MONTH	Jul	Nov	Sep
COUNTRY	France (SP)		Japan
TONNAGE	850-1500		>1800
18	-	5	-
20	-	15	-
22	-	65	-
24	-	30	-
26	-	-	-
28	-	-	-
30	-	15	-
32	10	5	-
34	20	-	-
36	10	5	-
38	-	10	-
40	10	-	-
42	-	5	-
44	20	-	-
46	30	30	-
48	30	30	-
50	49	75	139
52	89	90	9
54	139	85	28
56	89	90	120
58	129	120	19
60	89	70	83
62	148	80	65
64	69	30	46
66	49	65	28
68	20	30	37
70	-	40	139
72	-	5	204
74	-	-	83
76	-	-	-
78	-	5	-
Total ‰	1000	1000	1000
Serial Numbers	-	-	-
Number of Samples	3	4	1
Number of Fish Measured	101	217	108
Mean Length (cm)	56.50	53.23	64.58
Mean Weight (kg)	-	-	-
Total Weight Landed (tons)	-	-	-
Estimated Number Landed	-	-	-
Mesh(mm) or Hook(no) Size ¹	50	50	-
Range of Depths (fm)	-	-	100

¹ Stretch mesh

TABLE 23 LENGTH FREQUENCIES - HADDOCK - 4Vn, 4Vs - 1971

(FREQUENCIES IN % - 2 CM GROUPS)

DIVISION	4Vn			4Vs			
	Longline			Otter Trawl	Otter Trawl (Side)		
GEAR	Commercial			Research	Commercial		
CATCHES/LANDINGS	Landings			Catches	Landings		
MONTH	Oct	Nov	Dec	Nov	Feb	Mar	Apr
COUNTRY	Can(M)			Fr(SP)	Can(M)		
TONNAGE	0-25			850-1500	151-500		
24	-	-	-	5	-	-	-
26	-	-	-	5	-	-	-
36	-	-	-	-	7	10	-
38	-	-	-	-	11	5	6
40	6	-	-	15	40	5	18
42	-	5	-	35	54	55	18
44	6	15	5	20	36	65	86
46	18	10	25	15	93	110	112
48	18	50	80	45	135	130	173
50	54	50	65	45	87	150	129
52	36	85	50	55	93	125	169
54	66	120	135	50	88	115	97
56	84	140	160	70	64	85	55
58	145	120	115	140	70	70	37
60	78	140	130	140	47	45	27
62	78	95	70	130	82	5	21
64	108	75	55	100	29	-	19
66	102	40	65	55	18	10	12
68	48	20	25	30	12	-	12
70	54	10	5	30	12	-	-
72	30	5	5	5	12	5	-
74	12	5	-	10	6	-	4
76	48	10	5	-	6	10	-
78	-	-	5	-	-	-	2
80	-	-	-	-	-	-	-
82	6	-	-	-	-	-	2
84	-	5	-	-	-	-	-
Total %	997	1000	1000	1000	1002	1000	999
Serial Numbers	145	146	175	-	13	14	73-74
Number of Samples	1	1	1	2	1	1	2
Number of Fish Measured	166	200	200	355	205	200	448
Mean Length (cm)	61.50	58.10	57.60	58.06	53.20	51.50	51.60
Mean Weight (kg)	2.57	2.13	2.07	-	1.44	1.28	1.28
Total Weight Landed (tons)	22	9	2	-	55	126	133
Estimated Number Landed ¹	9	4	1	-	38	98	104
Mesh(mm) or Hook(no) Size	-	-	-	50	114	114	114
Range of Depths (fm)	50	50	53	-	53	100	82-85

¹ Numbers in thousands

TABLE 24 LENGTH FREQUENCIES - HADDOCK - 4W - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)					OT (Side)	
	Commercial						
CATCHES/LANDINGS	Landings						
MONTH	Jan	Feb	Mar	Dec	Apr	Apr	
COUNTRY	Can(M)						
TONNAGE	501-900				51-150	51-150	
32	-	-	-	-	-	-	21
34	-	-	-	-	-	-	21
36	2	8	5	40	18	62	62
38	2	5	17	55	79	56	56
40	6	14	31	67	67	58	58
42	15	55	92	62	85	44	44
44	22	49	87	47	36	74	74
46	52	110	113	52	91	77	77
48	49	80	107	135	139	74	74
50	94	69	118	79	109	72	72
52	80	121	100	119	85	104	104
54	101	99	79	79	79	75	75
56	179	94	87	74	79	38	38
58	109	103	42	48	18	91	91
60	124	54	30	42	18	38	38
62	62	45	40	26	24	24	24
64	39	49	25	11	12	34	34
66	39	22	15	16	12	10	10
68	-	9	8	21	12	14	14
70	8	13	3	5	24	5	5
72	8	-	-	5	12	5	5
74	-	-	1	-	-	-	-
76	8	-	1	11	-	5	5
78	-	-	-	-	-	-	-
80	-	-	-	5	-	-	-
Total ‰	999	999	1001	999	999	1002	
Serial Numbers	2	4	5,7,61-62	168	55	52	
Number of Samples	1	1	4	1	1	1	
Number of Fish Measured	233	276	888	267	165	264	
Mean Length (cm)	56.00	53.40	51.00	50.90	50.00	49.80	
Mean Weight (kg)	1.91	1.57	1.37	1.41	1.32	1.33	
Total Weight Landed (tons)	214	419	2175	82	20	63	
Estimated Number Landed ¹	112	267	1588	58	15	47	
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	
Range of Depths (fm)	58	90	58-74	39	75	64	

¹ Numbers in thousands

TABLE 24 LENGTH FREQUENCIES - HADDOCK - 4W - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Side)				Longline	
	Commercial				Commercial	
CATCHES/LANDINGS	Landings				Landings	
MONTH	Jan	Feb	Mar	Apr	Sep	Oct
COUNTRY	Can(M)				Can(M)	
TONNAGE	151-500				26-50	
30	-	-	2	-	-	-
32	-	-	2	3	-	-
34	-	4	10	7	-	5
36	3	18	31	5	-	-
38	9	31	63	30	-	25
40	27	24	79	44	5	10
42	53	66	65	72	25	10
44	74	73	92	65	25	20
46	75	66	91	67	40	20
48	48	68	90	88	55	40
50	55	44	83	94	110	45
52	79	94	98	90	80	90
54	76	118	76	91	140	80
56	111	101	66	86	120	110
58	97	83	54	84	100	115
60	69	92	42	54	105	125
62	49	61	23	59	55	110
64	35	26	15	17	45	85
66	56	4	6	20	50	45
68	21	9	5	12	25	45
70	28	9	4	5	10	5
72	35	4	1	-	10	15
74	-	-	-	-	-	-
76	-	4	1	5	-	-
Total ‰	1000	999	999	998	1000	1000
Serial Numbers	1	3	6,8-12	18,53	124	163
Number of Samples	1	1	6	2	1	1
Number of Fish Measured	202	292	1696	462	200	200
Mean Length (cm)	55.20	52.80	49.20	52.00	56.10	57.50
Mean Weight (kg)	1.74	1.53	1.25	1.47	1.79	1.93
Total Weight Landed (tons)	124	208	1470	743	17	15
Estimated Number Landed ¹	71	136	1176	505	9	8
Mesh(mm) or Hook(no) Size	114	114	114	114	-	-
Range of Depths (fm)	56	68	50-73	50-65	60	50

¹ Numbers in thousands

TABLE 25 LENGTH FREQUENCIES - HADDOCK - 4X (SOUTH) - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)					
	Commercial					
CATCHES/LANDINGS	Landings					
MONTH	Jan	Apr	Jun	Aug	Jun	Aug
COUNTRY	Can(M)					
TONNAGE	501-900		151-500		26-50	
28	-	-	-	-	-	6
30	-	-	-	-	22	-
32	1	-	-	-	17	6
34	2	-	-	-	39	6
36	36	13	-	-	28	28
38	95	26	-	-	11	52
40	123	49	-	-	67	23
42	77	79	-	-	45	57
44	77	49	8	10	89	51
46	43	84	25	20	73	52
48	43	97	34	70	67	69
50	44	92	85	10	84	52
52	41	175	102	140	101	41
54	51	105	169	120	78	41
56	57	79	153	130	140	86
58	52	74	136	180	89	47
60	64	35	93	60	28	41
62	81	31	68	90	11	101
64	53	9	25	70	6	93
66	28	-	68	-	-	64
68	22	4	17	50	6	29
70	8	-	8	10	-	18
72	2	-	8	30	-	12
74	-	-	-	10	-	6
76	-	-	-	-	-	-
78	2	-	-	-	-	18
Total ‰	1002	1001	999	1000	1001	999
Serial Numbers	-	17	86	139	75	-
Number of Samples	4	1	1	1	1	2
Number of Fish Measured	1118	228	118	100	179	172
Mean Length (cm)	50.70	50.80	57.00	57.90	49.30	54.70
Mean Weight (kg)	1.51	1.42	1.99	2.10	1.33	1.90
Total Weight Landed (tons)	461	299	342	6	39	125
Estimated Number Landed ¹	305	211	172	3	29	66
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114
Range of Depths (fm)	50	45	50	95	80	25-58

¹ Numbers in thousands

TABLE 25 LENGTH FREQUENCIES - HADDOCK - 4X (SOUTH) - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Side)						
	Commercial Landings						
CATCHES/LANDINGS							
MONTH	Jan	Feb	Apr	May	Jun	Sep	
COUNTRY	Can(M)						
TONNAGE	151-500						
30	-	-	3	-	-	-	-
32	9	-	3	-	-	-	-
34	13	2	3	5	7	-	-
36	47	2	16	19	10	7	-
38	54	22	41	47	21	13	7
40	38	17	47	57	43	26	13
42	42	29	81	85	50	13	46
44	42	53	55	57	57	46	73
46	59	34	76	66	47	66	66
48	66	89	77	96	116	139	139
50	102	103	79	109	117	139	139
52	70	144	105	126	129	119	132
54	124	127	105	72	122	132	86
56	96	106	98	81	93	79	33
58	70	91	66	54	63	13	7
60	66	67	49	41	70	7	-
62	59	43	42	50	32	-	-
64	26	36	23	23	21	-	-
66	9	19	11	5	3	-	-
68	7	5	14	5	-	-	-
70	2	5	3	-	-	-	-
72	-	2	-	-	-	-	-
74	-	5	3	-	-	-	-
76	-	-	-	-	-	-	-
78	-	-	2	-	-	-	-
80	-	-	-	5	-	-	-
Total ‰	1001	1001	1002	1003	1001	998	
Serial Numbers	15,16	25,27,28	19,72	64	87,88	129	
Number of Samples	2	3	2	1	2	1	
Number of Fish Measured	485	417	554	218	319	151	
Mean Length (cm)	51.30	53.60	51.40	50.70	51.60	53.00	
Mean Weight (kg)	1.51	1.68	1.51	1.43	1.50	1.60	
Total Weight Landed (tons)	329	947	395	995	320	30	
Estimated Number Landed ¹	218	564	262	696	213	19	
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	
Range of Depths (fm)	48-68	51-68	50-80	80	69-71	68	

¹ Numbers in thousands

TABLE 25 LENGTH FREQUENCIES - HADDOCK - 4X (SOUTH), 4X (NORTH) - 1971 (FREQUENCIES IN ‰ - 2 CM GROUPS)
(CONT'D)

DIVISION	4X(SOUTH)					4X (NORTH)
	Otter Trawl (Side)			Longline		OT (Stern)
GEAR	Commercial					Commercial
CATCHES/LANDINGS	Landings					Landings
MONTH	Oct	Dec	Feb	Sep	Oct	Sep
COUNTRY	Can(M)					Can(M)
TONNAGE	151-500		51-150	51-150		0-50
22	-	-	1	-	-	-
24	-	-	-	-	-	-
26	-	-	5	-	-	-
28	-	-	-	-	-	-
30	-	3	4	-	-	7
32	-	10	10	-	-	71
34	18	44	22	-	-	269
36	28	61	62	-	3	291
38	9	68	56	-	-	183
40	9	57	39	-	-	71
42	28	40	46	-	7	41
44	55	29	62	-	28	15
46	83	49	92	7	28	7
48	119	52	113	14	38	7
50	73	50	104	49	48	11
52	101	78	90	69	65	4
54	165	58	103	118	121	4
56	64	74	74	174	171	4
58	55	72	66	118	149	-
60	92	70	26	194	133	11
62	92	59	17	90	98	-
64	9	50	-	63	51	-
66	-	26	9	69	21	4
68	-	22	-	14	27	-
70	-	18	-	14	4	-
72	-	3	-	7	7	-
74	-	2	-	-	-	-
76	-	4	-	-	-	-
Total ‰	1000	999	1001	1000	999	1000
Serial Numbers	137	-	-	130	-	128
Number of Samples	1	4	2	1	2	1
Number of Fish Measured	109	938	492	144	292	268
Mean Length (cm)	52.30	51.40	48.60	58.70	57.20	37.60
Mean Weight (kg)	1.56	1.59	1.27	2.17	2.01	0.56
Total Weight Landed (tons)	90	189	125	63	56	166
Estimated Number Landed	58	119	98	29	28	296
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114
Range of Depths (fm)	73	65-100	57-62	56	53-54	35

¹ Numbers in thousands

TABLE 26 LENGTH FREQUENCIES - HADDOCK - 5Y, 5Ze - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	5Y		5Ze	
	Otter Trawl (Side)		Otter Trawl (Stern)	
GEAR	Commercial		Commercial	
CATCHES/LANDINGS	Landings		Catches	
MONTH	Nov	May	Aug	Sep
COUNTRY	Can(M)	Can(M)	Japan	
TONNAGE	151-500	501-900	>1800	
32	1	-	-	-
34	1	-	-	-
36	2	2	-	-
38	2	27	-	-
40	4	60	78	-
42	6	133	59	-
44	20	38	-	-
46	31	31	59	-
48	37	29	20	-
50	51	16	78	102
52	88	91	98	122
54	81	70	59	102
56	147	56	118	122
58	88	119	98	20
60	140	84	98	20
62	88	77	157	133
64	81	77	78	133
66	74	28	-	245
68	29	42	-	-
70	22	7	-	-
72	-	7	-	-
74	-	-	-	-
76	-	7	-	-
78	-	-	-	-
80	7	-	-	-
Total ‰	1000	1001	1000	999
Serial Numbers	164	63	-	-
Number of Samples	1	1	2	1
Number of Fish Measured	229	245	51	98
Mean Length (cm)	58.00	54.30	55.36	60.19
Mean Weight (kg)	2.13	1.81	-	-
Total Weight Landed (tons)	27	267	1	10
Estimated Number Landed ¹	13	148	-	-
Mesh(mm) or Hook(no) Size	114	114	-	-
Range of Depths (fm)	78	48	115	30

¹ Numbers in thousands

TABLE 27

AGE/LENGTH TABLE - HADDOCK - 5Y - 1971 (4th QUARTER)

GEAR		Otter Trawl (Commercial)															
CATCHES OR LANDINGS		Landings															
COUNTRY		U.S.A.															
TONNAGE		0-310															
STRUCTURES USED IN AGE DETERMINATION		Scales															
Length Group (2 cm)	Age	2	3	4	5	6	7	8	9	10	11	12	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		Months Within Quarter			Oct	Nov	Dec										
40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
42	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
46	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
48	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
50	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35
52	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24
54	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	14
56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
58	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
60	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	26
62	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
64	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	87
66	-	-	-	-	1	-	3	1	-	-	-	-	-	-	-	-	104
68	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	173
70	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	121
72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61
74	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	78
76	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	95
78	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	43
80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26
82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Total No. of Ages Read		3	10	1	2	2	1	7	3	2	1	1	33	1000			
Serial Numbers		No. of Age Samples											2				
X		Number of fish measured each month											-	-	183		
		Mean length of fish (cm) each month											-	-	67.60		
		Mean weight of fish (kg) each month											-	-	3.43		
		Total weight caught or landed (tons) each month											-	-	64		
		Estimated number caught or landed (whole numbers) each month											1	-	186		
		Range of depths (m) each month											-	-	100-146		
		Mesh size (mm)											-	-	114		

AGE COMPOSITIONS OF LANDINGS (PER MILLE)												
Month	2	3	4	5	6	7	8	9	10	11	12	Total
Oct	-	-	-	-	-	-	-	-	-	-	-	-
Nov	-	-	-	-	-	-	-	-	-	-	-	-
Dec	14	76	13	109	63	73	297	95	106	121	-	1000

¹ Numbers in 100's

TABLE 28

AGE/LENGTH TABLE - HADDOCK - 52e - 1971 (1st QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		Landings														
COUNTRY		U.S.A.														
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	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
														Months Within Quarter		
													Jan	Feb	Mar	
34		2	-	-	-	-	-	-	-	-	-	2	6	-	-	
36		5	-	-	-	-	-	-	-	-	-	5	27	2	-	
38		7	4	-	-	-	-	-	-	-	-	11	41	12	2	
40		11	3	-	-	-	-	-	-	-	-	14	74	23	7	
42		11	5	1	-	-	-	-	-	-	-	17	88	19	7	
44		3	3	1	-	-	-	-	-	-	-	7	50	11	14	
46		3	4	-	1	-	3	-	-	-	-	11	9	8	9	
48		1	1	1	-	2	-	-	-	-	-	5	-	11	8	
50		-	1	4	10	1	4	5	1	-	-	26	6	20	12	
52		-	-	2	9	3	2	4	2	-	-	22	17	33	19	
54		-	2	1	8	2	3	11	1	-	-	28	-	62	20	
56		-	-	-	5	-	3	10	-	-	-	18	-	71	65	
58		-	-	-	1	3	-	8	2	-	-	14	15	85	60	
60		-	-	-	4	2	-	15	5	-	-	26	73	91	69	
62		-	-	-	1	2	1	16	2	-	-	22	29	92	122	
64		-	-	-	3	2	2	23	5	-	1	36	131	110	116	
66		-	-	-	-	1	1	22	5	1	1	31	174	101	89	
68		-	-	-	-	-	3	11	3	1	1	19	44	75	110	
70		-	-	-	-	-	1	4	5	10	2	22	73	55	74	
72		-	-	-	-	-	-	5	3	1	1	14	29	55	94	
74		-	-	-	-	-	-	2	2	1	-	7	73	38	39	
76		-	-	-	-	-	-	-	1	1	-	5	15	8	28	
78		-	-	-	-	-	-	-	3	-	-	4	15	10	18	
80		-	-	-	-	-	-	-	-	-	-	1	-	2	11	
82		-	-	-	-	-	-	-	-	-	-	-	-	2	7	
84		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
86		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88		-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90		-	-	-	-	-	-	-	-	-	-	-	11	4	-	
Total No. of Ages Read		43	23	10	42	18	23	136	40	15	5	12	367	1000 1000 1000		
Serial Numbers		No. of Age Samples											21			
X		Number of fish measured each month											151	710	1011	
		Mean length of fish (cm) each month											58.26	61.31	64.63	
		Mean weight of fish (kg) each month											2.45	2.48	2.74	
		Total weight caught or landed (tons) each month											306	477	641	
		Estimated number caught or landed (whole numbers) each month											1247	1928	2345	
		Range of depths (m) each month											33-219	53-165	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
Jan	201	83	15	35	27	30	357	133	57	17	45	1000
Feb	48	30	13	93	57	55	471	133	43	16	41	1000
Mar	22	18	8	68	46	55	475	152	60	22	74	1000

¹ Numbers in 100's

TABLE 28
(CONT'D)

AGE/LENGTH TABLE - HADDOCK - 52e - 1971 (2nd QUARTER)

GEAR		Otter Trawl (Commercial)															
CATCHES OR LANDINGS		Landings															
COUNTRY		U.S.A.															
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	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
														Months Within Quarter			
													Apr	May	Jun		
34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
36	2	1	-	-	-	-	-	-	-	-	-	-	3	3	19	12	
38	15	4	-	-	-	-	-	-	-	-	-	19	8	74	18		
40	21	4	1	-	-	-	-	-	-	-	-	26	21	61	38		
42	34	8	2	-	-	-	-	-	-	-	-	44	22	35	71		
44	36	4	-	1	-	-	-	-	-	-	-	41	16	29	89		
46	39	7	-	2	1	-	2	-	-	-	-	51	19	3	80		
48	14	3	1	5	-	4	3	-	-	-	-	30	12	10	50		
50	6	6	1	2	4	2	7	-	-	-	-	28	17	17	26		
52	2	7	1	4	5	4	5	-	-	-	-	28	48	29	16		
54	-	5	3	10	1	4	3	2	-	-	-	28	51	27	28		
56	-	2	1	5	4	5	8	-	1	-	-	26	63	35	24		
58	-	2	-	9	6	4	6	3	-	-	-	30	71	41	38		
60	-	-	1	5	7	4	18	5	1	-	-	41	78	79	47		
62	-	-	-	3	5	6	21	11	-	1	1	48	79	65	57		
64	-	-	-	6	6	14	23	10	-	1	-	60	86	91	74		
66	-	-	-	3	6	11	20	11	4	-	-	55	88	95	79		
68	-	-	-	-	2	6	21	6	2	-	2	39	96	72	83		
70	-	-	-	1	3	2	14	6	1	2	1	30	78	70	72		
72	-	-	-	-	1	-	5	1	4	4	1	16	37	50	43		
74	-	-	-	-	-	1	1	4	1	3	-	10	51	28	26		
76	-	-	-	-	1	1	3	1	1	1	-	8	17	33	12		
78	-	-	-	-	-	-	-	-	1	-	1	2	19	16	10		
80	-	-	-	-	-	-	-	-	-	1	2	3	17	3	3		
82	-	-	-	-	-	-	-	-	-	-	-	-	6	3	1		
84	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-		
													1000	1000	1000		
Total No. of Ages Read	169	53	11	56	52	68	160	60	16	13	8	666	<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> X </div>				
Serial Numbers	No. of Age Samples											34					
<div style="border: 1px solid black; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> X </div>	Number of fish measured each month												926	401	2243		
	Mean length of fish (cm) each month												62.36	59.38	57.47		
	Mean weight of fish (kg) each month												2.46	2.15	2.06		
	Total weight caught or landed (tons) each month												719	1147	1075		
	Estimated number caught or landed (whole numbers) each month												1	2929	5330	5214	
	Range of depths (m) each month												40-201	27-68	31-82		
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	83	49	14	94	94	121	300	126	44	41	34	1000
May	189	64	12	68	81	103	272	110	45	34	22	1000
Jun	277	70	13	68	67	92	238	95	34	28	18	1000

¹ Numbers in 100's

TABLE 28
(CONT'D)

AGE/LENGTH TABLE - HADDOCK - 5Ze - 1971 (3rd QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		Landings														
COUNTRY		U.S.A.														
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	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
														Months Within Quarter		
													Jul	Aug	Sep	
36		2	-	-	-	-	-	-	-	-	-	-	2	13	1	-
38		11	-	-	-	-	-	-	-	-	-	-	11	27	6	4
40		19	-	-	-	-	-	-	-	-	-	-	19	81	13	5
42		38	-	-	-	-	-	-	-	-	-	-	38	169	44	18
44		31	2	-	-	-	-	-	-	-	-	-	33	148	75	36
46		37	1	-	-	-	-	-	-	-	-	-	38	148	77	64
48		28	3	1	-	-	-	-	-	-	-	-	32	47	70	51
50		19	2	-	-	1	-	1	-	-	-	-	23	11	49	61
52		13	1	-	1	-	-	-	1	-	-	-	16	-	37	65
54		4	6	-	1	1	-	4	-	-	-	-	16	3	18	35
56		-	1	-	5	1	-	9	1	1	-	-	18	7	19	27
58		-	2	-	3	2	-	8	1	-	-	-	16	17	18	26
60		-	-	1	2	1	2	13	2	-	-	-	21	27	23	39
62		-	-	-	3	3	3	21	4	-	-	-	34	39	57	63
64		-	-	-	1	2	2	9	3	1	1	1	20	54	167	76
66		-	-	-	2	-	2	16	6	-	1	-	27	40	60	76
68		-	-	-	3	3	3	18	5	1	-	1	34	50	50	119
70		-	-	-	-	1	1	7	9	4	2	1	25	47	66	67
72		-	-	-	-	-	1	8	5	1	-	1	16	34	58	62
74		-	-	-	-	1	-	3	1	1	-	-	6	18	35	50
76		-	-	-	-	-	-	2	4	-	1	-	7	11	28	26
78		-	-	-	-	-	-	1	5	2	-	1	9	6	18	16
80		-	-	-	-	-	-	-	-	-	-	1	1	1	6	10
82		-	-	-	-	-	-	-	1	1	1	1	4	-	4	4
84		-	-	-	-	-	-	-	-	1	-	-	1	-	1	-
Total No. of Ages Read													467			
Serial Numbers													No. of Age Samples 27			
Number of fish measured each month													783	818	624	
Mean length of fish (cm) each month													52.09	59.55	61.35	
Mean weight of fish (kg) each month													1.63	2.35	2.53	
Total weight caught or landed (tons) each month													666	546	555	
Estimated number caught or landed (whole numbers) each month													4077	2327	2194	
Range of depths (m) each month													46-164	33-238	42-238	
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
Jul	625	22	3	21	23	23	172	73	19	10	9	1000
Aug	346	30	3	36	42	39	287	134	37	21	25	1000
Sep	280	36	3	48	46	40	327	141	36	17	26	1000

¹ Numbers in 100's

TABLE 28
(CONT'D)

AGE/LENGTH TABLE - HADDOCK - 52e - 1971 (4th QUARTER)

GEAR		Otter Trawl (Commercial)														
CATCHES OR LANDINGS		Landings														
COUNTRY		U.S.A.														
TONNAGE		0-458														
STRUCTURES USED IN AGE DETERMINATION		Scales														
Length Group (2 cm)	Age											Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8	9	10	11		12	Months Within Quarter		
													Oct	Nov	Dec	
36	-	1	-	-	-	-	-	-	-	-	-	1	3	-	-	
38	1	-	-	-	-	-	-	-	-	-	-	1	3	-	-	
40	5	-	-	1	-	-	-	-	-	-	-	6	16	1	4	
42	13	1	-	-	-	-	-	-	-	-	-	14	45	5	8	
44	29	1	-	-	-	-	-	-	-	-	-	30	82	11	45	
46	51	2	-	-	-	-	-	-	-	-	-	53	77	35	73	
48	57	2	-	-	-	-	-	-	-	-	-	59	78	44	108	
50	60	3	-	-	-	-	-	-	-	-	-	63	62	47	70	
52	26	2	-	1	1	-	-	-	-	-	-	30	61	37	49	
54	19	4	-	5	-	-	4	1	-	-	-	33	52	24	18	
56	8	4	2	4	1	2	7	1	-	-	-	29	52	20	19	
58	2	5	1	4	1	-	10	-	-	-	-	23	34	19	12	
60	-	2	2	9	-	-	16	4	-	-	1	34	26	41	21	
62	-	-	-	10	4	4	23	5	-	-	-	46	42	53	30	
64	-	2	-	7	5	1	25	3	1	-	-	44	45	77	47	
66	-	1	-	9	9	6	38	14	-	-	-	77	64	113	66	
68	-	-	1	6	5	4	38	9	2	1	1	67	64	111	80	
70	-	-	-	2	-	3	24	11	2	1	-	43	70	127	96	
72	-	-	-	2	3	2	27	5	4	-	1	44	49	86	93	
74	-	-	-	-	-	1	14	6	2	-	2	25	38	58	77	
76	-	-	-	-	-	1	10	7	1	-	1	20	24	38	35	
78	-	-	-	-	-	-	7	3	3	2	-	15	9	23	25	
80	-	-	-	-	-	1	1	2	-	-	1	5	3	17	16	
82	-	-	-	-	-	-	-	-	-	1	-	1	3	6	5	
84	-	-	-	-	-	-	-	1	1	1	-	3	-	2	2	
86	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	
88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
Total No. of Ages Read		271	30	6	60	29	25	244	72	16	6	7	766			
Serial Numbers		No. of Age Samples											46			
X	Number of fish measured each month													1143	1458	1091
	Mean length of fish (cm) each month													57.84	64.93	61.94
	Mean weight of fish (kg) each month													2.27	3.07	2.78
	Total weight caught or landed (tons) each month													542	400	227
	Estimated number caught or landed (whole numbers) each month													2387	1303	816
	Range of depths (m) each month													33-247	51-201	29-238
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	446	47	8	67	30	27	267	78	17	6	7	1000
Nov	190	26	6	79	44	44	415	135	31	15	15	1000
Dec	354	27	4	53	31	34	329	111	30	13	14	1000

¹ Numbers in 100's

TABLE 29 LENGTH FREQUENCIES - REDFISH - 1A, 1B, 1C - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	1A			1B	1C		
	Otter Trawl (Prawn)			OT (Prawn)	OT (Prawn)		Longline
GEAR	Research			Research	Research		
CATCHES/LANDINGS	Catches			Catches	Catches		
MONTH	Jul	Jul	Aug	Aug	May	Aug	Jun
COUNTRY	Den(G)			Den(G)	Den(G)		
TONNAGE	151-500			151-500	151-500		
6	-	-	-	-	9	-	-
7	-	2	-	-	9	6	-
8	-	-	-	-	-	19	-
9	-	7	-	-	-	13	-
10	-	5	-	-	-	-	-
11	-	11	-	2	-	6	-
12	-	12	-	19	-	13	-
13	4	11	-	103	-	13	-
14	11	16	19	155	9	6	-
15	37	32	14	79	9	13	-
16	78	101	158	120	-	-	-
17	172	185	242	204	-	-	-
18	187	167	237	180	9	6	-
19	175	101	116	85	18	-	-
20	101	100	93	30	53	6	-
21	90	87	60	12	35	6	-
22	52	68	33	4	44	6	-
23	41	44	19	2	53	32	-
24	30	25	9	1	35	32	-
25	15	16	-	-	106	78	-
26	-	4	-	-	80	78	-
27	-	-	-	2	62	130	-
28	-	-	-	-	106	110	18
29	-	-	-	-	44	84	18
30	-	-	-	-	159	117	29
31	4	-	-	-	44	78	12
32	-	-	-	-	53	39	12
33	-	-	-	-	9	39	12
34	-	-	-	-	-	32	12
35	-	-	-	-	-	6	12
36	-	-	-	-	-	13	6
37	-	-	-	-	9	-	6
38	-	-	-	-	9	-	23
39	-	-	-	-	-	6	18
40	-	2	-	-	9	-	47
41	-	-	-	1	9	-	6
42	-	-	-	-	-	-	35
43	-	-	-	-	-	6	35
44	-	-	-	-	18	-	29
45	-	2	-	1	-	-	58
46	-	-	-	-	-	-	29
47	-	-	-	-	-	-	41
48	-	-	-	-	-	-	41
49	-	-	-	-	-	-	23
50	-	-	-	-	-	-	6
51	-	-	-	-	-	-	6
52	-	-	-	-	-	-	41
53	-	-	-	-	-	-	35
54	-	-	-	-	-	-	23
55	-	-	-	-	-	-	47
56	-	-	-	-	-	-	18
57	-	-	-	-	-	-	58
58	-	-	-	-	-	-	6
59	-	-	-	-	-	-	18
60	-	1	-	-	-	-	-
61	-	-	-	-	-	-	47
62	-	-	-	-	-	-	29
63	4	-	-	-	-	-	23
64	-	-	-	-	-	-	29
65	-	-	-	-	-	-	29
66	-	-	-	-	-	-	18
67	-	-	-	-	-	-	12
68	-	-	-	-	-	-	12
69	-	-	-	-	-	-	6
70	-	-	-	-	-	-	6
71	-	-	-	-	-	-	-
72	-	-	-	-	-	-	12
Total ‰	1001	999	1000	1000	1000	993	1003
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	2	3	1	3	-	-	1
Number of Fish Measured	268	562	215	1237	113	154	171
Mean Length (cm)	19.10	18.60	18.10	16.30	26.70	26.90	49.40
Mean Weight (kg)	-	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	64-70	36	36	42	36	42	-
Range of Depths (fm)	187-319	187-325	330	165-297	248-314	259-286	187-116

TABLE 30 LENGTH FREQUENCIES - REDFISH - 1D, 1E - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	1D				1E	
	Otter Trawl (Prawn)				Otter Trawl (Prawn)	
GEAR	Research				Research	
CATCHES/LANDINGS	Catches				Catches	
MONTH	Jan	May	Jun	Aug	Feb	Aug
COUNTRY	Den(G)				Den(G)	
TONNAGE	151-500				151-500	
5	5	8	-	-	-	-
6	13	62	-	-	8	-
7	8	73	9	31	4	31
8	27	12	-	119	-	85
9	63	21	-	25	8	23
10	49	66	-	6	19	8
11	57	30	-	38	35	31
12	79	27	-	25	31	54
13	74	46	9	31	15	54
14	47	62	28	-	15	77
15	44	65	9	31	15	15
16	47	52	55	13	4	54
17	40	83	55	25	15	23
18	19	79	64	44	8	31
19	28	27	83	19	23	15
20	55	49	-	13	12	23
21	45	55	37	38	35	15
22	26	47	73	50	54	-
23	18	27	64	25	92	-
24	21	35	64	-	81	15
25	12	18	37	-	77	8
26	6	5	92	6	69	8
27	3	4	18	-	77	31
28	2	3	46	6	54	-
29	5	1	55	6	65	8
30	13	5	73	75	19	62
31	17	4	28	38	19	15
32	22	4	37	38	23	15
33	30	8	37	69	8	-
34	19	3	9	56	27	15
35	34	3	-	56	27	23
36	18	4	-	38	12	-
37	18	3	-	50	8	15
38	9	4	-	13	19	31
39	7	3	-	6	4	38
40	7	3	9	6	8	8
41	3	-	-	6	4	8
42	2	-	-	-	-	38
43	1	-	-	-	-	23
44	-	-	-	-	4	23
45	1	-	9	-	-	15
46	-	-	-	-	-	23
47	-	-	-	-	-	-
48	-	-	-	-	4	8
--	-	-	-	-	-	-
51	-	-	-	-	-	8
52	-	-	-	-	-	-
53	-	-	-	-	-	15
--	-	-	-	-	-	-
56	1	-	-	-	-	-
--	-	-	-	-	-	-
59	1	-	-	-	-	-
60	-	-	-	-	-	-
61	-	-	-	-	-	8
Total ‰	996	1001	1000	1002	1002	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	1	1	1	1	2	2
Number of Fish Measured	2011	769	109	160	260	130
Mean Length (cm)	19.10	16.00	23.90	23.20	24.50	24.30
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	36	36	80	36	36	36
Range of Depths (fm)	165	165	286	165	193	171-198

TABLE 31 LENGTH FREQUENCIES - REDFISH - 2H, 2J, 3L - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	2H			2J	3L			
GEAR	OT (Stern)			OT (Stern)	Otter Trawl (Stern)			
CATCHES/LANDINGS	Research			Commercial	Commercial			
MONTH	Catches			Catches	Catches			
COUNTRY	USSR			Poland	Japan			
TONNAGE	>1800			>1800	>1800			
SEX	♂	♀	Total					
18	-	-	-	-	5	-	-	-
19	-	-	-	-	33	-	-	-
20	1	-	1	3	59	-	-	-
21	4	7	11	6	73	-	-	-
22	9	10	19	8	87	-	-	-
23	15	21	36	10	77	-	-	-
24	17	19	36	39	54	3	32	-
25	31	28	59	61	44	-	119	-
26	36	37	73	76	28	-	135	-
27	40	41	81	86	5	7	135	-
28	27	36	63	82	-	3	103	-
29	25	23	48	83	14	27	79	-
30	18	21	39	79	5	17	111	-
31	28	20	48	70	26	23	79	-
32	27	21	48	63	42	47	63	-
33	20	20	40	55	56	60	63	-
34	23	22	45	66	75	96	24	-
35	24	29	53	56	75	90	24	-
36	25	33	58	46	66	100	32	17
37	24	25	49	40	56	116	-	68
38	21	35	56	16	61	106	-	119
39	15	17	32	16	33	103	-	85
40	11	24	35	14	21	80	-	153
41	10	16	26	12	7	83	-	186
42	5	11	16	3	-	33	-	153
43	2	8	10	2	-	7	-	119
44	-	7	7	2	-	-	-	68
45	2	4	6	2	-	-	-	34
46	1	2	3	2	-	-	-	-
47	-	-	-	1	-	-	-	-
48	-	1	1	-	-	-	-	-
49	-	-	-	1	-	-	-	-
55	1	-	1	-	-	-	-	-
Total ‰	462	538	1000	1000	1002	1001	999	1002
Serial Numbers	-	-	-	-	-	-	-	-
Number of Samples	-	-	-	1	3	2	1	1
Number of Fish Measured	1272	1479	2751	1295	427	301	126	59
Mean Length (cm)	31.17	32.09	31.67	30.60	29.74	36.94	29.29	41.19
Mean Weight (kg)	-	-	-	0.35	-	-	-	-
Total Weight Landed (tons)	-	-	414	-	935	489	459	135
Estimated Number Landed	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	110	-	-	-	-	-
Range of Depths (fm)	-	-	135-297	-	230-280	235-245	250	350

TABLE 32 LENGTH FREQUENCIES - REDFISH - 3M, 30 - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3M				30		
	Otter Trawl (Stern)				Otter Trawl (Stern)		
GEAR	Commercial				Commercial		
CATCHES/LANDINGS	Catches				Catches		
MONTH	Mar	Apr	Jun	Jul	Sep	Dec	Sep
COUNTRY	Japan				Japan		Poland
TONNAGE	>1800				>1800		
16	-	-	-	-	-	-	3
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	3
19	-	-	-	-	-	-	113
20	-	2	-	24	-	-	396
21	3	-	-	36	-	-	154
22	-	6	-	48	-	-	14
23	3	8	-	133	-	-	17
24	17	10	46	84	-	-	51
25	-	2	62	60	-	-	82
26	-	11	85	72	-	12	58
27	7	13	108	36	-	48	34
28	7	36	108	108	-	60	10
29	23	59	131	120	23	60	7
30	27	63	46	84	62	72	7
31	30	59	38	36	163	36	3
32	13	55	38	60	124	36	20
33	17	82	69	12	116	48	28
34	47	97	85	-	85	36	-
35	80	95	38	24	93	24	-
36	137	90	85	36	47	120	-
37	160	90	31	12	70	145	-
38	170	74	8	12	85	181	-
39	110	53	23	-	62	120	-
40	127	40	-	-	16	-	-
41	17	34	-	-	-	-	-
42	3	19	-	-	16	-	-
43	3	-	-	-	31	-	-
44	-	-	-	-	8	-	-
Total ‰	1001	998	1001	997	1001	998	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	3	3	2	1	1	1	1
Number of Fish Measured	300	524	130	83	129	83	293
Mean Length (cm)	36.81	34.63	30.76	27.79	34.90	34.91	12.21
Mean Weight (kg)	-	-	-	-	-	-	-
Total Weight Landed (tons)	797	304	143	400	910	81	-
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	45
Range of Depths (fm)	230-235	185-245	230	235	165	205	144-155

TABLE 33 LENGTH FREQUENCIES - REDFISH - 3P, 3Ps - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3P					3Ps	
	Otter Trawl (Stern)					Otter Trawl	
GEAR	Commercial					Research	
CATCHES/LANDINGS	Catches					Catches	
MONTH	Apr	Jun	Jul	Aug	Oct	Jul	Nov
COUNTRY	Japan					Fr (SP)	
TONNAGE	>1800					850-1500	
8	-	-	-	-	-	1	-
9	-	-	-	-	-	2	1
10	-	-	-	-	-	5	3
11	-	-	-	20	-	3	7
12	-	-	-	10	-	3	12
13	-	-	-	7	-	8	12
14	-	-	-	15	-	19	30
15	-	-	-	22	-	16	52
16	-	-	-	34	-	13	43
17	-	-	14	46	-	24	22
18	5	-	-	71	-	43	37
19	-	-	10	95	-	51	46
20	11	-	10	95	-	58	57
21	11	5	10	110	19	69	58
22	5	5	7	98	26	75	58
23	-	3	3	110	51	74	48
24	11	5	14	110	64	70	37
25	16	3	7	56	71	50	26
26	16	3	3	56	83	35	15
27	42	3	14	37	64	21	10
28	58	29	59	7	58	18	10
29	21	85	122	-	71	15	17
30	63	138	181	-	45	30	36
31	68	164	206	-	38	42	47
32	63	159	143	-	51	53	62
33	68	119	80	-	32	47	57
34	105	87	77	-	45	40	53
35	111	61	17	-	58	30	40
36	79	37	14	-	83	28	28
37	63	29	3	-	58	23	25
38	84	34	3	-	32	14	17
39	37	11	-	-	19	10	13
40	26	8	-	-	19	5	11
41	37	13	-	-	13	3	5
42	-	-	-	-	-	2	4
43	-	-	-	-	-	-	1
44	-	-	-	-	-	-	1
Total ‰	1001	1001	997	999	1000	1000	1001
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	1	2	2	2	1	19	15
Number of Fish Measured	190	378	287	409	156	6730	4924
Mean Length (cm)	33.69	32.70	30.78	21.49	30.69	-	-
Mean Weight (kg)	-	-	-	-	-	-	-
Total Weight Landed (tons)	54	549	495	572	31	-	-
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	-	-	-	50	50
Range of Depths (fm)	200	180	165-180	175-177	230	-	-

TABLE 34 LENGTH FREQUENCIES - REDFISH - 4R - 1971

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl (Stern)			Otter Trawl (Side)			
	Commercial Landings						
CATCHES/LANDINGS	Feb			May		Jun	
MONTH	Can(M)						
COUNTRY	151-500			151-500		51-150	
TONNAGE	♂♂	♀♀	Total	♂♂	♀♀	Total	
20	2	-	2	-	-	-	-
21	-	-	-	-	-	-	-
22	7	-	7	-	-	-	-
23	12	-	12	-	-	-	3
24	20	-	20	-	-	-	7
25	34	-	34	-	-	-	3
26	62	2	64	-	-	-	13
27	79	-	79	-	-	-	23
28	82	2	84	37	-	37	70
29	73	13	86	87	23	110	123
30	50	31	81	113	53	166	137
31	41	23	64	80	100	180	133
32	43	51	94	43	93	136	173
33	21	59	80	27	77	104	117
34	17	53	70	17	97	114	67
35	10	56	66	-	43	43	37
36	7	25	32	7	27	34	43
37	5	21	26	3	30	33	13
38	6	20	26	-	7	7	10
39	1	16	17	-	23	23	7
40	5	22	27	-	13	13	10
41	-	4	4	-	-	-	-
42	1	6	7	-	-	-	3
43	-	1	1	-	-	-	-
44	-	6	6	-	-	-	-
45	-	4	4	-	-	-	-
46	2	-	2	-	-	-	3
47	-	-	-	-	-	-	-
48	-	1	1	-	-	-	-
49	-	2	2	-	-	-	3
57	-	2	2	-	-	-	-
Total %	580	420	1000	414	586	1000	998
Serial Numbers	-	-	100-102	-	-	65	93
Number of Samples	-	-	3	-	-	1	1
Number of Fish Measured	551	383	934	124	176	300	300
Mean Length (cm)	28.92	34.70	31.34	30.52	33.18	32.08	31.56
Mean Weight (kg)	0.39	0.66	0.50	0.44	0.57	0.51	0.49
Total Weight Landed (tons)	-	-	113	-	-	268	199
Estimated Number Landed ¹	-	-	226	-	-	525	406
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	130-135	-	-	142	130

¹ Numbers in thousands

TABLE 35 LENGTH FREQUENCIES - REDFISH - 4S - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Jul			Oct			Nov		
COUNTRY	Can(M)								
TONNAGE	51-150			151-500			51-150		
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
21	-	-	-	-	-	-	5	-	5
24	8	-	8	-	-	-	-	-	-
25	2	-	2	18	-	18	-	-	-
26	5	-	5	18	7	25	-	-	-
27	14	-	14	11	4	15	15	5	20
28	60	-	60	26	7	33	25	10	35
29	93	8	101	44	18	62	105	15	120
30	166	40	206	114	33	147	135	85	220
31	129	58	187	77	33	110	75	100	175
32	70	80	150	66	55	121	35	155	190
33	28	84	112	30	48	78	5	70	75
34	11	61	72	22	41	63	5	55	60
35	-	33	33	33	52	85	-	30	30
36	4	25	29	11	52	63	5	25	30
37	-	7	7	7	37	44	-	15	15
38	2	7	9	7	33	40	-	5	5
39	-	-	-	7	30	37	-	10	10
40	-	4	4	4	22	26	-	10	10
41	-	2	2	-	4	4	-	-	-
42	-	-	-	-	26	26	-	-	-
Total ‰	592	409	1001	495	502	997	410	590	1000
Serial Numbers	-	-	-	-	-	149	-	-	170
Number of Samples	-	-	2	-	-	1	-	-	1
Number of Fish Measured	255	177	432	135	136	271	82	118	200
Mean Length (cm)	30.18	32.91	31.29	31.08	34.60	32.85	29.91	32.42	31.39
Mean Weight (kg)	0.43	0.55	0.48	0.47	0.65	0.56	0.41	0.53	0.48
Total Weight Landed (tons)	-	-	3279	-	-	929	-	-	984
Estimated Number Landed ¹	-	-	6831	-	-	1659	-	-	2050
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	150-165	-	-	207	-	-	140

¹ Numbers in thousands

TABLE 36 LENGTH FREQUENCIES - REDFISH - 4RST - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl											
	Commercial Landings											
CATCHES/LANDINGS	Jun			Jul			Aug			Sep		
MONTH	USA											
COUNTRY	34-440											
TONNAGE												
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
20	-	-	-	4	-	4	-	-	-	-	-	-
21	-	-	-	4	-	4	-	-	-	-	-	-
22	-	-	-	1	1	2	-	2	2	-	-	-
23	-	-	-	-	1	1	-	-	-	-	-	-
24	-	-	-	1	1	1	-	-	-	-	-	-
25	-	-	-	1	1	1	2	-	2	-	-	-
26	-	-	-	7	2	9	3	-	3	2	-	2
27	-	-	-	6	1	7	2	-	2	-	-	-
28	6	2	8	18	7	24	12	7	18	12	2	14
29	26	10	36	50	4	54	42	8	50	52	16	68
30	102	18	120	82	36	118	73	40	113	100	46	146
31	118	58	176	100	52	152	113	55	168	96	110	206
32	68	92	160	92	73	166	78	103	182	90	144	234
33	76	100	176	49	58	107	50	117	167	22	126	148
34	36	90	126	32	84	117	33	73	107	32	82	114
35	18	78	96	33	73	107	37	55	92	8	30	38
36	-	54	54	11	29	40	13	32	45	4	14	18
37	-	32	32	3	27	30	8	15	23	2	2	4
38	-	14	14	1	26	27	2	13	15	-	4	4
39	-	-	-	1	19	20	2	8	10	-	2	2
40	-	2	2	-	2	2	-	-	-	-	2	2
41	-	-	-	-	3	3	-	2	2	-	-	-
42	-	-	-	-	1	1	-	-	-	-	-	-
43	-	-	-	-	1	1	-	-	-	-	-	-
Total ‰	450	550	1000	498	502	1000	470	530	1000	420	580	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	5	5	5	9	9	9	6	6	6	5	5	5
Number of Fish Measured	225	275	500	448	452	900	282	318	600	210	290	500
Mean Length (cm)	31.51	33.56	32.64	31.21	33.74	32.48	31.73	33.09	32.45	31.10	32.42	31.87
Mean Weight (kg)	0.48	0.58	0.54	0.48	0.60	0.54	0.49	0.56	0.53	0.47	0.53	0.50
Total Weight Landed (tons)	289	426	715	529	672	1201	465	593	1058	330	515	845
Estimated Number Landed ¹	5983	7313	13296	11131	11230	22361	9377	10575	19952	7099	9803	16902
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	100-150	-	-	100-150	-	-	100-150	-	-	100-150

¹ Numbers in hundreds

TABLE 36 LENGTH FREQUENCIES - REDFISH - 4RST - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Oct			Nov			Dec		
COUNTRY	USA								
TONNAGE	34-440								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
27	-	-	-	-	10	10	-	-	-
28	17	3	20	90	-	90	20	-	20
29	43	23	67	120	60	180	50	20	70
30	157	93	250	110	80	190	130	120	250
31	117	120	237	90	110	200	110	70	180
32	43	127	170	20	90	210	80	120	200
33	17	113	130	10	90	100	20	60	80
34	7	67	73	-	10	10	50	80	130
35	10	30	40	-	-	-	-	50	50
36	-	10	10	-	10	10	-	10	10
37	-	3	3	-	-	-	-	10	10
Total ‰	410	590	1000	440	560	1000	460	540	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	3	3	3	1	1	1	1	1	1
Number of Fish Measured	123	177	300	44	56	100	46	54	100
Mean Length (cm)	30.62	32.01	31.44	29.68	31.37	30.63	30.96	32.17	31.61
Mean Weight (kg)	0.44	0.50	0.48	0.40	0.48	0.44	0.46	0.51	0.49
Total Weight Landed (tons)	160	263	423	32	48	80	35	45	80
Estimated Number Landed ¹	3613	5200	8813	793	1009	1801	754	885	1639
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	100-150	-	-	100-150	-	-	100-150

¹ Numbers in hundreds

TABLE 37 LENGTH FREQUENCIES - REDFISH - 4Vn - 1971

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl (Side)											
	Commercial											
CATCHES/LANDINGS	Landings											
MONTH	Jan			May			Jul			Sep		
COUNTRY	Can(M)											
TONNAGE	151-500											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
19	4	-	4	-	-	-	-	-	-	-	-	-
20	11	8	19	-	-	-	-	-	-	-	-	-
21	19	4	23	-	-	-	5	-	5	-	-	-
22	19	-	19	4	-	4	23	-	23	-	-	-
23	53	27	80	-	-	-	27	-	27	-	-	-
24	84	34	118	9	-	9	41	-	41	-	-	-
25	53	42	95	18	-	18	95	9	104	-	-	-
26	61	61	122	22	-	22	86	18	104	-	-	-
27	49	38	87	22	-	22	109	23	132	-	-	-
28	30	42	72	22	-	22	95	32	127	-	6	6
29	34	30	64	85	4	89	73	36	109	6	-	6
30	38	34	72	116	4	120	23	32	55	18	6	24
31	15	30	45	71	18	89	5	32	37	35	18	53
32	4	30	34	45	27	72	9	59	68	71	53	124
33	-	15	15	22	54	76	5	27	32	118	41	159
34	-	34	34	27	76	103	-	45	45	76	41	117
35	-	46	46	9	76	85	-	32	32	59	41	100
36	-	23	23	-	67	67	-	36	36	41	53	94
37	-	11	11	-	103	103	-	18	18	35	53	88
38	-	8	8	-	58	58	-	-	-	41	29	70
39	-	8	8	-	22	22	-	5	5	24	35	59
40	-	-	-	-	18	18	-	-	-	-	35	35
41	-	-	-	-	-	-	-	-	-	6	29	35
42	-	-	-	-	-	-	-	-	-	6	-	6
43	-	-	-	-	-	-	-	-	-	-	12	12
44	-	-	-	-	-	-	-	-	-	-	6	6
49	-	-	-	-	-	-	-	-	-	-	6	6
Total %/oo	474	525	999	472	527	999	596	404	1000	536	464	1000
Serial Numbers	-	-	103	-	-	78	-	-	150	-	-	122
Number of Samples	-	-	1	-	-	1	-	-	1	-	-	1
Number of Fish Measured	125	138	263	106	118	224	131	89	220	91	79	170
Mean Length (cm)	25.62	29.36	27.58	29.82	35.46	32.79	26.58	31.66	28.64	34.29	36.18	35.16
Mean Weight (kg)	0.27	0.41	0.34	0.41	0.69	0.56	0.29	0.50	0.38	0.62	0.74	0.68
Total Weight Landed (tons)	-	-	42	-	-	764	-	-	570	-	-	292
Estimated Number Landed ¹	-	-	124	-	-	1364	-	-	1500	-	-	429
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	145	-	-	125	-	-	107	-	-	97

¹ Numbers in thousands

TABLE 37 LENGTH FREQUENCIES - REDFISH - 4Vn, 4Vs - 1971
(CONT'D)

(FREQUENCIES IN % - 1 CM GROUPS)

DIVISION	4Vn		4Vs								
GEAR	Otter Trawl		Otter Trawl (Side)								
CATCHES/LANDINGS	Research		Commercial								
MONTH	Catches		Landings								
COUNTRY	Jul	Nov	Jan	Feb		May					
TONNAGE	Fr (SP) 850-1500		Can (M) 151-500								
SEX			♂	♀	Total	♂	♀	Total	♂	♀	Total
8	1	1	-	-	-	-	-	-	-	-	-
9	1	1	-	-	-	-	-	-	-	-	-
10	1	3	-	-	-	-	-	-	-	-	-
11	3	6	-	-	-	-	-	-	-	-	-
12	9	14	-	-	-	-	-	-	-	-	-
13	5	55	-	-	-	-	-	-	-	-	-
14	12	83	-	-	-	-	-	-	-	-	-
15	10	56	-	-	-	-	-	-	-	-	-
16	8	23	-	-	-	-	-	-	-	-	-
17	10	34	-	-	-	-	-	-	-	-	-
18	21	23	-	-	-	-	-	-	-	-	-
19	19	16	-	-	-	-	-	-	-	-	-
20	43	9	-	-	-	-	-	-	-	-	-
21	33	13	-	-	-	-	-	-	-	-	-
22	27	4	14	-	14	24	10	34	12	-	12
23	16	-	46	5	51	15	5	20	18	-	18
24	8	5	42	19	61	54	10	64	36	-	36
25	7	1	69	32	101	59	5	64	26	-	26
26	5	4	60	32	92	63	34	97	43	3	46
27	3	3	46	51	97	34	5	39	39	9	48
28	4	1	51	37	88	24	15	39	67	13	80
29	13	5	46	46	92	117	24	141	58	17	75
30	28	23	42	46	88	73	24	97	54	25	79
31	74	50	19	37	56	29	39	68	28	20	48
32	105	61	14	23	37	24	39	63	32	41	73
33	108	64	5	79	84	15	59	74	15	88	103
34	99	68	-	42	42	10	73	83	13	78	91
35	81	62	-	19	19	10	54	64	3	68	71
36	71	45	-	46	46	5	24	29	1	75	76
37	38	45	-	9	9	-	10	10	-	61	61
38	33	27	-	14	14	-	10	10	-	29	29
39	20	22	-	9	9	-	5	5	-	15	15
40	19	26	-	-	-	-	-	-	-	5	5
41	15	23	-	-	-	-	-	-	-	3	3
42	19	18	-	-	-	-	-	-	-	2	2
43	8	16	-	-	-	-	-	-	-	-	-
44	10	15	-	-	-	-	-	-	-	-	-
45	3	18	-	-	-	-	-	-	-	-	-
46	1	17	-	-	-	-	-	-	-	-	-
47	3	17	-	-	-	-	-	-	-	-	-
48	3	9	-	-	-	-	-	-	-	-	-
49	3	8	-	-	-	-	-	-	-	-	-
50	-	6	-	-	-	-	-	-	-	-	-
Total %	1000	1000	454	546	1000	556	445	1001	445	552	997
Serial Numbers	-	-	-	-	104	-	-	105	-	-	79-81
Number of Samples	8	6	-	-	1	-	-	1	-	-	3
Number of Fish Measured	1561	1541	98	118	216	114	91	205	306	396	702
Mean Length (cm)	-	-	26.69	30.75	28.91	27.85	31.78	29.60	28.10	34.14	31.45
Mean Weight (kg)	-	-	0.30	0.47	0.39	0.34	0.51	0.42	0.35	0.62	0.50
Total Weight Landed (tons)	-	-	-	-	145	-	-	177	-	-	852
Estimated Number Landed	-	-	-	-	372	-	-	421	-	-	1704
Mesh(mm) or Hook(no) Size	50	50	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	-	-	125	-	-	120	-	-	90-100

¹ Numbers in thousands

TABLE 37 LENGTH FREQUENCIES - REDFISH - 4Vs - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)											
	Commercial Landings											
CATCHES/LANDINGS	Landings											
MONTH	Aug			Sep			Oct			Dec		
COUNTRY	Can (M)											
TONNAGE	151-500											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
20	13	9	22	8	-	8	-	-	-	-	-	-
21	9	9	18	11	-	11	-	-	-	-	-	-
22	22	9	31	19	11	30	-	-	-	-	-	-
23	53	13	66	45	19	64	16	-	16	-	-	-
24	58	13	71	49	30	79	12	8	20	-	-	-
25	53	22	75	75	42	117	4	4	8	9	-	9
26	49	18	67	57	34	91	24	12	36	60	13	73
27	71	35	106	60	30	90	16	4	20	43	26	69
28	53	27	80	57	30	87	4	-	4	30	21	51
29	49	22	71	57	34	91	16	-	16	43	13	56
30	31	40	71	19	38	57	24	20	44	77	17	94
31	13	27	40	11	45	56	43	12	55	30	4	34
32	4	53	57	8	45	53	63	20	83	26	30	56
33	4	66	70	4	26	30	71	32	103	17	52	69
34	4	44	48	-	34	34	71	59	130	4	34	38
35	-	31	31	-	49	49	47	59	106	9	77	86
36	-	31	31	-	15	15	36	79	115	4	112	116
37	-	13	13	-	19	19	8	51	59	9	120	129
38	-	22	22	-	11	11	-	91	91	-	60	60
39	-	4	4	-	4	4	-	47	47	-	34	34
40	-	4	4	-	4	4	-	24	24	-	9	9
41	-	-	-	-	-	-	-	8	8	-	13	13
42	-	-	-	-	-	-	-	8	8	-	4	4
43	-	-	-	-	-	-	-	4	4	-	-	-
44	-	-	-	-	-	-	-	-	-	-	-	-
48	-	-	-	-	-	-	-	4	4	-	-	-
Total ‰	486	512	998	480	520	1000	455	546	1001	361	639	1000
Serial Numbers	-	-	151	-	-	152	-	-	153	-	-	173
Number of Samples	-	-	1	-	-	1	-	-	1	-	-	1
Number of Fish Measured	110	116	226	127	138	265	115	138	253	84	149	233
Mean Length (cm)	26.14	30.84	28.55	26.13	30.09	28.19	31.77	35.65	33.89	29.35	34.91	32.90
Mean Weight (kg)	0.28	0.48	0.38	0.28	0.44	0.37	0.51	0.71	0.62	0.40	0.67	0.57
Total Weight Landed (tons)	-	-	416	-	-	317	-	-	186	-	-	198
Estimated Number Landed¹	-	-	1095	-	-	857	-	-	300	-	-	347
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	77	-	-	90	-	-	130	-	-	73

¹ Numbers in thousands

TABLE 37 LENGTH FREQUENCIES - REDFISH - 4V - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Stern)			Otter Trawl					
	Commercial			Commercial					
CATCHES/LANDINGS	Catches			Landings					
MONTH	Feb	Mar	Dec	May		Jun			
COUNTRY	Japan			USA					
TONNAGE	>1800			51-440					
SEX				♂♂	♀♀	Total	♂♂	♀♀	Total
19	-	-	-	20	-	20	10	-	10
20	-	13	-	-	-	-	20	-	20
21	-	26	-	20	10	30	20	-	20
22	-	26	-	40	-	40	30	-	30
23	-	20	-	30	30	60	50	-	50
24	-	7	-	70	40	110	80	20	100
25	-	53	-	20	20	40	80	70	150
26	-	39	12	40	60	100	80	20	100
27	-	79	48	60	20	80	20	60	80
28	-	66	60	70	20	90	50	80	130
29	-	79	60	10	10	20	10	30	40
30	5	86	72	10	20	30	-	30	30
31	28	99	36	-	80	80	-	50	50
32	98	72	36	10	30	40	-	30	30
33	172	59	48	-	60	60	-	30	30
34	163	112	36	-	60	60	10	10	20
35	167	86	24	-	30	30	-	10	10
36	186	46	120	-	40	40	-	40	40
37	102	13	145	-	40	40	-	50	50
38	47	7	181	-	10	10	-	10	10
39	33	13	120	-	20	20	-	-	-
Total ‰	1001	1001	998	400	600	1000	460	540	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	1	1	1
Number of Fish Measured	215	152	83	40	60	100	46	54	100
Mean Length (cm)	35.25	30.71	34.91	25.20	30.83	28.58	24.76	30.07	27.63
Mean Weight (kg)	-	-	-	0.26	0.48	0.39	0.24	0.44	0.35
Total Weight Landed (tons)	54	795	6	46	127	173	84	178	262
Estimated Number Landed ¹	-	-	-	1765	2648	4413	3438	4036	7474
Mesh(mm) or Hook(no) Size	-	-	-	-	-	64	-	-	64
Range of Depths (fm)	230	235	205	-	-	100-150	-	-	100-150

¹ Numbers in hundreds

TABLE 37 LENGTH FREQUENCIES - REDFISH - 4V - 1971
(CONT'D)

(FREQUENCIES IN \circ/\circ - 1 CM GROUPS)

GEAR	Otter Trawl								
CATCHES/LANDINGS	Commercial								
MONTH	Jul			Sep			Nov		
COUNTRY	USA								
TONNAGE	51-440								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
21	-	-	-	20	-	20	-	-	-
22	5	-	5	30	-	30	-	-	-
23	20	10	30	80	-	80	-	-	-
24	40	10	50	30	10	40	-	-	-
25	65	45	110	50	10	60	23	7	30
26	25	60	85	50	10	60	77	47	123
27	30	40	70	70	40	110	67	67	133
28	15	65	80	40	40	80	83	123	207
29	45	45	90	40	10	50	53	90	143
30	60	65	125	40	30	70	37	103	140
31	45	75	120	10	70	80	30	40	70
32	25	45	70	-	50	50	20	53	73
33	20	60	80	-	70	70	-	30	30
34	10	35	45	-	60	60	-	10	10
35	-	10	10	-	50	50	-	10	10
36	-	15	15	-	30	30	-	13	13
37	-	10	10	-	40	40	-	13	13
38	-	5	5	-	-	-	-	3	3
39	-	-	-	-	-	-	-	-	-
40	-	-	-	-	10	10	-	-	-
43	-	-	-	-	10	10	-	-	-
Total \circ/\circ	405	595	1000	460	540	1000	390	610	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	2	2	2	1	1	1	3	3	3
Number of Fish Measured	81	119	200	46	54	100	117	183	300
Mean Length (cm)	27.99	29.74	29.03	25.80	32.22	29.27	28.02	29.62	29.00
Mean Weight (kg)	0.35	0.42	0.39	0.30	0.48	0.40	0.34	0.41	0.39
Total Weight Landed (tons)	17	30	47	37	75	112	137	256	393
Estimated Number Landed ¹	481	706	1187	1213	1566	2778	3995	6249	10244
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	112-274	-	-	112-183	-	-	185-274

¹ Numbers in hundreds

TABLE 38 LENGTH FREQUENCIES - REDFISH - 4W - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Stern)						Otter Trawl (Side)					
	Commercial Landings											
CATCHES/LANDINGS												
MONTH	Jan			Feb			Apr			Jun		
COUNTRY	Can(M)											
TONNAGE	501-900						151-500					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
17	-	-	-	-	-	-	-	-	4	-	-	-
18	-	-	-	-	-	-	4	-	4	-	-	3
19	-	-	-	-	-	-	-	-	4	3	-	8
20	-	-	-	-	-	-	8	-	8	10	7	24
21	-	-	-	-	-	-	17	-	17	21	14	37
22	-	-	-	5	-	5	46	13	59	27	20	47
23	-	-	-	10	5	15	50	17	67	28	29	57
24	-	-	-	5	5	10	38	38	76	27	28	55
25	-	-	-	20	5	25	50	29	79	29	28	57
26	9	-	9	10	-	10	29	29	58	41	31	72
27	5	5	10	30	5	35	59	25	84	29	12	41
28	5	-	5	30	-	30	50	4	54	31	17	48
29	9	5	14	59	5	64	50	21	71	38	23	61
30	5	-	5	79	10	89	21	21	42	29	14	43
31	9	5	14	79	10	89	21	13	34	37	19	56
32	24	9	33	59	50	109	13	29	42	27	30	57
33	33	24	57	30	89	119	8	21	29	22	38	60
34	76	28	104	25	79	104	-	75	75	17	42	59
35	85	47	132	25	94	119	4	46	50	10	25	35
36	76	57	133	10	59	69	4	29	33	4	35	39
37	62	47	109	-	50	50	-	29	29	4	24	28
38	28	85	113	-	30	30	-	29	29	-	28	28
39	43	81	124	-	15	15	-	38	38	1	31	32
40	5	66	71	-	15	15	-	13	13	2	22	24
41	5	38	43	-	-	-	-	-	-	2	13	15
42	-	9	9	-	-	-	-	-	-	-	8	8
43	-	9	9	-	-	-	-	-	-	-	5	5
44	-	5	5	-	-	-	-	-	-	-	3	3
45	-	-	-	-	-	-	-	-	-	-	1	1
Total ‰	479	520	999	476	526	1002	472	519	999 ²	439	547	1003 ²
Serial Numbers	-	-	106	-	-	107	-	-	54	-	-	82, 83
Number of Samples	-	-	1	-	-	1	-	-	1	-	-	2
Number of Fish Measured	101	110	211	96	106	202	113	124	239 ²	382	495	887 ²
Mean Length (cm)	35.04	37.46	36.30	30.18	34.34	32.36	26.18	31.80	29.03	27.66	31.56	29.64
Mean Weight (kg)	0.67	0.81	0.74	0.43	0.63	0.54	0.29	0.53	0.41	0.35	0.53	0.44
Total Weight Landed (tons)	-	-	36	-	-	29	-	-	340	-	-	506
Estimated Number Landed ¹	-	-	49	-	-	54	-	-	829	-	-	1150
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	225	-	-	90	-	-	220	-	-	235-240

¹ Numbers in thousands

² Includes "Sex Undetermined"

TABLE 38 LENGTH FREQUENCIES - REDFISH - 4W - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Jul			Aug			Sep		
COUNTRY	Can(M)								
TONNAGE	151-500								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
19	4	-	4	-	-	-	-	-	-
20	2	4	6	7	-	7	-	-	-
21	7	4	11	7	-	7	-	-	-
22	16	4	20	10	-	10	-	-	-
23	31	24	55	14	10	24	-	-	-
24	38	40	78	31	3	34	8	6	14
25	51	49	100	24	7	31	11	6	17
26	51	47	98	21	10	31	6	6	12
27	29	27	56	17	-	17	6	11	17
28	35	24	59	21	3	24	11	11	22
29	31	22	53	17	10	27	14	6	20
30	16	16	32	17	14	31	11	-	11
31	27	31	58	17	14	31	23	14	37
32	11	44	55	21	17	38	28	28	56
33	16	51	67	41	31	72	62	42	104
34	7	60	67	59	55	114	82	70	152
35	7	51	58	66	52	118	45	56	101
36	7	29	36	24	69	93	28	96	124
37	2	35	37	14	48	62	6	93	99
38	2	22	24	17	83	100	-	87	87
39	-	13	13	3	86	89	-	56	56
40	-	7	7	-	24	24	-	37	37
41	-	4	4	-	10	10	-	23	23
42	-	2	2	-	-	-	-	8	8
43	-	-	-	-	-	-	-	3	3
44	-	-	-	-	3	3	-	-	-
Total ‰	390	610	1000	448	549	997	341	659	1000
Serial Numbers	-	-	99	-	-	119	-	-	131
Number of Samples	-	-	1	-	-	1	-	-	1
Number of Fish Measured	175	276	451	130	160	290	121	234	355
Mean Length (cm)	27.12	30.84	29.40	30.77	35.49	33.37	32.47	35.76	34.64
Mean Weight (kg)	0.32	0.48	0.42	0.48	0.70	0.60	0.54	0.71	0.65
Total Weight Landed (tons)	-	-	838	-	-	1332	-	-	296
Estimated Number Landed ¹	-	-	1995	-	-	2220	-	-	455
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-
Range of Depths (fm)	-	-	225	-	-	245	-	-	240

¹ Numbers in thousands

TABLE 38 LENGTH FREQUENCIES - REDFISH - 4W - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	May			Jun			Jul		
COUNTRY	USA								
TONNAGE	51-440								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
17	-	-	-	3	-	3	-	-	-
18	-	-	-	3	-	3	-	-	-
19	-	-	-	3	-	3	-	-	-
20	-	-	-	25	-	25	-	-	-
21	-	-	-	19	3	22	-	-	-
22	-	-	-	13	6	19	-	-	-
23	-	-	-	13	3	16	-	-	-
24	44	15	59	19	6	25	-	-	-
25	66	11	77	38	10	48	-	-	-
26	108	51	159	107	23	130	50	-	50
27	67	55	122	62	13	75	60	-	60
28	51	104	155	64	37	100	80	-	80
29	41	64	105	62	38	100	140	-	140
30	25	60	85	59	71	130	90	40	130
31	15	38	53	7	26	33	50	30	80
32	9	30	40	4	41	45	20	50	70
33	4	20	24	7	42	49	60	70	130
34	1	20	21	4	62	65	20	50	70
35	-	24	24	-	62	62	-	90	90
36	-	34	34	-	27	27	-	70	70
37	-	9	9	-	16	16	-	10	10
38	-	3	3	-	-	-	-	10	10
39	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	10	10
Total ‰	431	569	1000	513	487	1000	570	430	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	4	4	4	3	3	3	1	1	1
Number of Fish Measured	166	234	400	154	146	300	57	43	100
Mean Length (cm)	26.94	30.17	28.78	26.50	31.31	28.84	29.42	33.86	31.33
Mean Weight (kg)	0.31	0.44	0.38	0.30	0.49	0.39	0.40	0.60	0.49
Total Weight Landed (tons)	130	244	374	106	163	269	90	102	192
Estimated Number Landed ¹	4208	5550	9757	3529	3353	6882	2266	1710	3976
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	60-100	-	-	60-150	-	-	60-100

¹ Numbers in hundreds

TABLE 38 LENGTH FREQUENCIES - REDFISH - 4W - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Sep			Oct			Nov		
COUNTRY	USA								
TONNAGE	51-440								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
19	38	-	38	-	-	-	4	-	4
20	21	1	22	10	-	10	7	-	7
21	48	9	57	20	-	20	11	-	11
22	71	21	92	60	-	60	11	7	18
23	93	18	112	75	25	100	17	19	36
24	96	43	139	135	40	175	69	76	146
25	80	55	135	60	80	140	94	56	150
26	53	40	93	75	60	135	98	88	186
27	20	60	80	70	40	110	70	85	154
28	10	38	48	35	70	105	58	68	126
29	9	30	39	-	75	75	10	55	65
30	-	44	44	-	25	25	-	40	40
31	-	35	35	5	20	25	-	34	34
32	-	38	38	-	15	15	-	21	21
33	-	18	18	-	5	5	-	3	3
34	-	-	-	-	-	-	-	-	-
35	-	1	1	-	-	-	-	-	-
36	-	9	9	-	-	-	-	-	-
Total ‰	539	461	1000	545	455	1000	447	553	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	2	2	2	2	2	2	3	3	3
Number of Fish Measured	114	86	200	109	91	200	135	165	300
Mean Length (cm)	23.41	27.51	25.30	24.55	27.09	25.70	25.49	27.02	26.34
Mean Weight (kg)	0.20	0.34	0.27	0.24	0.31	0.27	0.26	0.31	0.29
Total Weight Landed (tons)	25	35	60	104	116	220	253	374	627
Estimated Number Landed ¹	1223	1045	2267	4401	3674	8074	9687	11963	21650
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	60-100	-	-	60-100	-	-	60-200

¹ Numbers in hundreds

TABLE 39 LENGTH FREQUENCIES - REDFISH - 4X (SOUTH) - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	OT (Stern)			Otter Trawl (Side)											
				Commercial Landings											
CATCHES/LANDINGS				Apr			Apr			May			Nov		
MONTH				Can (M)											
COUNTRY															
TONNAGE	501-900			151-500											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total			
18	-	-	-	-	-	-	-	-	-	-	-	7			
21	-	-	-	-	-	-	2	-	2	-	-	-			
22	-	5	5	4	4	8	-	-	-	7	-	7			
23	15	5	20	4	-	4	9	9	18	10	10	20			
24	10	5	15	-	-	-	22	18	40	23	17	40			
25	29	10	39	17	4	21	25	20	45	36	30	66			
26	29	19	48	9	4	13	31	13	44	43	23	66			
27	29	34	63	13	13	26	29	25	54	17	26	43			
28	68	63	131	21	13	34	31	29	60	23	36	59			
29	73	73	146	34	13	47	34	22	56	30	30	60			
30	19	58	77	21	13	34	27	20	47	23	30	53			
31	29	68	97	21	21	42	38	22	60	63	7	70			
32	19	83	102	34	30	64	25	18	43	50	20	70			
33	-	83	83	56	34	90	36	16	52	40	20	60			
34	5	68	73	77	34	111	45	31	76	33	40	73			
35	5	24	29	34	38	72	36	27	63	23	33	56			
36	5	24	29	21	51	72	18	31	49	17	40	57			
37	-	10	10	17	43	60	11	29	40	17	40	57			
38	-	24	24	-	56	56	2	29	31	-	30	30			
39	-	5	5	-	30	30	-	49	49	-	10	10			
40	-	5	5	-	47	47	2	51	53	-	33	33			
41	-	-	-	-	38	38	-	56	56	-	30	30			
42	-	-	-	-	56	56	-	27	27	-	13	13			
43	-	-	-	-	47	47	-	16	16	-	10	10			
44	-	-	-	-	13	13	-	18	18	-	7	7			
45	-	-	-	-	4	4	-	-	-	-	3	3			
46	-	-	-	-	9	9	-	-	-	-	7	7			
Total ‰	335	666	1001	383	615	998	423	576	999	455	545	1003 ²			
Serial Numbers	-	-	50	-	-	51	-	-	66	-	-	171			
Number of Samples	-	-	1	-	-	1	-	-	1	-	-	1			
Number of Fish Measured	69	137	206	90	144	234	189	258	447	137	164	302 ²			
Mean Length (cm)	28.28	31.27	30.27	31.78	36.88	34.92	30.31	34.95	32.99	30.01	33.46	31.84			
Mean Weight (kg)	0.36	0.48	0.44	0.51	0.80	0.69	0.45	0.70	0.59	0.43	0.62	0.53			
Total Weight Landed (tons)	-	-	57	-	-	82	-	-	415	-	-	136			
Estimated Number Landed ¹	-	-	130	-	-	119	-	-	703	-	-	257			
Mesh(mm) or Hook(no) Size	-	-	-	-	-	-	-	-	-	-	-	-			
Range of Depths (fm)	-	-	65	-	-	250	-	-	240	-	-	220			

¹ Numbers in thousands

² Includes "Sex Undetermined"

TABLE 39 LENGTH FREQUENCIES - REDFISH - 4X - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl											
	Commercial Landings											
CATCHES/LANDINGS	Apr			May			Nov			Dec		
MONTH	USA											
COUNTRY	34-440											
TONNAGE												
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
16	-	-	-	-	-	-	-	-	-	3	-	3
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	5	-	5
20	-	-	-	-	-	-	-	-	-	5	-	5
21	-	-	-	-	-	-	-	-	-	28	8	35
22	-	-	-	-	-	-	-	-	-	40	3	43
23	-	-	-	-	-	-	43	23	67	40	10	50
24	-	-	-	-	-	-	100	33	133	98	43	140
25	-	-	-	30	10	40	150	83	233	83	106	190
26	2	-	2	90	30	120	107	57	163	78	125	203
27	28	-	28	70	40	110	60	87	147	45	128	173
28	50	16	66	100	110	210	30	73	103	5	80	85
29	100	30	130	30	130	160	10	40	50	3	45	48
30	124	54	178	10	150	160	-	33	33	-	18	18
31	78	52	130	10	40	50	3	23	27	-	3	3
32	38	66	104	-	40	40	-	23	23	-	-	-
33	20	88	108	10	50	60	-	7	7	-	-	-
34	10	94	104	10	10	20	-	3	3	-	-	-
35	2	74	76	-	20	20	-	-	-	-	-	-
36	2	52	54	-	10	10	-	-	-	-	-	-
37	-	14	14	-	-	-	-	-	-	-	-	-
38	-	4	4	-	-	-	-	-	-	-	-	-
39	-	2	2	-	-	-	-	-	-	-	-	-
Total ‰	454	546	1000	360	640	1000	513	487	1000	431	569	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	5	5	5	1	1	1	3	3	3	4	4	4
Number of Fish Measured	227	273	500	36	64	100	154	146	300	173	227	400
Mean Length (cm)	29.96	32.92	31.58	27.58	29.73	28.96	25.31	27.23	26.24	24.32	26.41	25.51
Mean Weight (kg)	0.42	0.55	0.49	0.33	0.41	0.38	0.25	0.32	0.29	0.23	0.29	0.26
Total Weight Landed (tons)	419	666	1085	62	138	200	103	123	226	316	527	843
Estimated Number Landed ¹	10032	12064	22096	1894	3368	5262	4047	3837	7884	13815	18232	32047
Mash(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	100-150	-	-	100-150	-	-	60-100	-	-	60-100

¹ Numbers in hundreds

TABLE 40 LENGTH FREQUENCIES - REDFISH - 5Y - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl											
	Commercial											
CATCHES/LANDINGS	Landings											
MONTH	Feb			Mar			Apr			May		
COUNTRY	USA											
TONNAGE	34-440											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
20	-	-	-	-	-	-	-	-	-	3	-	3
21	-	-	-	-	-	-	-	-	-	1	1	3
22	-	-	-	-	-	-	-	-	-	6	1	7
23	-	-	-	-	-	-	-	-	-	7	3	10
24	-	-	-	-	-	-	-	-	-	13	3	16
25	-	-	-	10	-	10	-	-	-	7	13	20
26	18	15	34	38	8	45	4	-	4	10	5	15
27	48	52	99	38	40	78	8	6	14	59	20	79
28	53	104	158	75	70	145	76	38	114	102	45	147
29	26	113	138	78	58	135	114	52	166	88	51	139
30	31	108	139	65	75	140	126	56	182	74	72	146
31	16	91	107	63	85	147	80	56	136	34	42	75
32	16	82	98	15	85	100	44	88	132	25	60	85
33	1	55	56	10	55	65	10	84	94	4	50	54
34	4	52	56	3	43	45	4	64	68	4	58	62
35	-	25	25	3	35	38	2	56	58	1	36	37
36	-	50	50	-	30	30	2	30	32	-	45	45
37	-	15	15	-	18	18	-	-	-	-	21	21
38	-	11	11	-	5	5	-	-	-	-	17	17
39	-	5	5	-	-	-	-	-	-	-	15	15
40	-	-	-	-	-	-	-	-	-	-	2	2
41	-	-	-	-	-	-	-	-	-	-	2	2
Total ‰	221	779	1000	395	605	1000	470	530	1000	440	560	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	4	4	4	4	4	4	5	5	5	8	8	8
Number of Fish Measured	103	297	400	158	242	400	235	265	500	350	450	800
Mean Length (cm)	28.51	30.97	30.42	29.00	31.26	30.36	29.85	31.99	30.98	28.55	31.97	30.46
Mean Weight (kg)	0.30	0.39	0.37	0.31	0.40	0.37	0.34	0.43	0.39	0.30	0.44	0.38
Total Weight Landed (tons)	186	863	1049	493	965	1458	787	1112	1899	664	1229	1893
Estimated Number Landed ¹	6244	21964	28208	15627	23935	39562	22951	25881	48833	22004	28030	50034
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	112-183	-	-	112-183	-	-	112-183	-	-	112-274

¹ Numbers in hundreds

TABLE 40 LENGTH FREQUENCIES - REDFISH - 5Y - 1971
(CONT'D)

(FREQUENCIES IN %/oo - 1 CM GROUPS)

GEAR	Otter Trawl											
	Commercial											
CATCHES/LANDINGS	Landings											
MONTH	Jun			Jul			Aug			Sep		
COUNTRY	USA											
TONNAGE	34-440											
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total	♂	♀	Total
19	-	-	-	-	1	1	-	-	-	-	-	-
20	5	-	5	5	-	5	-	-	-	3	-	3
21	12	-	12	4	-	4	-	-	-	2	-	2
22	10	2	11	16	3	19	1	-	1	4	-	4
23	10	3	13	8	1	10	3	-	3	6	1	7
24	17	2	19	4	4	8	5	1	6	8	3	11
25	9	6	15	14	3	16	8	2	10	20	5	25
26	28	13	41	21	5	26	37	8	45	34	8	42
27	42	12	54	41	8	49	51	10	61	51	12	63
28	67	21	87	45	18	64	80	21	101	47	30	78
29	74	27	101	53	20	74	56	47	103	34	34	68
30	95	43	138	101	37	137	58	58	116	43	33	76
31	63	53	116	54	30	84	43	65	107	103	32	135
32	29	60	89	35	43	78	24	71	95	95	31	126
33	10	51	61	23	24	47	10	66	76	80	29	109
34	4	46	50	6	79	84	5	66	71	6	38	44
35	1	47	47	-	72	72	1	71	72	9	38	47
36	5	65	69	-	79	79	4	54	58	3	45	48
37	-	33	33	-	56	56	-	32	32	3	44	46
38	-	20	20	-	40	40	-	19	19	2	30	32
39	-	10	10	-	19	19	-	12	12	-	17	17
40	-	3	3	-	15	15	-	8	8	-	11	11
41	-	5	5	-	8	8	-	3	3	-	6	6
42	-	1	1	-	3	3	-	1	1	-	1	1
43	-	-	-	-	-	-	-	1	1	-	-	-
Total %/oo	479	521	1000	431	569	1000	385	615	1000	552	448	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	9	9	9	5	5	5	11	11	11	14	14	14
Number of Fish Measured	420	480	900	211	289	500	455	645	1100	785	613	1398
Mean Length (cm)	28.55	32.82	30.78	28.82	34.05	31.80	28.86	32.93	31.36	29.94	33.24	31.42
Mean Weight (kg)	0.30	0.48	0.39	0.31	0.53	0.44	0.31	0.48	0.41	0.35	0.50	0.42
Total Weight Landed (tons)	648	1096	1744	206	461	667	297	723	1020	423	484	907
Estimated Number Landed ¹	21185	23073	44258	6551	8657	15208	9512	15169	24680	11947	9706	21653
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	60-100	-	-	60-100	-	-	60-100	-	-	60-100

¹ Numbers in hundreds

TABLE 40 LENGTH FREQUENCIES - REDFISH - 5Y - 1971
(CONT'D)

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl									OT (Stern)
	Commercial									Commercial
CATCHES/LANDINGS	Landings									Catches
MONTH	Oct			Nov			Dec			Nov
COUNTRY	USA									Poland
TONNAGE	34-440									>1800
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	
15	-	-	-	-	-	-	-	-	-	11
16	-	-	-	-	-	-	-	-	-	32
17	-	-	-	-	-	-	-	-	-	45
18	-	-	-	-	-	-	-	-	-	62
19	-	-	-	-	-	-	-	-	-	55
20	-	-	-	-	-	-	-	-	-	43
21	-	-	-	-	-	-	-	-	-	45
22	15	-	15	-	-	-	-	-	-	38
23	23	-	23	-	-	-	-	-	-	23
24	13	-	13	-	-	-	-	-	-	23
25	43	7	50	-	-	-	-	-	-	21
26	78	-	78	18	22	40	-	-	-	47
27	70	12	83	71	34	105	13	-	13	104
28	121	27	148	87	51	138	-	-	-	92
29	40	25	65	54	95	149	27	-	27	53
30	52	50	102	81	127	209	84	7	90	47
31	25	37	62	45	74	119	80	-	80	47
32	17	35	52	4	55	60	110	20	130	30
33	5	25	30	3	32	35	83	27	110	23
34	10	50	60	3	28	31	33	27	60	32
35	-	70	70	3	22	26	23	60	83	23
36	-	73	73	1	21	22	3	104	107	17
37	-	17	17	1	26	27	3	93	97	15
38	-	23	23	-	20	20	-	103	103	15
39	-	22	22	-	11	11	-	33	33	19
40	-	2	2	-	5	5	-	40	40	21
41	-	2	2	-	3	3	-	20	20	17
42	-	-	-	-	1	1	-	7	7	-
Total %/oo	521	479	1000	372	628	1000	460	540	1000	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-
Number of Samples	3	3	3	3	3	3	2	2	2	1
Number of Fish Measured	148	152	300	110	190	300	93	107	200	469
Mean Length (cm)	27.42	33.27	30.23	28.91	31.24	30.38	31.69	36.71	34.40	26.40
Mean Weight (kg)	0.27	0.49	0.38	0.31	0.41	0.37	0.41	0.66	0.54	-
Total Weight Landed (tons)	174	294	468	168	372	540	109	203	312	-
Estimated Number Landed ¹	6461	5950	12412	5395	9123	14519	2629	3087	5716	-
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64	-
Range of Depths (fm)	-	-	60-100	-	-	60-150	-	-	30-100	118-120

¹ Numbers in hundreds

TABLE 41 LENGTH FREQUENCIES - REDFISH - 5Ze - 1971

(FREQUENCIES IN %/oo - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Feb			May			Sep		
COUNTRY	USA								
TONNAGE	34-440								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
21	20	10	30	-	-	-	5	-	5
22	10	-	10	20	20	40	10	-	10
23	20	-	20	10	10	20	49	-	49
24	60	-	60	40	20	60	34	15	49
25	90	10	100	20	30	60	25	-	25
26	60	20	80	90	60	150	64	10	74
27	90	50	140	60	20	80	94	34	128
28	70	70	140	30	50	80	64	20	84
29	70	50	120	40	60	100	30	54	84
30	20	30	50	30	70	100	25	34	59
31	50	50	100	-	60	60	25	74	99
32	20	30	50	10	70	80	30	44	74
33	-	20	20	-	20	20	5	25	30
34	-	30	30	-	30	30	5	30	35
35	-	30	30	-	30	30	-	-	-
36	-	-	-	-	10	10	10	10	20
37	-	10	10	-	10	10	-	34	34
38	-	10	10	-	30	30	5	34	39
39	-	-	-	-	10	10	-	25	25
40	-	-	-	-	20	20	-	20	20
41	-	-	-	-	10	10	-	54	54
42	-	-	-	-	10	10	-	5	5
Total %/oo	580	420	1000	350	650	1000	478	522	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	2	2	2
Number of Fish Measured	58	42	100	35	65	100	97	106	203
Mean Length (cm)	26.83	30.07	28.19	26.60	30.71	29.27	27.33	33.22	30.40
Mean Weight (kg)	0.25	0.36	0.30	0.24	0.40	0.34	0.27	0.51	0.39
Total Weight Landed (tons)	129	135	264	135	415	550	210	432	642
Estimated Number Landed	5132	3716	8848	5576	10356	15932	7767	8488	16255
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	112-183	-	-	112-183	-	-	112-274

1 Numbers in hundreds

TABLE 41 LENGTH FREQUENCIES - REDFISH - 52e - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl						OT (Stern)
	Commercial Landings						Commercial Catches
CATCHES/LANDINGS	Oct			Nov			Oct
MONTH	USA						Poland
TONNAGE	34-440						>1800
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	
18	-	-	-	-	-	-	2
19	-	-	-	-	-	-	4
20	-	-	-	-	-	-	4
21	-	-	-	20	-	20	5
22	10	-	10	20	-	20	7
23	10	-	10	10	-	10	14
24	30	-	30	20	20	40	99
25	40	10	50	40	10	50	117
26	10	10	20	70	40	110	161
27	40	20	60	80	20	100	177
28	40	20	60	50	60	110	152
29	30	10	40	-	80	80	85
30	60	30	90	20	100	120	74
31	30	80	110	40	80	120	37
32	40	30	70	-	110	110	32
33	40	20	60	-	20	20	14
34	-	10	10	10	50	60	9
35	10	30	40	-	10	10	2
36	-	30	30	-	-	-	-
37	-	70	70	-	-	-	-
38	-	20	20	-	10	10	-
39	-	70	70	-	-	-	4
40	-	40	40	-	10	10	-
41	-	50	50	-	-	-	1
42	-	40	40	-	-	-	-
43	-	20	20	-	-	-	-
Total ‰	390	610	1000	380	620	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	1
Number of Fish Measured	39	61	100	38	62	100	434
Mean Length (cm)	28.67	35.48	32.82	26.66	30.82	28.93	27.20
Mean Weight (kg)	0.31	0.62	0.50	0.25	0.37	0.32	-
Total Weight Landed (tons)	115	357	472	64	155	219	-
Estimated Number Landed ¹	3679	5754	9433	2596	4235	6830	-
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-
Range of Depths (fm)	-	-	60-100	-	-	60-150	112-115

¹ Numbers in hundreds

TABLE 42

AGE FREQUENCIES - REDFISH - 2J, 30 - 1971

(FREQUENCIES IN ‰)

DIVISION		2J						30					
GEAR		Otter Trawl (Stern)						Otter Trawl (Stern)					
CATCHES/LANDINGS		Commercial						Research					
MONTH		Catches						Catches					
COUNTRY		May						Sep					
TONNAGE		Poland						Poland					
		>1800						>1800					
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		‰	%	Tot.	‰	%	Tot.	‰	%	Tot.	‰	%	Tot.
1970	1	-	-	-	-	-	-	10	-	-	-	6.0	
69	2	-	-	-	-	-	-	712	-	-	-	10.1	
68	3	-	-	-	-	-	-	172	-	-	-	14.7	
67	4	-	-	-	-	-	-	106	-	-	-	17.4	
66	5	30	-	-	-	25.3	-	-	-	-	-	-	
65	6	134	-	-	-	26.1	-	-	-	-	-	-	
64	7	312	-	-	-	27.4	-	-	-	-	-	-	
63	8	219	-	-	-	28.1	-	-	-	-	-	-	
62	9	163	-	-	-	29.9	-	-	-	-	-	-	
61	10	50	-	-	-	32.3	-	-	-	-	-	-	
60	11	40	-	-	-	32.7	-	-	-	-	-	-	
59	12	25	-	-	-	33.8	-	-	-	-	-	-	
58	13	11	-	-	-	35.0	-	-	-	-	-	-	
57	14	10	-	-	-	36.4	-	-	-	-	-	-	
56	15	3	-	-	-	38.0	-	-	-	-	-	-	
55	16	-	-	-	-	-	-	-	-	-	-	-	
54	17	3	-	-	-	39.0	-	-	-	-	-	-	
Total ‰		1000			-			1000			-		
Serial Numbers		-			-			-			-		
Number of Samples		1			-			1			-		
Number of Fish Aged		285			-			104			-		
Mean Age		7.97			-			2.37			-		
Mean Weight (kg)		-			-			-			-		
Total Weight Landed (tons)		-			-			-			-		
Estimated Number Landed		-			-			-			-		
Mesh(mm) or Hook(no.) Size		-			-			45			-		
Range of Depths (fm)		305			-			60-80			-		

TABLE 44

AGE FREQUENCIES - REDFISH - 5Y, 5Ze - 1971

(FREQUENCIES IN ‰)

DIVISION		5Y						5Ze					
GEAR		Otter Trawl (Stern)						Otter Trawl (Stern)					
CATCHES/LANDINGS		Commercial						Commercial					
MONTH		Catches						Catches					
COUNTRY		Nov						Oct					
TONNAGE		Poland						Poland					
		>1800						>1800					
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1966	5			10									
65	6			64					30				24.0
64	7			123					150				25.6
63	8			71					190				27.4
62	9			105					220				27.9
61	10			102					200				29.3
60	11			72					110				30.9
59	12			82					30				32.0
58	13			52					20				32.5
57	14			61					30				34.0
56	15			32					-				-
55	16			82					-				-
54	17			31					-				-
53	18			21					10				39.0
52	19			20					-				-
51	20			11					-				-
50	21			30					10				41.0
49	22			21					-				-
48	23			10					-				-
Total ‰		1000						1000					
Serial Numbers		-						-					
Number of Samples		1						1					
Number of Fish Aged		97						100					
Mean Age		11.75						9.70					
Mean Weight (kg)		-						-					
Total Weight Landed (tons)		-						-					
Estimated Number Landed		-						-					
Mesh(mm) or Hock(no.) Size		-						-					
Range of Depths (fm)		118-120						112-115					

TABLE 45 LENGTH FREQUENCIES - SILVER HAKE - 4V, 4W - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	4V			4W			
	Otter Trawl			Otter Trawl			
GEAR	Research	Commercial		Research	Commercial		
CATCHES/LANDINGS	Catches			Catches			
MONTH	Nov	Feb	Mar	Jun	Mar	Sep	Dec
COUNTRY	Fr(SP)	USSR		Fr(SP)	USSR		
TONNAGE	850-1500	BMRT, SRTM		850-1500	BMRT, SRTM		
10	-	-	-	-	-	-	6
12	-	-	-	21	-	-	7
14	-	-	-	99	-	-	7
16	-	-	-	116	-	5	3
18	-	-	-	49	-	35	-
20	-	-	-	7	-	120	5
22	-	-	-	12	14	120	29
24	-	8	-	91	161	45	130
26	5	35	13	263	259	75	221
28	25	170	166	154	214	225	118
30	120	263	336	95	222	245	154
32	170	146	259	54	96	105	196
34	225	160	132	18	19	20	91
36	240	80	51	5	4	5	19
38	135	60	20	2	2	-	3
40	40	50	12	4	1	-	3
42	10	20	9	2	3	-	3
44	20	2	2	2	1	-	-
46	10	2	-	2	1	-	2
48	-	2	-	1	2	-	3
50	-	-	-	-	1	-	-
52	-	-	-	2	-	-	-
54	-	2	-	-	-	-	-
56	-	-	-	1	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	2	2	7	9	13	1	4
Number of Fish Measured	271	400	1400	2330	2300	200	800
Mean Length (cm)	35.0	32.8	31.9	24.6	28.4	27.2	29.0
Mean Weight (kg)	-	0.28	0.20	-	0.15	0.13	0.18
Total Weight Landed (tons)	-	176	3	-	30652	8174	2
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	50	40	40	50	40	40	40
Range of Depths (fm)	-	33-60	60-77	-	41-85	115-120	77-153

TABLE 46 LENGTH FREQUENCIES - SILVER HAKE - 4X, 5Y - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	4X	5Y					
GEAR	Otter Trawl Exploratory	Otter Trawl Commercial					
CATCHES/LANDINGS	Catches	Landings					
MONTH	Jun	Jun			Jul		
COUNTRY	USSR	USA					
TONNAGE	BMRT	0-150					
SEX		♂♂	♀♀	Total	♂♂	♀♀	Total
10	2	-	-	-	-	-	-
12	30	-	-	-	-	-	-
14	94	-	-	-	-	-	-
16	109	-	-	-	1	-	1
18	67	-	-	-	-	-	-
20	17	-	-	-	11	4	15
22	20	-	-	-	18	5	23
24	70	-	-	-	11	-	11
26	203	52	1	53	69	5	74
28	188	115	132	248	143	54	196
30	110	97	90	187	169	220	380
32	50	59	44	103	35	72	107
34	18	55	22	77	19	26	45
36	9	59	38	97	17	22	39
38	8	16	20	36	4	13	17
40	1	5	71	76	4	24	28
42	-	2	37	40	-	37	37
44	1	-	43	43	-	7	7
46	1	-	18	18	-	7	7
48	2	-	6	6	-	7	7
50	-	-	11	11	-	5	5
52	-	-	-	-	-	-	-
54	-	-	1	1	-	-	-
56	-	-	2	2	-	-	-
58	-	-	2	2	-	-	-
Total ‰	1000	460	540	1000	492	508	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	-	3	3	3	7	7	7
Number of Fish Measured	6824	103	109	212	404	417	821
Mean Length (cm)	24.50	31.49	35.73	33.78	29.31	33.28	31.33
Mean Weight (kg)	-	0.20	0.30	0.26	0.18	0.26	0.22
Total Weight Landed (tons)	-	213	372	585	1353	1996	3349
Estimated Number Landed ¹	-	10493	12334	22827	74616	77017	151633
Mesh(mm) or Hook(no) Size	12	-	-	64	-	-	64
Range of Depths (fm)	-	-	-	50-100	-	-	30-55

¹ Numbers in hundreds

TABLE 46 LENGTH FREQUENCIES - SILVER HAKE - 5Y - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Aug			Oct			Nov		
COUNTRY	USA								
TONNAGE	0-150								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
14	-	2	2	-	-	-	5	-	5
16	-	-	-	-	-	-	5	-	5
18	7	5	12	10	-	10	5	-	5
20	26	7	34	38	19	58	32	5	37
22	26	2	29	10	48	58	28	14	41
24	29	12	41	58	104	212	55	65	120
26	106	19	125	29	163	192	97	106	203
28	197	89	285	29	77	106	88	78	166
30	108	161	269	67	29	96	106	51	157
32	19	70	89	58	87	144	18	41	60
34	12	41	53	29	48	77	28	78	106
36	12	17	29	-	-	-	-	46	46
38	-	19	19	10	10	19	5	9	14
40	-	2	2	-	10	10	-	14	14
42	-	5	5	-	-	-	-	5	5
44	-	7	7	-	10	10	-	14	14
46	-	-	-	-	-	-	-	-	-
48	-	-	-	-	10	10	-	5	5
Total ‰	542	458	1000	337	663	1000	470	530	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	3	3	3	1	1	1	2	2	2
Number of Fish Measured	226	191	417	35	69	104	102	115	217
Mean Length (cm)	27.93	30.99	29.33	28.16	28.30	28.25	27.42	30.67	29.15
Mean Weight (kg)	0.14	0.20	0.16	0.16	0.16	0.16	0.14	0.15	0.15
Total Weight Landed (tons)	601	715	1316	319	825	1144	647	790	1437
Estimated Number Landed ¹	43430	36704	80134	20390	40198	60589	45765	51598	97363
Mesh(mm) or Hook(no) Size	-	-	64	-	-	64	-	-	64
Range of Depths (fm)	-	-	25-40	-	-	30-35	-	-	20-50

¹ Numbers in hundreds

TABLE 47 LENGTH FREQUENCIES - SILVER HAKE - 52e - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl (Stern)			Otter Trawl		
	Commercial			Research	Commercial	
CATCHES/LANDINGS	Catches			Catches		
MONTH	Aug	Sep	Oct	Sep-Oct	May	Jun
COUNTRY	Japan			Fr(SP)	USSR	
TONNAGE	>1800			850-1500	BMRT. SRTM	
18	-	-	-	2	-	-
20	-	-	-	4	-	-
22	-	-	-	9	-	-
24	-	-	-	28	18	7
26	7	-	95	127	47	80
28	118	164	172	294	148	150
30	165	261	239	259	152	221
32	118	233	172	158	190	221
34	73	146	134	61	170	153
36	141	86	80	36	125	84
38	157	38	15	11	38	40
40	128	50	42	6	25	16
42	76	23	10	3	16	9
44	15	3	15	2	27	4
46	-	-	10	-	18	6
48	-	-	14	1	9	4
50	-	-	-	-	11	2
52	-	-	-	-	4	2
54	-	-	-	-	2	1
Total ‰	998	1003	998	1001	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	2	2	-	2	8
Number of Fish Measured	406	399	401	2932	447	1605
Mean Length (cm)	30.81	33.33	32.97	30.10	33.70	32.30
Mean Weight (kg)	-	-	-	-	0.230	0.244
Total Weight Landed (tons)	1	1	2	-	5817	10599
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	-	50	40	40
Range of Depths (fm)	55-121	43-72	40	-	31-50	38-57

TABLE 47 LENGTH FREQUENCIES - SILVER HAKE - 52e - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	OT (Stern)	Otter Trawl					
	Exploratory	Commercial					
CATCHES/LANDINGS	Catches	Catches					
MONTH	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COUNTRY	USSR						
TONNAGE	BMRT	BMRT, SETM					
10	+	-	-	-	-	-	-
12	3	-	-	-	-	-	-
14	4	-	-	-	-	-	-
16	30	-	-	-	-	-	-
18	36	1	+	1	4	-	-
20	28	1	1	7	15	+	-
22	34	8	3	13	21	1	-
24	51	45	32	40	19	15	-
26	217	117	126	104	60	69	45
28	240	237	288	225	149	88	133
30	157	285	315	264	226	163	310
32	84	131	134	166	268	216	292
34	60	79	51	78	143	236	135
36	22	49	25	48	40	96	58
38	13	24	11	23	24	38	8
40	8	13	4	12	10	29	10
42	4	4	3	7	16	18	5
44	4	3	2	5	2	8	2
46	3	2	2	6	2	8	-
48	1	+	1	2	-	2	-
50	-	1	2	2	-	7	-
52	1	-	-	1	1	4	2
54	+	-	-	-	-	2	-
Total ‰	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	-	14	22	13	4	17	2
Number of Fish Measured	6629	2700	4408	2500	800	3330	400
Mean Length (cm)	28.2	30.5	30.1	30.8	31.4	33.3	31.8
Mean Weight (kg)	-	0.202	0.198	0.220	0.238	0.292	0.238
Total Weight Landed (tons)	-	3512	13283	2696	1896	440	381
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	12	40	40	40	40	40	40
Range of Depths (fm)	-	33-55	33-61	27-61	41-88	27-88	55-148

TABLE 48 LENGTH FREQUENCIES - SILVER HAKE - 52w - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl							
	Exploratory	Commercial						
CATCHES/LANDINGS	Catches							
MONTH	Jun	Jun	Jul	Aug	Sep	Oct	Nov	Dec
COUNTRY	USSR							
TONNAGE	BMRT	BMRT, SRIM						
10	6	-	-	-	-	-	-	-
12	18	8	-	-	-	-	-	-
14	15	12	-	-	-	-	-	-
16	14	3	-	-	-	-	+	-
18	80	30	-	-	-	2	6	-
20	178	73	-	-	-	9	18	-
22	135	59	5	18	4	17	41	15
24	89	68	25	53	21	61	121	50
26	94	86	170	157	106	190	264	242
28	116	127	305	267	230	286	206	340
30	52	116	232	196	238	227	173	197
32	59	84	97	87	209	97	77	105
34	38	38	50	67	78	42	34	28
36	15	31	30	48	44	23	12	13
38	11	31	7	37	22	15	13	7
40	15	48	12	12	16	9	9	3
42	18	51	12	18	9	7	6	-
44	9	30	8	10	10	7	8	-
46	16	51	10	8	5	3	5	-
48	8	17	10	12	6	2	3	-
50	9	18	8	5	2	2	3	-
52	5	8	-	3	-	1	1	-
54	+	8	8	2	-	-	+	-
56	-	2	8	-	-	-	-	-
58	-	1	3	-	-	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-	-	-
Number of Samples	-	3	2	3	4	17	16	2
Number of Fish Measured	3616	606	400	600	800	3300	3210	400
Mean Length (cm)	26.3	31.7	31.0	30.9	31.3	29.6	28.7	28.9
Mean Weight (kg)	-	0.184	0.219	0.207	0.184	0.181	0.164	0.162
Total Weight Landed (tons)	-	-	4316	2	3	3388	67	162
Estimated Number Landed	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	12	40	40	40	40	40	40	40
Range of Depths (fm)	-	68	50-55	36-55	30-55	33-50	33-44	93-110

TABLE 49 LENGTH FREQUENCIES - SILVER HAKE - 6B, 6C - 1971

(FREQUENCIES IN % - 2 CM GROUPS)

DIVISION	6B			6C	
GEAR	Otter Trawl (Stern)				
CATCHES/LANDINGS	Commercial				
MONTH	Catches				
COUNTRY	Jul	Nov	Dec	Oct	Nov
TONNAGE	Japan				
	>1800				
18	-	-	-	-	5
20	-	-	-	7	34
22	5	-	3	208	378
24	80	90	97	356	412
26	353	225	316	309	138
28	239	195	287	101	30
30	150	170	125	14	5
32	85	150	124	-	-
34	60	85	46	7	-
36	30	70	3	-	-
38	-	15	-	-	-
Total %	1002	1000	1001	1002	1002
Serial Numbers	-	-	-	-	-
Number of Samples	1	1	3	1	1
Number of Fish Measured	201	200	393	149	204
Mean Length (cm)	29.19	30.38	29.03	25.66	24.47
Mean Weight (kg)	-	-	-	-	-
Total Weight Landed (tons)	0	5	10	10	0
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	-	-	-
Range of Depths (fm)	55	60	59-77	81	70

TABLE 49 LENGTH FREQUENCIES - SILVER HAKE - 6 - 1971
(CONT'D)

(FREQUENCIES IN % - 2 CM GROUPS)

GEAR	Otter Trawl				
	Exploratory	Commercial			
CATCHES/LANDINGS	Catches				
MONTH	Jun	Jan	Jun	Jul	Nov
COUNTRY	USSR				
TONNAGE	BMRT	BMRT, SRIM			
10	3	-	-	-	-
12	3	-	13	-	-
14	17	-	-	-	-
16	4	-	-	-	+
18	26	-	-	-	1
20	121	8	13	-	41
22	64	110	105	15	65
24	98	253	26	40	134
26	225	255	79	150	257
28	208	146	-	290	206
30	130	65	13	220	150
32	42	47	92	105	71
34	25	35	184	80	28
36	8	16	158	50	20
38	7	16	66	35	12
40	8	16	40	10	4
42	3	14	40	5	5
44	5	9	40	-	3
46	+	4	13	-	1
48	1	1	79	-	+
50	2	4	13	-	2
52	-	-	-	-	+
54	+	1	26	-	-
Total %	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	-	6	1	1	7
Number of Fish Measured	6556	1000	76	200	1404
Mean Length (cm)	26.7	27.8	35.2	30.2	28.0
Mean Weight (kg)	0.159	0.165	0.308	0.187	0.168
Total Weight Landed (tons)	-	3	-	2	2170
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no) Size	12	40	40	40	40
Range of Depths (fm)	-	22-27	30-33	27-30	22-80

TABLE 51

AGE FREQUENCIES - SILVER HAKE - 4W - 1971

(FREQUENCIES IN %)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Mar						Aug					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		88	92	Tot.	88	92	Tot.	88	92	Tot.	88	92	Tot.
1970	1	-	-	-	-	-	-	38	75	129	19.4	18.4	18.4
69	2	35	18	53	25.2	25.6	25.3	43	16	59	25.7	22.5	24.9
68	3	173	187	360	26.0	27.3	27.1	118	92	210	28.6	29.4	29.0
67	4	204	222	426	29.5	29.9	29.7	162	178	340	31.0	32.5	31.8
66	5	20	99	119	30.9	32.8	32.5	27	167	194	34.1	34.8	34.7
65	6	2	18	20	32.5	35.2	34.9	5	43	48	34.5	37.7	37.4
64	7	-	8	8	-	41.0	41.0	5	-	5	38.5	-	38.5
63	8	-	10	10	-	45.3	45.3	-	5	5	-	48.5	48.5
62	9	-	4	4	-	48.5	48.5	-	5	5	-	48.5	48.5
61	10	-	-	-	-	-	-	-	5	5	-	54.5	54.5
Total %		434	566	1000	28.2	30.2	29.3	398	586	1000	29.0	31.5	30.2
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	5	-	-	-	-	-	1	-	-	-
Number of Fish Aged		211	276	487	-	-	-	74	109	186	-	-	-
Mean Age		3.45	3.93	3.74	-	-	-	3.33	3.96	3.66	-	-	-
Mean Weight (kg)		-	-	0.153	-	-	-	-	-	0.174	-	-	-
Total Weight Landed (tons)		-	-	30652	-	-	-	-	-	21101	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	75-155	-	-	-	-	-	190-210	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Sep						Dec					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		88	92	Tot.	88	92	Tot.	88	92	Tot.	88	92	Tot.
1970	1	163	141	304	21.7	20.4	21.0	21	10	51	23.8	23.2	20.5
69	2	54	-	54	26.5	-	26.5	160	159	319	25.6	25.7	25.7
68	3	206	175	381	28.6	30.2	29.4	54	139	193	29.3	30.0	29.8
67	4	153	75	228	30.5	31.4	30.8	52	242	294	30.1	32.2	31.8
66	5	11	22	33	32.5	34.5	33.8	7	95	102	33.5	33.9	33.9
65	6	-	-	-	-	-	-	-	20	20	-	37.5	37.5
64	7	-	-	-	-	-	-	-	-	-	-	-	-
63	8	-	-	-	-	-	-	-	14	14	-	45.0	45.0
62	9	-	-	-	-	-	-	-	7	7	-	49.5	49.5
Total %		587	413	1000	27.1	27.3	27.2	294	686	1000	27.1	30.9	29.5
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	2	-	-	-
Number of Fish Aged		54	38	92	-	-	-	87	202	295	-	-	-
Mean Age		2.65	2.61	2.63	-	-	-	2.54	3.62	3.25	-	-	-
Mean Weight (kg)		-	-	0.131	-	-	-	-	-	0.180	-	-	-
Total Weight Landed (tons)		-	-	8174	-	-	-	-	-	2	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	210-220	-	-	-	-	-	140-280	-	-	-

TABLE 52

AGE FREQUENCIES - SILVER HAKE - 52e - 1971

(FREQUENCIES IN %/oo)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		May					Jun						
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	%oo Frequency			Mean Length			%oo Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	-	-	-	-	-	-	7	21	107	21.5	19.0	17.3
69	2	67	24	91	25.2	26.1	25.4	60	39	107	23.8	23.0	23.3
68	3	203	182	385	26.9	27.8	27.3	130	89	219	27.5	28.0	27.7
67	4	86	285	371	29.3	29.8	29.7	103	153	256	29.7	30.2	30.0
66	5	10	85	95	33.5	33.8	33.8	45	48	93	33.2	34.2	33.7
65	6	-	29	29	-	36.5	36.5	12	40	52	35.6	36.5	36.3
64	7	-	14	14	-	40.5	40.5	8	38	46	36.9	40.0	39.5
63	8	-	10	10	-	43.5	43.5	4	73	77	37.5	43.3	43.0
62	9	-	5	5	-	44.5	44.5	-	38	38	-	46.2	46.2
61	10	-	-	-	-	-	-	-	2	2	-	52.5	52.5
60	11	-	-	-	-	-	-	-	3	3	-	54.5	54.5
Total %oo		366	634	1000	27.3	30.2	29.5	369	544	1000	28.7	33.4	30.3
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	2	-	-	-	-	-	12	-	-	-
Number of Fish Aged		77	135	210	-	-	-	215	317	583	-	-	-
Mean Age		3.10	3.75	3.69	-	-	-	3.56	4.96	4.11	-	-	-
Mean Weight (kg)		-	-	0.168	-	-	-	-	-	0.187	-	-	-
Total Weight Landed (tons)		-	-	5817	-	-	-	-	-	10599	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	55-90	-	-	-	-	-	70-105	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jul					Aug						
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	%oo Frequency			Mean Length			%oo Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	-	-	-	-	-	-	23	23	46	20.5	19.5	20.0
69	2	35	25	60	25.4	26.5	25.8	69	23	92	26.2	25.5	26.0
68	3	210	120	330	29.0	29.7	29.3	356	92	448	28.8	30.3	29.1
67	4	155	190	345	31.6	32.1	31.9	219	80	299	31.8	32.5	32.0
66	5	100	70	170	33.3	35.1	34.0	23	69	92	33.5	34.5	34.3
65	6	5	50	55	36.5	38.1	38.0	-	23	23	-	38.5	38.5
64	7	-	15	15	-	41.8	41.8	-	-	-	-	-	-
63	8	-	15	15	-	43.8	43.8	-	-	-	-	-	-
62	9	-	-	-	-	-	-	-	-	-	-	-	-
61	10	-	10	10	-	49.5	49.5	-	-	-	-	-	-
Total %oo		505	495	1000	30.5	33.3	31.8	690	310	1000	29.4	31.2	29.9
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	2	-	-	-	-	-	1	-	-	-
Number of Fish Aged		101	99	200	-	-	-	60	27	87	-	-	-
Mean Age		3.66	4.33	4.00	-	-	-	3.22	3.71	3.37	-	-	-
Mean Weight (kg)		-	-	0.230	-	-	-	-	-	0.198	-	-	-
Total Weight Landed (tons)		-	-	3512	-	-	-	-	-	13283	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	60-100	-	-	-	-	-	60-110	-	-	-

TABLE 53

AGE FREQUENCIES - SILVER HAKE - 52w - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jun						Jul					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	2	14	49	18.5	19.5	15.9	-	-	-	-	-	-
69	2	106	94	216	23.7	22.3	22.8	110	10	120	26.0	24.5	25.2
68	3	121	66	187	27.7	28.3	28.0	440	90	530	28.2	29.6	28.5
67	4	74	76	150	29.6	30.7	30.1	120	130	250	30.2	31.7	31.0
66	5	39	26	65	33.1	33.6	33.3	50	10	60	33.7	36.5	34.1
65	6	19	14	33	35.3	37.2	36.1	10	-	10	36.5	-	36.5
64	7	5	77	82	36.5	40.5	40.3	10	10	20	40.5	42.5	41.5
63	8	-	103	103	-	43.8	43.8	-	10	10	-	46.5	46.5
62	9	-	75	75	-	47.5	47.5	-	-	-	-	-	-
61	10	-	36	36	-	52.2	52.2	-	-	-	-	-	-
60	11	-	2	2	-	54.5	54.5	-	-	-	-	-	-
59	12	-	2	2	-	56.5	56.5	-	-	-	-	-	-
Total ‰		366	585	1000	28.0	36.4	32.3	740	260	1000	28.9	32.0	29.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	12	-	-	-	-	-	1	-	-	-
Number of Fish Aged		144	240	405	-	-	-	74	26	100	-	-	-
Mean Age		3.32	5.75	4.64	-	-	-	3.24	3.88	3.41	-	-	-
Mean Weight (kg)		-	-	0.239	-	-	-	-	-	0.168	-	-	-
Total Weight Landed (tons)		-	-	1327	-	-	-	-	-	4316	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	90-100	-	-	-	-	-	90-100	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Aug						Sep					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	-	-	-	-	-	-	20	11	31	21.5	22.5	21.8
69	2	20	20	40	25.5	25.5	25.5	117	192	309	25.2	25.9	25.7
68	3	352	51	403	28.3	29.3	28.5	149	246	395	28.5	29.5	29.1
67	4	94	217	311	30.9	31.9	31.6	53	96	149	33.3	31.2	31.9
66	5	31	83	114	35.1	34.5	34.7	10	11	21	34.5	36.5	35.5
65	6	-	31	31	-	37.2	37.2	10	11	21	36.5	38.5	37.5
64	7	-	20	20	-	39.5	39.5	-	32	32	-	40.5	40.5
63	8	-	31	31	-	45.1	45.1	-	42	42	-	45.0	45.0
62	9	-	30	30	-	49.8	49.8	-	-	-	-	-	-
61	10	-	20	20	-	53.5	53.5	-	-	-	-	-	-
Total ‰		497	503	1000	29.1	35.2	32.2	359	641	1000	28.1	30.4	29.6
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	1	-	-	-
Number of Fish Aged		48	49	97	-	-	-	34	60	94	-	-	-
Mean Age		3.27	5.01	4.15	-	-	-	2.85	3.43	3.22	-	-	-
Mean Weight (kg)		-	-	0.216	-	-	-	-	-	0.170	-	-	-
Total Weight Landed (tons)		-	-	2	-	-	-	-	-	3	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	65-100	-	-	-	-	-	55-100	-	-	-

TABLE 54

AGE FREQUENCIES - SILVER HAKE - 5Zw, 6 - 1971

(FREQUENCIES IN ‰)

DIVISION		5Zw											
GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Oct						Dec					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		88	89	Tot.	88	89	Tot.	88	89	Tot.	88	89	Tot.
1970	1	17	28	45	22.1	21.5	21.7	10	42	52	22.5	22.5	22.5
69	2	128	80	208	25.6	25.6	25.6	372	102	474	26.2	25.9	26.2
68	3	218	249	467	28.3	28.9	28.7	227	196	423	28.1	29.9	28.9
67	4	93	135	228	30.8	31.9	31.5	41	-	41	30.0	-	30.0
66	5	3	11	14	32.5	33.8	33.5	-	10	10	-	36.5	36.5
65	6	-	7	7	-	37.5	37.5	-	-	-	-	-	-
64	7	-	21	21	-	41.8	41.8	-	-	-	-	-	-
63	8	-	7	7	-	44.5	44.5	-	-	-	-	-	-
62	9	-	3	3	-	50.5	50.5	-	-	-	-	-	-
Total ‰		459	541	1000	27.9	29.9	28.9	650	350	1000	27.1	28.0	27.4
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	3	-	-	-	-	-	1	-	-	-
Number of Fish Aged		133	156	289	-	-	-	63	34	97	-	-	-
Mean Age		2.86	3.33	3.12	-	-	-	2.46	2.53	2.48	-	-	-
Mean Weight (kg)		-	-	0.150	-	-	-	-	-	0.132	-	-	-
Total Weight Landed (tons)		-	-	3388	-	-	-	-	-	162	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	60-90	-	-	-	-	-	170-200	-	-	-

DIVISION		6											
GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jan						Mar					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		88	89	Tot.	88	89	Tot.	88	89	Tot.	88	89	Tot.
1970	1	-	-	-	-	-	-	-	-	-	-	-	-
69	2	132	146	278	23.5	23.6	23.6	-	10	10	-	22.5	22.5
68	3	162	166	328	25.9	26.1	26.0	52	30	82	27.7	27.8	27.7
67	4	96	111	207	28.8	29.6	29.2	104	126	230	29.5	29.5	29.5
66	5	49	24	73	33.0	33.7	33.2	95	148	243	32.9	33.5	33.3
65	6	20	18	38	34.7	36.3	35.3	136	93	229	35.3	36.3	35.7
64	7	6	34	40	37.2	39.6	39.2	31	83	114	38.5	40.2	39.8
63	8	-	26	26	-	43.4	43.4	-	51	51	-	43.3	43.3
62	9	-	8	8	-	46.0	46.0	-	41	41	-	46.5	46.5
61	10	-	2	2	-	50.5	50.5	-	-	-	-	-	-
Total ‰		465	535	1000	27.1	29.0	28.1	418	582	1000	32.6	35.4	34.2
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	5	-	-	-	-	-	1	-	-	-
Number of Fish Aged		224	260	484	-	-	-	40	56	96	-	-	-
Mean Age		3.31	3.82	3.54	-	-	-	4.98	5.61	5.35	-	-	-
Mean Weight (kg)		-	-	0.137	-	-	-	-	-	0.294	-	-	-
Total Weight Landed (tons)		-	-	1111	-	-	-	-	-	381	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	40-50	-	-	-	-	-	40-50	-	-	-

TABLE 55

AGE FREQUENCIES - SILVER HAKE - 6 - 1971

(FREQUENCIES IN %)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jun						Oct					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	-	-	13	-	-	12.5	78	160	238	20.8	21.7	21.4
69	2	66	118	184	24.9	22.7	23.5	151	244	395	24.4	25.2	24.9
68	3	40	26	66	26.5	31.5	28.5	67	213	280	28.7	29.2	29.1
67	4	-	53	53	-	32.5	32.5	10	52	62	29.5	32.1	31.7
66	5	53	223	276	34.5	35.0	34.9	-	10	10	-	35.5	35.5
65	6	-	118	118	-	36.7	36.7	-	5	5	-	36.5	36.5
64	7	-	120	120	-	40.5	40.5	-	-	-	-	-	-
63	8	-	39	39	-	45.2	45.2	-	-	-	-	-	-
62	9	-	105	105	-	48.7	48.7	-	5	5	-	50.5	50.5
61	10	-	26	26	-	52.5	52.5	-	5	5	-	52.5	52.5
Total %		159	828	1000	28.5	36.8	35.4	306	694	1000	24.6	26.8	26.1
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	1	-	-	-
Number of Fish Aged		12	63	76	-	-	-	59	134	193	-	-	-
Mean Age		3.21	5.94	5.24	-	-	-	2.03	2.41	2.29	-	-	-
Mean Weight (kg)		-	-	0.308	-	-	-	-	-	-	-	-	-
Total Weight Landed (tons)		-	-	3	-	-	-	-	-	12	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	55-60	-	-	-	-	-	55-75	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Nov						Dec					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	21	-	31	22.5	-	22.5	-	-	-	-	-	-
69	2	206	52	289	26.0	26.9	26.0	52	52	104	26.5	26.9	26.7
68	3	340	133	473	27.6	29.9	28.2	188	375	563	29.1	30.2	29.8
67	4	73	82	155	29.4	31.7	30.6	31	261	292	29.8	32.7	32.4
66	5	-	21	21	-	35.5	35.5	21	10	31	35.5	34.5	35.2
65	6	-	21	21	-	36.5	36.5	-	-	-	-	-	-
64	7	-	10	10	-	40.5	40.5	-	10	10	-	40.5	40.5
Total %		640	319	1000	27.1	31.0	28.3	292	708	1000	29.1	31.1	30.5
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	1	-	-	-
Number of Fish Aged		62	31	97	-	-	-	28	68	96	-	-	-
Mean Age		2.73	3.55	2.95	-	-	-	3.07	3.38	3.29	-	-	-
Mean Weight (kg)		-	-	0.168	-	-	-	-	-	0.203	-	-	-
Total Weight Landed (tons)		-	-	2170	-	-	-	-	-	110	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	40-145	-	-	-	-	-	70-190	-	-	-

TABLE 56

AGE/LENGTH KEYS - SILVER HAKE - 1971

(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

DIVISION	COUNTRY	QUARTER	
4V	USSR	I.	February-March
4W	Fr(SP)	II.	June
	USSR	I.	March
	USSR	III.	August-September
	USSR	IV.	December
4X	USSR	II.	June
5Ze	Fr(SP)	III-IV.	September-October
	USSR	II.	May-June
	USSR	III.	July-September
	USSR	IV.	October-December
5Zw	USSR	II.	June
	USSR	III.	July-September
	USSR	IV.	October-December
6	USSR	I.	January
	USSR	II.	June
	USSR	IV.	November

TABLE 57 LENGTH FREQUENCIES - AMERICAN PLAICE - 1C, 1D - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	1C			1D			
	Otter Trawl			Otter Trawl			
GEAR	Research			Research			
CATCHES/LANDINGS	Catches			Catches			
MONTH	May	Jun	Aug	Jan	May	Jun	Aug
COUNTRY	Den(G)			Den(G)			
TONNAGE	151-500			151-500			
7	-	-	-	1	-	-	-
8	-	-	-	5	-	2	-
9	-	-	-	4	-	-	-
10	-	-	-	7	2	-	9
11	2	-	-	11	1	2	26
12	-	-	-	27	4	2	-
13	2	-	5	16	14	4	-
14	11	3	5	38	23	4	-
15	9	3	13	48	29	4	34
16	13	3	13	41	40	8	78
17	21	19	23	26	46	20	69
18	14	19	26	13	34	52	86
19	21	24	16	12	26	93	86
20	38	43	37	12	43	79	43
21	32	62	37	13	39	60	52
22	93	89	47	16	40	50	78
23	93	99	78	22	57	18	60
24	75	86	81	19	73	46	43
25	123	121	107	25	59	36	52
26	114	126	104	33	79	54	26
27	82	78	91	34	65	58	26
28	55	86	57	31	50	50	52
29	29	35	34	34	45	50	9
30	39	38	31	30	55	38	17
31	23	13	16	32	27	46	26
32	18	-	16	32	23	42	34
33	11	3	8	48	18	28	9
34	9	5	29	45	20	16	26
35	20	5	21	56	20	36	-
36	11	-	13	61	18	38	-
37	20	11	39	53	12	28	26
38	5	5	21	44	12	18	9
39	9	11	18	34	11	12	9
40	2	11	5	28	7	2	-
41	2	3	5	18	3	2	-
42	-	-	-	8	1	6	-
43	-	-	-	8	1	2	-
44	2	-	3	5	1	-	-
45	-	-	-	3	1	-	9
46	-	-	-	2	1	-	-
47	2	-	-	2	-	-	-
48	-	-	-	1	-	-	9
49	-	-	-	1	-	-	-
Total ‰	1000	1001	999	999	1000	1006	1003
Serial Numbers	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	1
Number of Fish Measured	559	372	383	3269	2200	504	116
Mean Length (cm)	25.4	25.1	26.3	28.1	25.5	26.1	22.9
Mean Weight (kg)	-	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	36	36	42	36	36	36	36
Range of Depths (fm)	248-315	259-314	259-286	165	165	110-138	165

TABLE 58 LENGTH FREQUENCIES - AMERICAN PLAICE - 3L - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Feb			Mar			May		
COUNTRY	Can(N)								
TONNAGE	501-900								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
23	1	-	1	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	1	1	2
26	1	-	1	-	-	-	-	-	-
27	1	1	2	-	-	-	-	1	1
28	1	1	2	5	-	5	4	3	7
29	3	4	7	-	-	-	5	2	7
30	5	3	8	10	5	15	9	6	15
31	7	5	12	15	5	20	13	6	19
32	12	11	23	10	5	15	18	14	32
33	14	17	31	10	5	15	22	12	34
34	21	25	46	5	5	10	31	12	43
35	24	22	46	15	25	40	34	19	53
36	25	25	50	15	20	35	29	23	52
37	31	26	57	10	25	35	33	27	60
38	29	30	59	10	5	15	35	27	62
39	27	19	46	-	45	45	31	21	52
40	29	32	61	5	25	30	31	22	53
41	34	31	65	5	25	30	25	24	49
42	23	28	51	5	55	60	35	20	55
43	17	34	51	5	20	25	23	27	50
44	19	36	55	5	60	65	20	24	44
45	12	36	48	10	50	60	18	22	40
46	10	32	42	-	45	45	14	34	48
47	7	25	32	5	45	50	10	27	37
48	3	29	32	5	20	25	6	28	34
49	5	21	26	-	30	30	5	27	32
50	1	19	20	-	10	10	1	27	28
51	1	23	24	5	15	20	1	18	19
52	-	15	15	-	30	30	-	13	13
53	-	13	13	-	20	20	-	11	11
54	1	11	12	-	20	20	-	9	9
55	-	10	10	-	50	50	-	11	11
56	-	13	13	-	10	10	-	8	8
57	-	7	7	-	55	55	-	4	4
58	-	9	9	-	30	30	-	2	2
59	-	11	11	-	20	20	-	4	4
60	-	5	5	-	25	25	-	3	3
61	-	6	6	-	5	5	-	2	2
62	-	3	3	-	10	10	-	-	-
63	-	3	3	-	5	5	-	-	-
64	-	3	3	-	5	5	-	1	1
65	-	1	1	-	10	10	-	-	-
66	-	1	1	-	-	-	-	-	-
67	-	1	1	-	5	5	-	1	1
68	-	1	1	-	-	-	-	-	-
69	-	-	-	-	-	-	-	-	-
70	-	-	-	-	5	5	-	-	-
Total ‰	364	648	1012	155	850	1005	454	543	997
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	-	-	3	-	-	1	-	-	2
Number of Fish Measured	-	-	-	-	-	-	-	-	-
Mean Length (cm)	38.79	44.23	42.28	37.23	47.87	46.23	38.47	43.62	41.27
Mean Weight (kg)	-	-	0.81	-	-	0.90	-	-	0.65
Total Weight Landed (tons)	-	-	1215	-	-	1780	-	-	3468
Estimated Number Landed ¹	-	-	1500	-	-	1972	-	-	5303
Mesh(mm) or Hook(no) Size	-	-	Large	-	-	Large	-	-	Large
Range of Depths (fm)	-	-	45-120	-	-	69	-	-	75-85

¹ Numbers in thousands

TABLE 58 LENGTH FREQUENCIES - AMERICAN PLAICE - 3L - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Stern)								
	Commercial Landings								
CATCHES/LANDINGS	Aug			Nov			Nov		
MONTH	Can(N)			501-900			Can(M)		
COUNTRY									
TONNAGE									
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
26	-	-	-	1	-	1	-	-	-
27	-	-	-	3	2	5	-	-	-
28	1	-	1	1	3	4	-	-	-
29	1	1	2	4	2	6	-	-	-
30	4	4	8	6	5	11	-	-	-
31	5	2	7	16	4	20	-	-	-
32	9	6	15	17	10	27	-	-	-
33	9	8	17	25	12	37	-	-	-
34	10	11	21	25	14	39	-	-	-
35	12	15	27	33	20	53	23	6	29
36	17	21	38	30	17	47	29	-	29
37	19	19	38	39	13	52	29	-	29
38	21	24	45	40	22	62	23	17	40
39	24	23	47	39	19	58	46	6	52
40	28	22	50	37	21	58	17	6	23
41	29	23	52	39	20	59	11	23	34
42	36	27	63	29	22	51	34	23	57
43	33	30	63	20	26	46	34	17	51
44	30	27	57	15	23	38	17	11	28
45	23	37	60	17	26	43	40	6	46
46	24	32	56	9	27	36	46	34	80
47	16	32	48	11	24	35	17	23	40
48	11	29	40	3	24	27	17	34	51
49	7	24	31	3	26	29	34	11	45
50	6	24	30	1	23	24	6	51	57
51	3	31	34	1	18	19	11	17	28
52	1	24	25	-	18	18	6	34	40
53	-	21	21	-	12	12	-	29	29
54	-	17	17	-	13	13	-	29	29
55	-	17	17	-	9	9	-	11	11
56	-	12	12	-	9	9	6	34	40
57	-	10	10	-	10	10	6	23	29
58	-	11	11	-	6	6	-	23	23
59	-	6	6	-	6	6	-	11	11
60	-	5	5	-	7	7	-	17	17
61	-	4	4	-	5	5	-	11	11
62	-	2	2	-	3	3	-	6	6
63	-	4	4	-	2	2	-	11	11
64	-	4	4	-	4	4	-	6	6
65	-	3	3	-	3	3	-	6	6
66	-	3	3	-	2	2	-	6	6
67	-	1	1	-	-	-	-	-	-
68	-	1	1	-	2	2	-	6	6
69	-	1	1	-	-	-	-	-	-
70	-	1	1	-	-	-	-	-	-
Total ‰	379	619	998	464	534	998	452	548	1000
Serial Numbers	-	-	-	-	-	-	-	-	172
Number of Samples	-	-	4	-	-	3	-	-	1
Number of Fish Measured	-	-	-	-	-	-	79	96	175
Mean Length (cm)	40.99	46.05	44.13	38.27	45.08	41.91	42.94	51.03	47.38
Mean Weight (kg)	-	-	0.92	-	-	0.80	0.75	1.34	1.08
Total Weight Landed (tons)	-	-	2110	-	-	3039	-	-	247
Estimated Number Landed ¹	-	-	2286	-	-	3808	-	-	229
Mesh(mm) or Hook(no) Size	-	-	Large	-	-	Large	-	-	114
Range of Depths (fm)	-	-	35-110	-	-	35-106	-	-	82

¹ Numbers in thousands

TABLE 59 LENGTH FREQUENCIES - AMERICAN PLAICE - 3Ps, 4T - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3Ps						4T		
	Otter Trawl Research						Otter Trawl (Side) Commercial		
CATCHES/LANDINGS	Catches						Landings		
MONTH	Jul			Nov			Jun		
COUNTRY	Fr(SP)						Can(M)		
TONNAGE	850-1500						51-150		
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
13	1	-	1	1	1	2	-	-	-
14	1	6	7	2	3	5	-	-	-
15	3	4	7	4	7	11	-	-	-
16	9	9	18	-	5	5	-	-	-
17	9	12	21	4	9	13	-	-	-
18	6	17	23	5	10	15	-	-	-
19	7	24	31	10	8	18	-	-	-
20	14	17	31	9	20	29	-	-	-
21	21	27	48	18	21	39	-	-	-
22	21	26	47	24	22	46	-	-	-
23	18	26	44	26	28	54	-	-	-
24	18	26	44	22	22	44	-	-	-
25	15	10	25	26	26	52	-	-	-
26	23	13	36	28	30	58	-	-	-
27	21	41	62	25	23	48	-	-	-
28	17	19	36	27	40	67	-	-	-
29	21	22	43	26	33	59	-	-	-
30	27	18	45	25	25	50	16	-	16
31	20	24	44	24	20	44	22	5	27
32	15	24	39	21	21	42	27	38	65
33	24	10	34	12	20	32	33	11	44
34	14	12	26	14	12	26	43	38	81
35	18	13	31	9	14	23	54	22	76
36	8	7	15	10	12	22	22	60	82
37	15	17	32	8	8	16	27	54	81
38	11	17	28	8	10	18	16	33	49
39	5	13	18	4	6	10	27	22	49
40	17	7	24	5	4	9	11	27	38
41	17	18	35	1	4	5	-	22	22
42	5	9	14	4	5	9	-	49	49
43	3	7	10	4	6	10	-	16	16
44	7	9	16	3	4	7	-	33	33
45	3	2	5	1	3	4	-	16	16
46	4	4	8	4	3	7	-	38	38
47	2	3	5	2	3	5	-	27	27
48	6	2	8	7	2	9	-	11	11
49	3	1	4	2	3	5	-	11	11
50	3	2	5	1	3	4	-	33	33
51	3	1	4	4	1	5	-	33	33
52	-	7	7	1	-	1	-	27	27
53	-	1	1	4	5	9	-	11	11
54	-	2	2	1	4	5	-	22	22
55	-	3	3	1	5	6	-	-	-
56	-	3	3	-	4	4	-	16	16
57	-	1	1	1	5	6	-	16	16
58	-	-	-	-	5	5	-	-	-
59	-	3	3	-	8	8	-	-	-
60	-	-	-	-	7	7	-	-	-
61	-	3	3	-	3	3	-	5	5
62	-	-	-	-	4	4	-	-	-
63	-	-	-	-	2	2	-	5	5
64	-	2	2	-	5	5	-	-	-
65	-	1	1	-	2	2	-	-	-
66	-	-	-	-	1	1	-	-	-
67	-	-	-	-	4	4	-	-	-
68	-	-	-	-	-	-	-	-	-
69	-	-	-	-	1	1	-	-	-
Total ‰	455	545	1000	438	562	1000	298	701	999
Serial Numbers	-	-	-	-	-	-	-	-	94
Number of Samples	-	-	10	-	-	-	-	-	1
Number of Fish Measured	301	364	665	943	1245	2188	55	129	184
Mean Length (cm)	-	-	-	-	-	-	34.76	42.80	40.40
Mean Weight (kg)	-	-	-	-	-	-	0.65	1.28	1.09
Total Weight Landed (tons)	-	-	-	-	-	-	-	-	317
Estimated Number Landed ¹	-	-	-	-	-	-	-	-	291
Mesh(mm) or Hook(no) Size	-	-	50	-	-	-	-	-	114
Range of Depths (fm)	-	-	27-220	-	-	-	-	-	35

¹ Numbers in thousands

TABLE 60 LENGTH FREQUENCIES - AMERICAN PLAICE - 4Vn - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side) Commercial			Otter Trawl Research					
	Landings			Catches					
CATCHES/LANDINGS				May			Jul		
MONTH	Jan			May			Jul		
COUNTRY	Can(M)			Fr(SP)					
TONNAGE	150-500			850-1500					
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
10	-	-	-	-	-	-	1	1	2
11	-	-	-	-	-	-	1	2	3
12	-	-	-	-	1	1	1	2	3
13	-	-	-	2	2	4	1	3	4
14	-	-	-	4	3	7	5	7	12
15	-	-	-	3	4	7	12	19	31
16	-	-	-	3	4	7	10	13	23
17	-	-	-	5	11	16	14	15	29
18	-	-	-	7	7	14	20	22	42
19	-	-	-	6	8	14	23	17	40
20	-	-	-	14	15	29	25	21	46
21	-	-	-	14	16	30	31	20	51
22	-	-	-	22	19	41	32	23	55
23	-	-	-	30	21	51	47	31	78
24	-	-	-	38	27	65	36	30	66
25	-	-	-	37	29	66	46	23	69
26	5	-	5	48	24	72	35	19	54
27	5	-	5	39	32	71	31	21	52
28	15	5	20	37	24	61	26	21	47
29	5	-	5	36	25	61	20	18	38
30	15	-	15	41	16	57	23	12	35
31	20	5	25	26	12	38	15	12	27
32	25	-	25	24	15	39	13	9	22
33	20	5	25	16	12	28	9	9	18
34	55	10	65	13	15	28	7	10	17
35	45	15	60	11	11	22	8	7	15
36	40	-	40	14	9	23	6	7	13
37	45	5	50	8	9	17	6	8	14
38	50	15	65	9	11	20	6	8	14
39	30	20	50	5	5	10	7	5	12
40	30	20	50	5	7	12	3	4	7
41	5	15	20	4	4	8	3	6	9
42	5	25	30	4	6	10	4	8	12
43	15	30	45	2	4	6	3	4	7
44	10	20	30	1	5	6	1	2	3
45	-	40	40	1	5	6	1	2	3
46	10	5	15	-	5	5	-	4	4
47	5	25	30	2	4	6	1	4	5
48	-	65	65	-	3	3	1	3	4
49	-	45	45	1	4	5	-	2	2
50	-	20	20	-	5	5	-	2	2
51	-	25	25	1	4	5	-	2	2
52	-	15	15	-	1	1	-	3	3
53	5	5	10	-	3	3	-	1	1
54	-	15	15	-	5	5	-	1	1
55	-	10	10	-	4	4	-	-	-
56	-	35	35	-	2	2	-	2	2
57	-	10	10	-	2	2	-	-	-
58	-	5	5	-	-	-	-	1	1
59	-	10	10	-	1	1	-	-	-
60	-	-	-	-	-	-	-	-	-
61	-	-	-	-	1	1	-	-	-
62	-	-	-	-	1	1	-	-	-
63	-	-	-	-	1	1	-	-	-
64	-	5	5	-	-	-	-	-	-
65	-	5	5	-	1	1	-	-	-
66	-	10	10	-	-	-	-	-	-
67	-	-	-	-	1	1	-	-	-
68	-	-	-	-	-	-	-	-	-
69	-	-	-	-	1	1	-	-	-
Total ‰	460	540	1000	533	467	1000	534	466	1000
Serial Numbers	-	-	44	-	-	-	-	-	-
Number of Samples	-	-	1	-	-	8	-	-	6
Number of Fish Measured	92	108	200	1454	1280	2734	1019	888	1907
Mean Length (cm)	36.17	47.07	42.06	-	-	-	-	-	-
Mean Weight (kg)	0.44	1.05	0.77	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	69	-	-	-	-	-	-
Estimated Number Landed ¹	-	-	90	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	-	-	114	-	-	50	-	-	50
Range of Depths (fm)	-	-	145	-	-	57-75	-	-	27-220

¹ Numbers in thousands

TABLE 60 LENGTH FREQUENCIES - AMERICAN PLAICE - 4Vn, 4Vs - 1971 (FREQUENCIES IN ‰ - 1 CM GROUPS)
(CONT'D)

DIVISION	4Vn			4Vs					
	Otter Trawl			Otter Trawl (Side)					
GEAR	Research			Commercial					
CATCHES/LANDINGS	Catches			Landings					
MONTH	Nov			Feb		Aug			
COUNTRY	Fr (SP)			Can (M)					
TONNAGE	850-1500			151-500					
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
11	-	1	1	-	-	-	-	-	-
12	1	3	4	-	-	-	-	-	-
13	2	4	6	-	-	-	-	-	-
14	1	3	4	-	-	-	-	-	-
15	2	8	10	-	-	-	-	-	-
16	3	12	15	-	-	-	-	-	-
17	4	11	15	-	-	-	-	-	-
18	7	14	21	-	-	-	-	-	-
19	6	12	18	-	-	-	-	-	-
20	13	20	33	-	-	-	-	-	-
21	16	16	32	-	-	-	-	-	-
22	20	16	36	-	-	-	-	-	-
23	27	21	48	-	-	-	-	-	-
24	32	21	53	-	-	-	-	-	-
25	35	22	57	-	-	-	-	-	-
26	49	24	73	-	-	-	-	-	-
27	46	31	77	-	-	-	-	-	-
28	48	21	69	-	-	-	-	-	-
29	45	29	74	-	-	-	-	-	-
30	39	23	62	25	5	30	-	-	-
31	33	22	55	35	10	45	-	-	-
32	28	17	45	35	-	35	-	-	-
33	21	16	37	25	5	30	-	-	-
34	13	8	21	45	20	65	-	-	-
35	17	12	29	15	5	20	-	-	-
36	13	9	22	50	5	55	5	-	5
37	5	7	12	40	20	60	25	-	25
38	3	2	5	25	5	30	-	-	-
39	6	3	9	25	-	25	20	15	35
40	2	5	7	20	10	30	15	-	15
41	1	4	5	5	15	20	40	15	55
42	2	3	5	40	20	60	40	15	55
43	-	4	4	30	15	45	60	20	80
44	-	3	3	5	20	25	40	25	65
45	1	5	6	15	25	40	35	20	55
46	-	2	2	5	15	20	35	15	50
47	1	2	3	20	15	35	35	25	60
48	-	2	2	-	25	25	20	40	60
49	-	2	2	5	25	30	5	65	70
50	-	1	1	5	15	20	15	35	50
51	-	2	2	-	45	45	5	50	55
52	-	1	1	-	20	20	5	50	55
53	-	-	-	5	30	35	5	35	40
54	-	2	2	-	20	20	5	35	40
55	-	2	2	-	10	10	-	10	10
56	-	1	1	-	30	30	-	45	45
57	-	2	2	-	45	45	-	25	25
58	-	-	-	-	15	15	-	-	-
59	-	1	1	-	5	5	-	5	5
60	-	2	2	-	5	5	-	20	20
61	-	-	-	-	5	5	-	-	-
62	-	1	1	-	20	20	-	5	5
63	-	-	-	-	-	-	-	5	5
64	-	-	-	-	-	-	-	5	5
65	-	2	2	-	-	-	-	5	5
66	-	1	1	-	-	-	-	-	-
67	-	-	-	-	-	-	-	5	5
Total ‰	542	458	1000	475	525	1000	410	590	1000
Serial Numbers	-	-	-	-	-	43	-	-	123
Number of Samples	-	-	14	-	-	1	-	-	1
Number of Fish Measured	1156	975	2131	95	105	200	82	118	200
Mean Length (cm)	-	-	-	37.56	48.52	43.32	43.85	50.68	47.88
Mean Weight (kg)	-	-	-	0.50	1.17	0.85	0.79	1.28	1.08
Total Weight Landed (tons)	-	-	-	-	-	487	-	-	45
Estimated Number Landed ¹	-	-	-	-	-	573	-	-	42
Mesh(mm) or Hook(no) Size	-	-	50	-	-	114	-	-	114
Range of Depths (fm)	-	-	27-220	-	-	175	-	-	47

¹ Numbers in thousands

TABLE 61 LENGTH FREQUENCIES - GREENLAND HALIBUT - 1A, 1B, 1D - 1971 (FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	1A			1B	1D	
	Otter Trawl (Prawn)			Otter Trawl (Prawn)	OT (Prawn)	
GEAR	Research			Research	Research	
CATCHES/LANDINGS	Catches			Catches	Catches	
MONTH	Jul	Jul	Aug	Jul	Jan	Jun
COUNTRY	Den(G)			Den(G)	Den(G)	
TONNAGE	151-500			151-500	151-500	
8	-	1	-	-	-	18
10	-	14	-	88	-	410
12	-	12	11	467	-	155
14	2	23	6	408	16	44
16	6	49	51	22	-	103
18	10	52	17	-	-	107
20	46	69	17	-	-	27
22	47	111	117	-	-	21
24	66	85	95	-	-	23
26	114	106	84	-	24	31
28	112	102	95	-	8	20
30	120	75	140	-	32	8
32	134	60	101	-	16	4
34	70	53	73	7	-	6
36	66	48	61	-	32	8
38	60	42	12	-	31	10
40	44	33	45	-	40	-
42	31	18	22	-	16	-
44	20	13	17	-	32	-
46	20	14	23	-	16	2
48	12	7	-	-	-	-
50	10	4	11	-	32	-
52	2	3	6	-	39	-
54	4	3	-	-	31	-
56	-	1	-	-	47	-
58	-	1	-	-	16	-
60	-	-	-	-	24	-
62	-	-	-	-	16	-
64	-	-	-	-	32	-
66	-	-	-	-	39	-
68	-	-	-	-	94	-
70	-	-	-	-	55	-
72	-	-	-	-	63	-
74	-	-	-	-	47	-
76	-	-	-	7	24	-
78	-	-	-	-	8	-
80	-	-	-	-	16	-
82	-	-	-	-	16	-
84	-	-	-	-	31	-
86	-	-	-	-	32	-
88	-	-	-	-	8	-
90	-	-	-	-	16	-
92	-	-	-	-	8	-
94	-	-	-	-	16	-
96	-	-	-	-	24	-
98	-	-	-	-	8	-
Total ‰	996	999	1004	999	1005	997
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	3	1	1	1	1
Number of Fish Measured	483	2161	179	135	127	483
Mean Length (cm)	31.8	27.9	29.7	13.8	61.5	15.2
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	-	-	-	-	-	-
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	68-70	36	36	42	36	-
Range of Depths (fm)	187-319	187-325	330	182	165	310-388

TABLE 62 LENGTH FREQUENCIES - WITCH - 3L, 4Vn, 4Vs - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3L			4Vn			4Vs		
GEAR	Otter Trawl			Otter Trawl			Otter Trawl		
	Commercial			Commercial			Commercial		
CATCHES/LANDINGS	Landings			Landings			Landings		
MONTH	Jun			Feb			Mar		
COUNTRY	Can(M)			Can(M)			Can(M)		
TONNAGE	501-900			151-500			151-500		
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
27	-	9	9	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-
29	28	-	28	-	-	-	-	-	-
30	19	-	19	-	-	-	10	-	10
31	37	9	46	2	-	2	-	5	5
32	14	19	33	-	-	-	35	5	40
33	42	42	84	-	-	-	35	-	35
34	51	37	88	-	-	-	5	15	20
35	65	14	79	3	-	3	35	15	50
36	83	42	125	11	-	11	25	-	25
37	46	19	65	10	-	10	10	20	30
38	60	28	88	18	-	18	20	15	35
39	32	51	83	31	-	31	25	15	40
40	56	60	116	27	2	29	15	25	40
41	14	28	42	21	4	25	20	25	45
42	-	19	19	36	4	40	25	20	45
43	-	32	32	28	9	37	20	35	55
44	5	9	14	36	17	53	25	10	35
45	-	14	14	68	31	99	10	40	50
46	-	9	9	42	24	66	10	45	55
47	-	5	5	30	42	72	10	45	55
48	-	5	5	26	57	83	20	50	70
49	-	-	-	23	69	92	5	45	50
50	-	-	-	6	61	67	5	45	50
51	-	-	-	5	54	59	-	55	55
52	-	-	-	-	56	56	-	20	20
53	-	-	-	3	35	38	-	15	15
54	-	-	-	6	17	23	-	5	5
55	-	-	-	5	21	26	-	20	20
56	-	-	-	-	29	29	-	15	15
57	-	-	-	-	13	13	-	-	-
58	-	-	-	-	15	15	-	10	10
59	-	-	-	-	2	2	-	10	10
60	-	-	-	-	-	-	-	10	10
61	-	-	-	-	2	2	-	-	-
Total ‰	552	451	1003	437	564	1001	365	635	1000
Serial Numbers	-	-	76	-	-	-	-	-	49
Number of Samples	-	-	1	-	-	2	-	-	1
Number of Fish Measured	119	97	216	172	219	391	73	127	200
Mean Length (cm)	35.55	38.06	36.68	43.83	50.08	47.35	39.01	46.48	43.76
Mean Weight (kg)	0.29	0.37	0.33	0.60	0.94	0.79	0.42	0.76	0.64
Total Weight Landed (tons)	-	-	11	-	-	173	-	-	368
Estimated Number Landed ¹	-	-	33	-	-	219	-	-	575
Mesh(mm) or Hook(no) Size	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	45	-	-	127-157	-	-	177

¹ Numbers in thousands

TABLE 63 LENGTH FREQUENCIES - WITCH - 4W - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl (Side)						Danish Seine		
	Commercial Landings								
CATCHES/LANDINGS	Jan			Feb			Jun		
MONTH	Can (M)								
COUNTRY	151-500			501-900			51-150		
TONNAGE	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
32	-	-	-	-	4	4	-	-	-
33	-	-	-	16	-	16	-	-	-
34	-	5	5	4	4	8	-	-	-
35	15	-	15	12	20	32	-	-	-
36	15	10	25	28	20	48	-	-	-
37	15	15	30	8	8	16	-	-	-
38	30	25	55	31	39	70	-	-	-
39	39	54	93	24	47	71	-	-	-
40	34	59	93	31	47	78	-	-	-
41	34	54	88	24	47	71	-	-	-
42	25	64	89	31	55	86	-	-	-
43	20	44	64	35	28	63	5	5	10
44	15	39	54	31	35	66	24	5	29
45	5	39	44	24	28	52	5	5	10
46	20	74	94	16	71	87	10	19	29
47	15	49	64	16	43	59	24	19	43
48	5	25	30	8	20	28	10	29	39
49	-	30	30	8	20	28	43	48	91
50	-	39	39	12	16	28	39	43	82
51	-	25	25	4	8	12	34	29	63
52	-	25	25	12	20	32	48	48	96
53	-	5	5	4	4	8	24	97	121
54	-	5	5	-	12	12	19	53	72
55	-	5	5	-	12	12	5	43	48
56	-	5	5	-	4	4	10	87	97
57	-	10	10	-	4	4	-	43	43
58	-	10	10	-	4	4	10	29	39
59	-	-	-	-	4	4	5	24	29
60	-	-	-	-	-	-	5	14	19
61	-	-	-	-	-	-	-	19	19
62	-	-	-	-	-	-	-	19	19
Total ‰	287	715	1002	379	624	1003	320	678	998
Serial Numbers	-	-	45	-	-	47	-	-	77
Number of Samples	-	-	1	-	-	1	-	-	1
Number of Fish Measured	58	145	203	96	158	254	66	141	207
Mean Length (cm)	40.74	44.61	43.51	41.90	43.78	43.07	50.48	53.50	52.54
Mean Weight (kg)	0.46	0.65	0.60	0.52	0.61	0.58	0.96	1.18	1.11
Total Weight Landed (tons)	-	-	50	-	-	35	-	-	100
Estimated Number Landed ¹	-	-	83	-	-	60	-	-	90
Mesh(mm) or Hook(no) Size	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	140	-	-	90	-	-	57

¹ Numbers in thousands

TABLE 64 LENGTH FREQUENCIES - YELLOWTAIL - 3L, 3N - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3L			3N		
	Otter Trawl (Stern)			Otter Trawl (Stern)		
GEAR	Commercial			Commercial		
CATCHES/LANDINGS	Landings			Landings		
MONTH	May			May		
COUNTRY	Can(N)			Can(N)		
TONNAGE	501-900			501-900		
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total
22	-	1	1	-	-	-
26	-	-	-	1	-	1
27	1	-	1	-	2	2
28	3	2	5	3	4	7
29	4	5	9	1	3	4
30	7	2	9	5	10	15
31	6	6	12	8	12	20
32	8	11	19	20	11	31
33	19	10	29	21	17	38
34	30	19	49	34	18	52
35	41	27	68	44	27	71
36	44	27	71	54	30	84
37	62	34	96	62	34	96
38	61	49	110	89	38	127
39	54	49	103	65	46	111
40	45	49	94	48	42	90
41	24	53	77	27	46	73
42	20	54	74	14	52	66
43	15	53	68	6	26	32
44	6	37	43	5	30	35
45	1	23	24	2	16	18
46	1	18	19	3	7	10
47	3	9	12	3	7	10
48	2	4	6	5	1	6
49	1	1	2	2	1	3
50	-	-	-	-	1	1
Total ‰	458	543	1001	522	481	1003
Serial Numbers	-	-	-	-	-	-
Number of Samples	-	-	2	-	-	-
Number of Fish Measured	463	549	1012	529	487	1016
Mean Length (cm)	37.50	39.75	38.72	37.39	38.84	38.09
Mean Weight (kg)	-	-	0.53	-	-	0.52
Total Weight Landed (tons)	-	-	977	-	-	958
Estimated Number Landed ¹	-	-	1836	-	-	1845
Mesh(mm) or Hook(no) Size	-	-	Large	-	-	Large
Range of Depths (fm)	-	-	30-35	-	-	35

¹ Numbers in thousands

TABLE 65 LENGTH FREQUENCIES - YELLOWTAIL - 3N, 4W - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	3N						4W
GEAR	Otter Trawl (Side)						OT (Stern)
CATCHES/LANDINGS	Commercial						Commercial
MONTH	Landings			Oct			Mar
COUNTRY	Can (M)						USSR
TONNAGE	151-500						>1800
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	
18	-	-	-	-	-	-	5
19	-	-	-	-	-	-	5
20	-	-	-	-	-	-	10
21	-	-	-	-	-	-	15
22	-	-	-	-	-	-	15
23	-	-	-	-	-	-	5
24	-	-	-	5	-	5	10
25	-	-	-	15	-	15	5
26	-	-	-	15	5	20	30
27	-	-	-	-	-	-	40
28	5	-	5	20	-	20	45
29	10	5	15	60	-	60	45
30	30	-	30	65	15	80	55
31	5	-	5	60	20	80	65
32	30	20	50	90	10	100	80
33	30	10	40	70	10	80	75
34	50	10	60	40	15	55	60
35	40	25	65	35	35	70	65
36	65	15	80	20	45	65	75
37	70	60	130	10	20	30	65
38	70	65	135	20	50	70	60
39	15	55	70	40	45	85	50
40	10	90	100	-	35	35	35
41	-	100	100	-	30	30	25
42	-	50	50	-	25	25	15
43	-	35	35	-	20	20	10
44	-	25	25	5	35	40	10
45	-	5	5	-	10	10	10
46	-	-	-	-	-	-	5
47	-	-	-	-	-	-	5
48	-	-	-	-	-	-	-
49	-	-	-	-	5	5	5
Total ‰	430	570	1000	570	430	1000	1000
Serial Numbers	-	-	147	-	-	148	-
Number of Samples	-	-	1	-	-	1	1
Number of Fish Measured	86	114	200	114	86	200	200
Mean Length (cm)	35.14	39.18	37.45	32.28	38.08	34.77	33.10
Mean Weight (kg)	0.36	0.51	0.44	0.28	0.47	0.36	0.35
Total Weight Landed (tons)	-	-	397	-	-	274	-
Estimated Number Landed	-	-	902	-	-	761	-
Mesh(mm) or Hook(no) Size	-	-	114	-	-	114	40
Range of Depths (fm)	-	-	43	-	-	31	40

¹ Numbers in thousands

TABLE 66 LENGTH FREQUENCIES - YELLOWTAIL - 5Y - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl											
	Commercial Landings											
CATCHES/LANDINGS												
MONTH	Feb			Sep			Oct			Dec		
COUNTRY	USA											
TORNAGE	0-150											
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
32	-	-	-	-	-	-	11	4	14	-	-	-
33	-	-	-	-	-	-	14	-	14	4	4	8
34	16	8	24	23	11	34	35	7	42	24	4	28
35	98	49	146	23	23	46	60	21	81	32	16	48
36	98	33	130	57	34	92	39	11	49	24	28	51
37	65	49	114	57	11	69	46	18	63	79	40	119
38	49	16	65	57	69	126	46	42	88	55	40	95
39	65	33	98	57	34	92	49	32	81	71	40	111
40	81	89	171	23	92	115	53	46	99	28	32	59
41	33	49	81	11	46	57	35	46	81	47	51	99
42	-	33	33	46	34	80	32	53	85	16	75	91
43	-	8	8	23	23	46	14	49	63	12	55	67
44	-	65	65	-	23	23	4	74	77	-	32	32
45	-	41	41	-	11	11	14	28	42	4	71	75
46	-	8	8	-	46	46	11	49	60	-	59	59
47	-	-	-	-	11	11	-	25	25	-	24	24
48	-	8	8	-	34	34	-	7	7	-	12	12
49	-	-	-	-	23	23	-	7	7	-	8	8
50	-	-	-	-	34	34	-	11	11	-	4	4
51	-	-	-	-	34	34	-	11	11	-	8	8
52	-	-	-	-	-	-	-	-	-	-	4	4
53	-	-	-	-	-	-	-	-	-	-	-	-
54	-	-	-	-	11	11	-	-	-	-	-	-
Total ‰	512	488	1000	391	609	1000	461	539	1000	395	605	1000
Serial Numbers	-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples	1	1	1	1	1	1	3	3	3	3	3	3
Number of Fish Measured	63	60	123	34	53	87	131	153	284	100	153	253
Mean Length (cm)	37.56	40.17	38.83	38.53	42.51	40.95	38.18	42.15	40.32	38.21	42.04	40.53
Mean Weight (kg)	0.49	0.63	0.55	0.49	0.74	0.64	0.45	0.68	0.58	0.45	0.68	0.59
Total Weight Landed (tons)	56	68	124	29	67	96	64	112	176	74	170	244
Estimated Number Landed ¹	1145	1090	2235	581	906	1488	1410	1647	3057	1643	2514	4157
Mesh(mm) or Hook(no) Size	-	-	114	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	51-59	-	-	42-55	-	-	33-88	-	-	37-104

¹ Numbers in hundreds

TABLE 67 LENGTH FREQUENCIES - YELLOWTAIL - 52e - 1971

(FREQUENCIES IN $\circ/\circ\circ$ - 1 CM GROUPS)

GEAR	Otter Trawl								
CATCHES/LANDINGS	Commercial								
MONTH	Jan			Feb			Mar		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
29	3	-	3	-	-	-	-	-	-
30	-	-	-	-	-	-	1	-	1
31	3	-	3	4	-	4	4	1	5
32	5	5	10	4	1	5	5	4	8
33	3	5	8	18	10	29	21	22	43
34	18	3	20	40	23	64	38	38	76
35	54	20	74	52	56	108	70	63	133
36	33	15	48	56	78	134	56	67	123
37	43	26	69	47	73	119	53	52	105
38	51	43	94	61	49	110	38	50	88
39	31	43	74	31	70	101	41	43	84
40	28	41	69	26	49	75	26	44	70
41	20	66	87	22	32	55	28	31	59
42	28	74	102	10	44	55	13	28	41
43	8	77	84	4	30	34	15	31	45
44	8	84	92	3	31	34	8	29	37
45	-	41	41	1	21	22	2	21	22
46	-	54	54	-	16	16	-	18	18
47	-	28	28	-	8	8	-	16	16
48	-	18	18	-	16	16	-	10	10
49	-	8	8	-	5	5	-	4	4
50	-	13	13	-	3	3	-	7	7
51	-	-	-	-	5	5	-	3	3
52	-	-	-	-	-	-	-	1	1
53	-	-	-	-	-	-	-	2	2
54	-	3	3	-	-	-	-	-	-
Total $\circ/\circ\circ$	334	666	1000	379	621	1000	415	585	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	5	5	5	8	8	8	13	13	13
Number of Fish Measured	131	261	392	292	478	770	542	763	1305
Mean Length (cm)	37.76	42.13	40.67	36.99	39.42	38.50	37.20	39.26	38.40
Mean Weight (kg)	0.50	0.74	0.66	0.47	0.59	0.54	0.48	0.59	0.54
Total Weight Landed (tons)	105	312	417	197	413	610	342	599	941
Estimated Number Landed ¹	2116	4216	6332	4237	6936	11173	7190	10122	17313
Mesh(mm) or Hook(no) Size	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	28-34	-	-	27-46	-	-	27-45

¹ Numbers in hundreds

TABLE 67 LENGTH FREQUENCIES - YELLOWTAIL - 52e - 1971
(CONT'D)

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Apr			May			Jun		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
28	1	-	1	-	-	-	-	-	-
31	2	2	4	1	-	1	-	-	-
32	7	1	9	4	1	5	4	-	4
33	21	7	29	10	1	11	13	9	23
34	30	19	49	26	-	26	34	30	63
35	38	42	80	32	16	48	53	26	79
36	59	57	115	70	32	102	68	57	125
37	65	56	121	78	37	115	85	53	138
38	52	71	123	87	41	128	79	62	141
39	37	61	98	75	52	127	67	50	117
40	29	50	79	53	53	106	44	42	85
41	14	50	64	36	57	92	34	42	76
42	14	28	42	23	43	67	20	24	44
43	12	41	52	9	25	34	8	17	25
44	1	31	32	6	23	30	5	23	28
45	-	27	27	4	12	16	2	13	15
46	2	15	17	1	23	25	1	7	8
47	-	27	27	-	21	21	-	7	7
48	-	9	9	-	25	25	-	5	5
49	-	6	6	-	14	14	1	6	7
50	-	12	12	-	2	2	-	4	4
51	-	3	3	-	2	2	-	2	2
52	-	1	1	-	2	2	-	2	2
53	-	-	-	-	1	1	-	-	-
54	-	-	-	-	-	-	-	-	-
55	-	-	-	-	1	1	-	1	1
Total %/oo	386	614	1000	515	485	1000	518	482	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	10	10	10	9	9	9	12	12	12
Number of Fish Measured	361	575	936	418	394	812	661	615	1276
Mean Length (cm)	37.17	40.09	38.96	38.00	41.28	39.59	37.67	39.28	38.45
Mean Weight (kg)	0.46	0.75	0.64	0.49	0.83	0.65	0.48	0.70	0.59
Total Weight Landed (tons)	261	675	936	305	481	786	560	756	1316
Estimated Number Landed ¹	5653	9004	14656	6184	5829	12013	11651	10840	22491
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	26-38	-	-	27-42	-	-	20-46

¹ Numbers in hundreds

TABLE 67 LENGTH FREQUENCIES - YELLOWTAIL - 5Ze - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Jul			Aug			Sep		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
28	-	-	-	-	-	-	1	-	1
--									
31	1	-	1	2	-	2	1	-	1
32	8	2	11	10	2	12	5	6	11
33	13	10	23	19	7	25	22	8	30
34	29	43	72	23	23	46	42	16	58
35	32	63	95	36	56	92	70	45	116
36	35	95	130	43	70	113	65	77	142
37	21	122	143	31	95	125	62	76	138
38	19	123	142	42	99	141	42	79	122
39	5	103	107	29	67	96	25	64	89
40	8	75	83	22	55	77	30	52	82
41	1	66	67	11	51	62	14	44	58
42	-	43	43	7	55	62	10	32	42
43	-	31	31	3	37	41	6	28	34
44	-	20	20	8	27	35	1	25	26
45	-	15	15	3	14	18	2	11	13
46	-	6	6	-	13	13	-	11	11
47	-	5	5	-	24	24	-	11	11
48	-	2	2	1	4	5	-	8	8
49	-	1	1	-	5	5	-	3	3
50	-	2	2	-	1	1	-	2	2
51	-	-	-	-	2	2	-	2	2
52	-	-	-	-	2	2	-	1	1
53	-	-	-	-	2	2	-	-	-
54	-	-	-	-	1	1	-	1	1
Total ‰	173	827	1000	289	711	1000	398	602	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	8	8	8	9	9	9	9	9	9
Number of Fish Measured	145	694	839	263	647	910	403	609	1012
Mean Length (cm)	35.68	38.52	38.03	37.11	39.38	38.72	36.71	39.10	38.15
Mean Weight (kg)	0.40	0.54	0.51	0.44	0.58	0.54	0.43	0.56	0.51
Total Weight Landed (tons)	154	993	1147	422	1342	1764	510	1009	1519
Estimated Number Landed ¹	3879	18568	22447	9450	23249	32699	11831	17878	29709
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	20-40	-	-	22-46	-	-	25-45

¹ Numbers in hundreds

TABLE 67 LENGTH FREQUENCIES - YELLOWTAIL - 5Ze - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Oct			Nov			Dec		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
30	-	1	1	2	-	2	-	-	-
31	8	6	14	1	1	2	-	-	-
32	16	7	23	12	5	17	-	-	-
33	41	29	70	23	23	47	-	-	-
34	59	51	110	31	40	71	-	-	-
35	65	69	133	44	55	99	15	-	15
36	53	68	121	38	77	115	-	-	-
37	56	65	121	34	84	117	30	15	45
38	34	72	107	35	59	94	75	45	119
39	44	55	99	30	68	98	30	60	90
40	17	33	49	30	49	79	75	104	179
41	8	49	56	26	39	66	-	60	60
42	13	22	34	10	28	39	-	60	60
43	1	16	17	4	24	28	-	90	90
44	4	9	13	6	26	32	15	104	119
45	1	9	10	3	30	33	-	60	60
46	-	4	4	-	19	19	-	45	45
47	-	7	7	1	11	12	-	60	60
48	-	3	3	-	17	17	-	30	30
49	-	5	5	-	1	1	-	15	15
50	-	1	1	-	6	6	-	-	-
51	-	2	2	-	3	3	-	15	15
52	-	-	-	-	3	3	-	-	-
53	-	-	-	-	2	2	-	-	-
Total ‰	419	581	1000	330	670	1000	239	761	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	11	11	11	10	10	10	1	1	1
Number of Fish Measured	419	693	1192	351	713	1064	16	51	67
Mean Length (cm)	37.17	38.87	38.16	37.13	39.16	38.49	40.69	44.88	43.88
Mean Weight (kg)	0.42	0.52	0.48	0.42	0.54	0.50	0.53	0.83	0.76
Total Weight Landed (tons)	506	878	1384	272	713	985	12	61	73
Estimated Number Landed ¹	12093	16794	28887	6479	13160	19639	233	741	974
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	51-88	-	-	52-91	-	-	53-55

¹ Numbers in hundreds

TABLE 68 LENGTH FREQUENCIES - YELLOWTAIL - 52w - 1971

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Jan			Feb			Mar		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂	♀	Total	♂	♀	Total	♂	♀	Total
28	1	-	1	-	-	-	-	-	-
29	3	-	3	2	-	2	-	-	-
30	2	2	4	13	1	13	6	3	9
31	6	2	8	21	5	26	13	16	29
32	28	8	36	36	31	67	24	35	59
33	54	27	81	65	56	120	40	42	82
34	73	51	124	53	82	135	79	61	139
35	78	86	164	71	89	159	67	92	160
36	63	94	157	58	73	131	56	92	148
37	47	72	119	42	70	112	42	66	108
38	33	71	104	25	55	80	40	55	95
39	19	47	66	17	31	48	18	42	61
40	8	33	40	6	23	30	15	31	46
41	7	26	33	8	22	30	8	17	25
42	1	23	23	4	15	19	2	10	13
43	1	15	16	2	13	15	-	9	9
44	-	10	10	-	4	4	-	11	11
45	-	7	7	-	4	4	-	2	2
46	-	1	1	-	-	-	-	1	1
47	-	4	4	-	1	1	-	1	1
48	-	-	-	-	-	-	-	-	-
49	-	-	-	-	3	3	-	1	1
50	-	-	-	-	1	1	-	-	-
Total %	422	578	1000	421	579	1000	410	590	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	9	9	9	10	10	10	7	7	7
Number of Fish Measured	449	615	1064	470	676	1116	359	517	876
Mean Length (cm)	35.24	37.27	36.41	25.90	37.35	36.74	35.40	36.35	35.96
Mean Weight (kg)	0.40	0.48	0.45	0.42	0.49	0.46	0.40	0.44	0.43
Total Weight Landed (tons)	532	885	1417	370	586	956	186	294	480
Estimated Number Landed ¹	13378	18323	31701	8745	12020	20765	4601	6626	11227
Mesh(mm) or Hook(no) Size	-	-	114	-	-	114	-	-	114
Range of Depths (fm)	-	-	18-43	-	-	20-38	-	-	26-36

¹ Numbers in hundreds

TABLE 68 LENGTH FREQUENCIES - YELLOWTAIL - 52w - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Apr			May			Jun		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
29	-	-	-	2	2	4	-	-	-
30	-	-	-	8	9	17	-	-	-
31	4	4	8	9	29	39	-	-	-
32	17	23	40	13	37	50	19	24	43
33	41	40	81	33	42	75	35	65	100
34	80	54	134	54	65	119	46	57	103
35	65	74	139	58	102	161	49	57	105
36	48	66	114	50	78	128	30	86	116
37	48	41	90	49	67	116	19	84	103
38	51	51	102	50	58	109	22	122	143
39	21	47	67	20	37	58	8	86	95
40	23	39	62	17	24	41	-	54	54
41	18	22	40	6	24	29	3	27	30
42	14	40	54	7	15	22	-	38	38
43	10	11	21	3	8	11	-	27	27
44	4	10	14	2	7	9	-	30	30
45	-	7	7	1	4	5	-	5	5
46	-	7	7	-	2	2	-	3	3
47	1	7	8	-	2	2	-	-	-
48	1	4	6	-	-	-	-	3	3
49	-	3	3	-	2	2	-	-	-
50	-	1	1	-	2	2	-	3	3
51	-	3	3	-	-	-	-	-	-
Total ‰	446	554	1000	384	616	1000	230	770	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	7	7	7	10	10	10	3	3	3
Number of Fish Measured	324	402	726	487	782	1269	85	285	370
Mean Length (cm)	36.39	37.59	37.05	35.93	36.21	36.10	35.04	37.66	37.05
Mean Weight (kg)	0.44	0.60	0.53	0.41	0.53	0.48	0.38	0.60	0.55
Total Weight Landed (tons)	233	401	634	214	435	649	51	268	319
Estimated Number Landed ¹	5383	6679	12062	5159	8284	13443	1339	4489	5827
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	15-28	-	-	11-37	-	-	18-34

¹ Numbers in hundreds

TABLE 68 LENGTH FREQUENCIES - YELLOWTAIL - 52w - 1971
(CONT'D)

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl								
	Commercial								
CATCHES/LANDINGS	Landings								
MONTH	Jul			Aug			Oct		
COUNTRY	USA								
TONNAGE	0-215								
SEX	♂♂	♀♀	Total	♂♂	♀♀	Total	♂♂	♀♀	Total
30	3	-	3	5	2	6	-	-	-
31	20	11	31	22	5	27	7	-	7
32	49	37	86	22	22	44	-	-	-
33	90	69	160	52	50	102	28	14	42
34	62	120	182	47	69	116	63	84	147
35	47	112	158	55	100	155	63	154	217
36	41	107	148	49	91	139	91	133	224
37	6	56	62	30	83	113	35	126	161
38	8	65	73	28	74	102	21	28	49
39	4	42	47	5	45	50	-	56	56
40	1	28	30	16	39	55	7	56	63
41	-	16	16	-	34	34	-	21	21
42	-	3	3	2	23	25	-	14	14
43	-	-	-	7	11	13	-	-	-
44	-	-	-	-	6	6	-	-	-
45	-	1	1	-	5	5	-	-	-
46	-	-	-	-	6	6	-	-	-
47	-	-	-	-	2	2	-	-	-
48	-	-	-	-	-	-	-	-	-
49	-	-	-	-	2	2	-	-	-
Total %	332	668	1000	332	668	1000	315	685	1000
Serial Numbers	-	-	-	-	-	-	-	-	-
Number of Samples	5	5	5	5	5	5	1	1	1
Number of Fish Measured	235	473	708	212	427	639	45	98	143
Mean Length (cm)	33.85	35.66	35.06	34.96	36.89	36.25	35.36	36.38	36.20
Mean Weight (kg)	0.34	0.42	0.39	0.38	0.47	0.44	0.36	0.42	0.40
Total Weight Landed (tons)	185	457	642	41	103	144	113	284	397
Estimated Number Landed ¹	5392	10852	16244	1083	2180	3263	3106	6764	9870
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122	-	-	122
Range of Depths (fm)	-	-	20-28	-	-	18-31	-	-	30-42

¹ Numbers in hundreds

TABLE 68 LENGTH FREQUENCIES - YELLOWTAIL - 52w - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl					
CATCHES/LANDINGS	Commercial					
MONTH	Nov			Dec		
COUNTRY	USA					
TONNAGE	0-215					
SEX	♂	♀	Total	♂	♀	Total
30	2	-	2	3	1	4
31	4	4	7	15	4	19
32	30	17	48	52	18	70
33	45	46	91	49	48	97
34	62	110	172	67	71	138
35	50	102	152	63	99	162
36	49	140	189	44	109	152
37	33	89	122	41	75	116
38	11	71	82	20	59	79
39	5	46	51	9	52	61
40	4	38	41	5	33	38
41	1	23	24	6	18	24
42	-	6	6	4	14	17
43	-	10	10	1	9	10
44	-	1	1	-	4	4
45	-	-	-	-	5	5
46	-	-	-	-	3	3
47	-	1	1	-	-	-
48	-	-	-	-	-	-
49	-	-	-	-	1	1
50	-	-	-	-	1	1
Total ‰	296	704	1000	379	621	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	6	6	6	8	8	8
Number of Fish Measured	243	578	821	418	685	1103
Mean Length (cm)	34.74	36.31	35.84	34.80	36.57	35.90
Mean Weight (kg)	0.34	0.41	0.39	0.35	0.43	0.39
Total Weight Landed (tons)	213	602	815	511	1016	1527
Estimated Number Landed ¹	6145	14617	20762	14608	23938	38546
Mesh(mm) or Hook(no) Size	-	-	122	-	-	122
Range of Depths (fm)	-	-	34-44	-	-	25-38

¹ Numbers in hundreds

TABLE 69

AGE FREQUENCIES - YELLOWTAIL - 52e - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Landings						Landings					
COUNTRY		Jan						Feb					
TONNAGE		USA											
		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		88	99	Tot.	88	99	Tot.	88	99	Tot.	88	99	Tot.
1969	2	5	1	6	30.4	32.0	30.7	3	-	3	31.9	32.0	31.9
68	3	117	135	251	35.5	38.2	37.2	163	257	420	35.6	36.6	36.3
67	4	111	241	352	38.0	41.2	40.2	124	221	345	37.5	39.4	38.7
66	5	71	197	268	39.3	43.5	42.8	66	99	165	38.6	43.0	41.3
65	6	21	64	85	40.7	45.7	44.4	17	31	49	40.1	46.2	44.0
64	7	7	18	25	41.7	48.6	46.8	4	7	11	41.2	47.8	45.5
63	8	2	8	10	43.7	47.5	46.6	1	4	5	43.6	48.0	47.2
62	9	1	1	2	40.0	45.0	43.5	1	1	2	40.0	47.8	45.5
61	10	-	1	1	-	50.0	50.0	-	-	-	-	50.0	50.0
Total ‰		334	666	1000	37.8	42.1	40.7	379	621	1000	37.0	39.4	38.5
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		5	5	5	-	-	-	8	8	8	-	-	-
Number of Fish Aged		117	124	241	-	-	-	199	199	398	-	-	-
Mean Age		4.06	4.43	4.30	-	-	-	3.87	3.92	3.90	-	-	-
Mean Weight (kg)		0.50	0.74	0.66	-	-	-	0.47	0.59	0.54	-	-	-
Total Weight Landed (tons)		105	312	417	-	-	-	197	413	610	-	-	-
Estimated Number Landed ¹		2116	4216	6332	-	-	-	4237	6936	11173	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	114	-	-	-	-	-	114	-	-	-
Range of Depths (fm)		-	-	28-34	-	-	-	-	-	27-46	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Mar						Apr					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		88	99	Tot.	88	99	Tot.	88	99	Tot.	88	99	Tot.
1969	2	3	1	4	32.0	32.0	32.0	20	5	24	33.2	33.9	33.3
68	3	175	255	430	35.5	36.3	36.0	146	210	357	36.3	37.6	37.1
67	4	127	188	315	37.5	39.3	38.6	130	229	360	37.6	39.3	38.6
66	5	78	94	172	39.1	43.4	41.4	56	97	152	38.6	42.8	41.3
65	6	24	33	57	40.8	46.3	43.9	23	52	76	40.1	46.0	44.2
64	7	5	8	13	41.5	47.9	45.3	8	10	17	41.6	48.5	47.6
63	8	3	4	7	43.5	48.6	46.1	1	8	10	41.9	48.4	47.6
62	9	1	1	2	40.0	47.1	44.7	1	2	3	42.4	47.6	45.4
61	10	-	1	1	-	50.0	50.0	-	1	1	-	45.9	45.9
60	11	-	-	-	-	-	-	-	-	-	-	52.0	52.0
Total ‰		416	584	1000	37.2	39.3	38.4	385	615	1000	37.2	40.1	39.0
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		13	13	13	-	-	-	10	10	10	-	-	-
Number of Fish Aged		320	327	647	-	-	-	248	246	494	-	-	-
Mean Age		3.94	3.92	39.3	-	-	-	3.87	4.10	4.01	-	-	-
Mean Weight (kg)		0.48	0.59	0.54	-	-	-	0.46	0.75	0.64	-	-	-
Total Weight Landed (tons)		342	599	941	-	-	-	261	675	936	-	-	-
Estimated Number Landed ¹		7190	10122	17313	-	-	-	5653	9004	14656	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	114	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	27-45	-	-	-	-	-	26-38	-	-	-

¹ Numbers in hundreds

TABLE 69
(CONT'D)

AGE FREQUENCIES - YELLOWTAIL - 5Ze - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		May						Jun					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	12	1	13	33.5	34.3	33.5	15	6	21	33.7	33.8	33.8
68	3	177	141	318	36.9	38.4	37.6	188	185	372	36.6	37.5	37.0
67	4	178	176	354	37.9	40.2	39.1	178	188	366	37.6	38.8	38.2
66	5	91	86	177	39.2	43.0	41.1	87	63	150	39.0	42.0	40.3
65	6	41	58	99	40.4	46.1	43.7	37	28	65	40.2	45.5	42.5
64	7	12	9	21	41.3	48.2	44.3	10	5	15	41.3	48.6	43.6
63	8	2	7	10	42.8	48.8	47.3	2	5	6	42.3	49.1	47.5
62	9	1	5	7	41.8	49.9	48.2	1	1	3	41.8	49.9	46.0
61	10	-	2	2	-	49.4	49.4	-	1	1	-	49.3	49.3
60	11	-	1	1	-	52.0	52.0	-	1	1	-	52.0	52.0
Total ‰		515	485	1000	38.0	41.3	39.6	518	482	1000	37.7	39.3	38.5
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		9	9	9	-	-	-	13	13	13	-	-	-
Number of Fish Aged		225	213	438	-	-	-	309	322	631	-	-	-
Mean Age		4.04	4.32	4.18	-	-	-	3.97	3.94	3.96	-	-	-
Mean Weight (kg)		0.49	0.83	0.65	-	-	-	0.45	0.70	0.59	-	-	-
Total Weight Landed (tons)		305	481	786	-	-	-	560	756	1316	-	-	-
Estimated Number Landed ¹		6184	5829	12013	-	-	-	11561	10840	22491	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	27-42	-	-	-	-	-	20-46	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jul						Aug					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	40	65	105	34.2	35.4	35.0	48	48	96	34.2	35.5	34.9
68	3	72	418	491	35.4	37.8	37.4	98	325	423	36.1	38.0	37.5
67	4	48	267	315	36.7	39.3	38.9	94	230	324	38.0	39.8	39.3
66	5	10	54	64	37.5	41.6	40.9	31	62	93	39.5	42.7	41.6
65	6	2	16	18	38.5	44.4	43.8	12	27	39	41.1	46.0	44.5
64	7	1	5	5	39.2	45.3	44.6	4	11	15	41.3	47.0	45.6
63	8	-	3	3	-	45.9	45.9	1	5	6	43.0	46.8	46.3
62	9	-	-	-	-	-	-	1	2	3	48.0	53.3	51.2
61	10	-	-	-	-	-	-	-	-	-	-	-	-
60	11	-	-	-	-	-	-	-	-	-	-	-	-
59	12	-	-	-	-	-	-	-	1	1	-	52.0	52.0
Total ‰		173	827	1000	35.7	38.5	38.0	289	711	1000	37.1	39.4	38.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		8	8	8	-	-	-	9	9	9	-	-	-
Number of Fish Aged		126	200	326	-	-	-	190	224	414	-	-	-
Mean Age		3.21	3.47	3.42	-	-	-	3.59	3.67	3.65	-	-	-
Mean Weight (kg)		0.40	0.58	0.51	-	-	-	0.44	0.58	0.54	-	-	-
Total Weight Landed (tons)		154	993	1147	-	-	-	422	1342	1764	-	-	-
Estimated Number Landed ¹		13879	18568	32699	-	-	-	11831	17878	29709	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	20-40	-	-	-	-	-	22-46	-	-	-

¹ Numbers in hundreds

TABLE 69
(CONT'D)

AGE FREQUENCIES - YELLOWTAIL - 5ze - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Landings						Landings					
MONTH		Sep						Oct					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		‰	‰	Tot.	‰	‰	Tot.	‰	‰	Tot.	‰	‰	Tot.
1969	2	66	48	114	34.7	35.2	34.9	76	116	192	34.6	35.8	35.3
68	3	151	281	432	36.0	37.9	37.2	149	246	395	36.5	38.6	37.8
67	4	127	189	316	37.5	39.6	38.8	135	150	285	37.9	39.6	38.8
66	5	35	50	85	39.0	42.6	41.1	45	46	91	39.9	41.8	40.9
65	6	14	19	33	40.8	45.8	43.7	9	12	21	40.9	46.5	44.0
64	7	3	10	13	40.2	47.3	45.6	2	9	11	39.4	46.9	45.3
63	8	1	4	6	43.0	46.6	45.7	2	2	4	45.0	47.0	45.9
62	9	-	1	1	-	54.0	54.0	-	1	1	-	50.0	50.0
61	10	-	-	-	-	-	-	-	1	1	-	52.0	52.0
60	11	-	-	-	-	-	-	-	-	-	-	-	-
59	12	-	1	1	-	54.0	54.0	-	-	-	-	-	-
Total ‰		398	602	1000	36.7	39.1	38.2	418	582	1000	37.2	38.9	38.2
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		10	10	10	-	-	-	11	11	11	-	-	-
Number of Fish Aged		235	250	485	-	-	-	256	273	529	-	-	-
Mean Age		3.48	3.61	3.56	-	-	-	3.47	3.37	3.41	-	-	-
Mean Weight (kg)		0.43	0.56	0.51	-	-	-	0.42	0.52	0.48	-	-	-
Total Weight Landed (tons)		510	1009	1519	-	-	-	506	878	1384	-	-	-
Estimated Number Landed ¹		11831	17878	29709	-	-	-	12093	16794	28887	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	25-45	-	-	-	-	-	28-48	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Landings						Landings					
MONTH		Nov						Dec					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		‰	‰	Tot.	‰	‰	Tot.	‰	‰	Tot.	‰	‰	Tot.
1969	2	66	139	206	34.1	35.5	35.1	5	7	12	35.5	40.8	38.7
68	3	110	256	366	36.5	38.4	37.8	48	175	223	39.5	42.2	41.6
67	4	102	174	276	38.2	39.9	39.3	92	227	318	40.4	43.8	42.8
66	5	37	61	98	40.3	42.8	41.9	68	181	249	41.0	45.6	44.4
65	6	7	22	29	41.2	47.1	45.6	7	90	98	40.9	47.4	47.0
64	7	3	13	16	41.1	48.1	46.7	7	71	79	41.8	48.2	48.1
63	8	2	4	6	45.8	46.8	46.5	-	13	13	-	47.9	47.9
62	9	-	1	1	-	51.5	51.5	-	8	8	-	51.8	51.8
61	10	-	1	1	-	52.0	52.0	-	-	-	-	-	-
Total ‰		328	672	1000	37.1	39.2	38.5	227	773	1000	40.7	44.9	43.9
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		1	1	1	-	-	-	10	10	10	-	-	-
Number of Fish Aged		15	25	40	-	-	-	230	250	480	-	-	-
Mean Age		3.48	3.46	3.46	-	-	-	4.21	4.62	4.53	-	-	-
Mean Weight (kg)		0.42	0.54	0.50	-	-	-	0.53	0.83	0.76	-	-	-
Total Weight Landed (tons)		272	713	985	-	-	-	12	61	73	-	-	-
Estimated Number Landed ¹		6479	13160	19639	-	-	-	233	741	974	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	29-50	-	-	-	-	-	29-30	-	-	-

¹ Numbers in hundreds

TABLE 70

AGE FREQUENCIES - YELLOWTAIL - 52w - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jan					Feb						
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	7	1	8	30.9	32.1	31.1	3	1	4	32.2	32.5	32.3
68	3	110	158	268	34.7	36.0	35.5	101	158	259	35.0	36.0	35.6
67	4	189	253	442	35.0	36.6	36.0	181	255	436	35.3	36.7	36.1
66	5	89	123	212	36.0	38.9	37.6	97	122	219	36.7	38.9	38.0
65	6	22	29	52	37.5	40.7	39.3	30	32	62	38.4	41.2	39.9
64	7	5	11	16	39.0	43.1	42.3	8	10	19	40.1	43.8	42.1
63	8	-	2	2	-	47.0	47.0	-	-	-	-	-	-
62	9	-	-	-	-	-	-	-	1	1	-	51.0	51.0
Total ‰		422	578	1000	35.2	37.3	36.9	420	580	1000	35.9	37.4	36.7
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		9	9	9	-	-	-	10	10	10	-	-	-
Number of Fish Aged		225	225	450	-	-	-	248	248	496	-	-	-
Mean Age		4.06	4.11	4.09	-	-	-	4.18	4.11	4.14	-	-	-
Mean Weight (kg)		0.40	0.48	0.45	-	-	-	0.42	0.49	0.46	-	-	-
Total Weight Landed (tons)		532	885	1417	-	-	-	370	586	956	-	-	-
Estimated Number Landed ¹		13378	18323	31701	-	-	-	8745	12000	20765	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	114	-	-	-	-	-	114	-	-	-
Range of Depths (fm)		-	-	18-43	-	-	-	-	-	20-38	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Mar					Apr						
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	5	7	11	31.6	31.4	31.5	11	3	14	34.1	34.0	34.1
68	3	106	173	279	34.7	35.4	35.1	32	36	69	34.4	36.6	35.6
67	4	183	269	452	35.1	35.9	35.6	180	265	445	35.4	36.2	35.8
66	5	88	110	198	36.3	37.9	37.2	158	189	348	37.2	38.2	37.7
65	6	25	22	47	38.0	40.4	39.1	46	43	89	37.4	41.8	39.5
64	7	5	7	12	39.0	43.3	41.5	15	14	28	41.3	43.1	42.2
63	8	-	1	1	-	47.0	47.0	3	1	5	41.3	45.0	42.4
62	9	-	1	1	-	49.0	49.0	1	1	2	43.0	49.0	44.7
61	10	-	-	-	-	-	-	-	-	-	-	-	-
60	11	-	-	-	-	-	-	-	1	1	-	48.0	48.0
Total ‰		411	589	1000	35.4	36.4	36.0	446	554	1000	36.4	37.6	37.1
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		7	7	7	-	-	-	7	7	7	-	-	-
Number of Fish Aged		175	175	350	-	-	-	174	174	348	-	-	-
Mean Age		4.09	3.99	4.03	-	-	-	4.58	4.53	4.55	-	-	-
Mean Weight (kg)		0.40	0.44	0.43	-	-	-	0.44	0.60	0.53	-	-	-
Total Weight Landed (tons)		186	294	480	-	-	-	233	401	634	-	-	-
Estimated Number Landed ¹		4601	6626	11227	-	-	-	5383	6679	12063	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	114	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	27-36	-	-	-	-	-	15-28	-	-	-

¹ Numbers in hundreds

TABLE 70
(CONT'D)

AGE FREQUENCIES - YELLOWTAIL - 52w - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		May						Jun					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		85	90	Tot.	85	90	Tot.	85	90	Tot.	85	90	Tot.
1969	2	9	4	13	34.3	34.0	34.2	8	3	11	33.9	34.0	33.9
68	3	27	67	94	34.6	34.2	34.3	23	49	71	33.9	37.5	36.4
67	4	161	313	474	35.2	35.6	35.5	106	365	471	34.7	36.9	36.0
66	5	133	192	325	36.9	37.1	37.0	72	273	345	35.6	38.3	37.8
65	6	41	32	73	37.3	40.4	38.7	19	57	76	36.1	40.5	39.4
64	7	9	9	18	39.9	42.1	41.0	2	21	23	37.1	41.8	41.3
63	8	2	1	3	41.1	45.0	42.2	-	1	1	-	45.0	45.0
62	9	-	1	1	-	49.0	49.0	-	-	-	-	-	-
61	10	-	-	-	-	-	-	-	-	-	-	-	-
60	11	-	-	-	-	-	-	-	1	1	-	48.0	48.0
Total ‰		382	618	1000	35.9	36.3	36.1	230	770	1000	35.0	37.7	37.1
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		8	8	8	-	-	-	3	3	3	-	-	-
Number of Fish Aged		189	199	388	-	-	-	61	74	135	-	-	-
Mean Age		4.54	4.35	4.42	-	-	-	4.34	4.53	4.48	-	-	-
Mean Weight (kg)		0.41	0.53	0.48	-	-	-	0.38	0.60	0.55	-	-	-
Total Weight Landed (tons)		214	435	649	-	-	-	51	268	319	-	-	-
Estimated Number Landed ¹		5159	8284	13443	-	-	-	1339	4489	5827	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	11-37	-	-	-	-	-	18-34	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jul						Aug					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		85	90	Tot.	85	90	Tot.	85	90	Tot.	85	90	Tot.
1969	2	92	47	139	33.1	34.0	33.4	71	35	106	33.4	34.3	33.7
68	3	45	126	171	34.4	35.1	34.9	47	112	159	35.3	36.0	35.8
67	4	137	358	495	33.8	35.6	35.1	135	340	475	34.7	36.4	35.9
66	5	52	112	163	34.5	36.8	36.1	68	136	203	36.2	38.1	37.4
65	6	7	24	31	35.3	38.5	37.1	13	41	54	37.1	40.1	39.4
64	7	-	1	1	-	41.0	41.0	-	2	2	-	41.0	41.0
Total ‰		332	668	1000	33.9	35.7	35.1	333	667	1000	35.0	36.9	36.3
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		7	7	7	-	-	-	5	5	5	-	-	-
Number of Fish Aged		173	174	347	-	-	-	105	125	230	-	-	-
Mean Age		3.51	3.91	3.78	-	-	-	3.72	4.06	3.95	-	-	-
Mean Weight (kg)		0.34	0.42	0.39	-	-	-	0.38	0.47	0.44	-	-	-
Total Weight Landed (tons)		185	457	642	-	-	-	41	103	144	-	-	-
Estimated Number Landed ¹		5392	10852	16244	-	-	-	1083	2180	3263	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	20-28	-	-	-	-	-	18-32	-	-	-

¹ Numbers in hundreds

TABLE 70
(CONT'D)

AGE FREQUENCIES - YELLOWTAIL - 52w - 1971

(FREQUENCIES IN %)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Oct						Nov					
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	67	210	277	34.9	35.4	35.1	88	236	324	33.5	34.8	34.5
68	3	61	123	183	35.2	36.5	36.0	55	130	185	34.6	36.3	35.7
67	4	119	267	386	35.5	37.0	36.5	102	255	357	35.1	37.0	36.5
66	5	58	72	130	36.3	38.2	37.4	45	67	113	36.2	38.1	37.4
65	6	8	12	21	36.2	38.9	37.8	5	13	18	36.1	39.7	38.7
64	7	1	2	3	38.0	42.0	40.3	1	1	2	38.0	43.0	41.4
Total %/oo		315	685	1000	35.4	36.6	36.2	296	704	1000	34.7	36.3	35.8
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		1	1	1	-	-	-	8	8	8	-	-	-
Number of Fish Aged		25	25	50	-	-	-	200	200	400	-	-	-
Mean Age		3.63	3.36	3.44	-	-	-	3.42	3.28	3.32	-	-	-
Mean Weight (kg)		0.36	0.42	0.40	-	-	-	0.34	0.41	0.39	-	-	-
Total Weight Landed (tons)		113	284	397	-	-	-	213	602	815	-	-	-
Estimated Number Landed ¹		3106	6764	9870	-	-	-	6145	14617	20762	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-	-	-	122	-	-	-
Range of Depths (fm)		-	-	30-40	-	-	-	-	-	34-44	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Dec											
COUNTRY		USA											
TONNAGE		0-215											
YEAR-CLASS	AGE	% Frequency			Mean Length			% Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	113	200	313	33.3	34.8	34.2						
68	3	70	113	183	34.5	36.4	35.7						
67	4	126	224	350	35.1	37.1	36.4						
66	5	63	61	124	37.0	38.6	37.8						
65	6	7	16	23	36.8	41.1	39.8						
64	7	1	5	6	38.0	44.1	43.0						
Total %/oo		380	620	1000	34.8	36.6	35.9						
Serial Numbers		-	-	-	-	-	-						
Number of Samples		6	6	6	-	-	-						
Number of Fish Aged		150	150	300	-	-	-						
Mean Age		3.43	3.35	3.38	-	-	-						
Mean Weight (kg)		0.35	0.43	0.39	-	-	-						
Total Weight Landed (tons)		511	1016	1527	-	-	-						
Estimated Number Landed ¹		14608	23928	38546	-	-	-						
Mesh(mm) or Hook(no.) Size		-	-	122	-	-	-						
Range of Depths (fm)		-	-	25-38	-	-	-						

¹ Numbers in hundreds

TABLE 71 LENGTH FREQUENCIES - POLLOCK - 4X, 52e - 1971

(FREQUENCIES IN ‰ - 3 CM GROUPS)

DIVISION	4X (NORTH)		4X (SOUTH)				52e
	Otter Trawl (Stern)		Otter Trawl (Side)				OT (Stern)
GEAR	Commercial		Commercial				Commercial
CATCHES/LANDINGS	Landings		Landings				Landings
MONTH	Aug	Aug	May	May	Jun	Jul	Oct
COUNTRY	Can(M)		Can(M)				Can(M)
TONNAGE	26-50	51-150	51-150	51-500		501-900	
42	-	-	-	5	-	-	4
45	-	-	-	5	-	5	19
48	-	-	9	2	14	33	77
51	-	-	-	5	-	66	127
54	-	-	-	2	-	66	127
57	-	-	-	7	-	66	81
60	-	-	27	3	22	180	181
63	17	-	18	14	7	251	197
66	-	19	183	52	50	77	108
69	17	75	192	130	86	104	42
72	83	113	208	206	137	87	23
75	117	170	173	208	187	49	4
78	217	94	109	157	158	11	8
81	300	189	63	82	158	5	-
84	117	208	9	65	79	-	-
87	33	57	9	31	72	-	-
90	17	38	-	24	7	-	-
93	50	19	-	2	7	-	-
96	17	19	-	2	7	-	-
99	17	-	-	-	-	-	-
102	-	-	-	-	-	-	-
105	-	-	-	-	7	-	-
Total ‰	1002	1001	1000	1002	998	1000	998
Serial Numbers	114	113	-	-	84	98	132
Number of Samples	1	1	2	2	1	1	1
Number of Fish Measured	60	53	110	308	139	183	259
Mean Length (cm)	81.25	80.30	72.60	75.64	77.42	63.59	59.66
Mean Weight (kg)	6.67	6.45	4.75	5.41	5.83	3.24	2.68
Total Weight Landed (tons)	40	62	126	344	444	242	80
Estimated Number Landed ¹	6	10	27	64	76	75	30
Mesh(mm) or Hook(no) Size	114	114	114	114	114	114	114
Range of Depths (fm)	60	55	87	70-88	87	80	115

¹ Numbers in thousands

TABLE 72 LENGTH FREQUENCIES - RED HAKE - 52e - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl					
	Commercial					
CATCHES/LANDINGS	Catches					
MONTH	May	Jun	Jul	Aug	Sep	Nov
COUNTRY	USSR					
TONNAGE	BMRT, SRIM					
18	-	-	-	-	30	-
20	-	-	-	-	130	-
22	7	-	-	-	235	-
24	23	10	7	2	320	23
26	80	44	63	23	170	73
28	109	101	121	38	45	130
30	175	160	178	136	20	236
32	202	226	209	168	10	205
34	195	183	210	197	10	95
36	133	130	110	142	20	80
38	39	53	45	100	10	50
40	13	36	25	87	-	43
42	7	27	20	63	-	30
44	7	11	7	33	-	17
46	3	11	3	8	-	10
48	2	4	2	3	-	3
50	5	1	-	-	-	5
52	-	3	-	-	-	-
Total ‰	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	3	4	7	3	1	3
Number of Fish Measured	615	700	1400	600	200	600
Mean Length (cm)	32.6	33.6	32.9	35.3	24.5	32.8
Mean Weight (kg)	0.207	0.248	0.228	0.310	0.116	0.267
Total Weight Landed (tons)	406	708	786	396	547	291
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	40	40	40	40	40	40
Range of Depths (fm)	52-88	68-93	38-63	34-57	50	38-52

TABLE 73 LENGTH FREQUENCIES - RED HAKE - 5Zw - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl					
	Commercial					
CATCHES/LANDINGS	Catches					
MONTH	Jun	Jul	Sep	Oct	Nov	Dec
COUNTRY	USSR					
TONNAGE	BMRT, SRTM					
18	-	-	-	1	1	-
20	-	-	-	8	8	-
22	40	-	3	37	33	8
24	40	-	27	46	67	40
26	175	90	163	96	100	105
28	280	95	283	205	201	260
30	220	110	190	254	254	240
32	110	180	96	154	145	150
34	70	165	117	89	94	118
36	30	135	47	49	39	37
38	5	70	37	23	18	15
40	20	45	17	15	14	18
42	10	30	7	10	11	2
44	-	30	10	5	5	5
46	-	35	3	4	5	2
48	-	10	-	3	2	-
50	-	5	-	1	2	-
52	-	-	-	-	1	-
54	-	-	-	+	+	-
Total ‰	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	1	1	2	13	18	2
Number of Fish Measured	200	200	300	2600	5600	400
Mean Length (cm)	29.7	34.4	30.8	30.7	30.5	30.7
Mean Weight (kg)	0.244	0.268	0.193	0.200	0.208	0.186
Total Weight Landed (tons)	2811	3313	2	3579	174	14
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no) Size	40	40	40	40	40	40
Range of Depths (fm)	25	55	50-55	38-50	36-47	44-47

TABLE 73 LENGTH FREQUENCIES - RED HAKE - 5Zw - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 1 CM GROUPS)

GEAR	Otter Trawl				
	Commercial				
CATCHES/LANDINGS	Landings				
MONTH	May	Jun	Jul	Aug	Sep
COUNTRY	USA				
TONNAGE	0-215				
12	-	1	-	-	-
13	1	1	-	-	-
14	-	-	-	-	-
15	1	1	-	20	-
16	6	-	-	9	5
17	6	5	44	30	-
18	13	6	30	53	-
19	6	17	15	27	13
20	8	23	-	26	35
21	2	23	15	21	30
22	19	30	19	41	-
23	30	56	19	20	18
24	31	56	142	66	53
25	17	69	167	50	58
26	38	58	206	56	202
27	50	80	66	69	197
28	105	84	182	97	197
29	83	108	51	50	38
30	98	83	4	107	13
31	67	67	15	36	5
32	62	62	17	59	43
33	58	44	4	9	40
34	60	21	-	36	35
35	48	29	-	38	18
36	41	24	-	11	-
37	18	15	4	9	-
38	34	10	-	11	-
39	23	7	-	20	-
40	23	1	-	20	-
41	18	11	-	-	-
42	2	2	-	-	-
43	2	1	-	-	-
44	8	4	-	-	-
45	7	1	-	-	-
46	-	-	-	9	-
47	-	-	-	-	-
48	3	-	-	-	-
53	2	-	-	-	-
54	3	-	-	-	-
55	2	-	-	-	-
56	5	-	-	-	-
Total ‰	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	13	15	4	2	4
Number of Fish Measured	733	1043	105	103	108
Mean Length (cm)	30.98	28.42	25.45	27.27	27.04
Mean Weight (kg)	0.26	0.18	0.20	0.16	0.21
Total Weight Landed (tons)	1049	951	86	9	50
Estimated Number Landed ¹	40346	52833	4300	563	2381
Mesh(mm) or Hook(no) Size	64	64	64	64	64
Range of Depths (fm)	18-32	15-31	18-24	17-32	17-25

¹ Numbers in hundreds

TABLE 74 LENGTH FREQUENCIES - RED HAKE - 6A - 1971

(FREQUENCIES IN %/oo - 1 CM GROUPS)

GEAR	Otter Trawl			
	Commercial			
CATCHES/LANDINGS	Landings			
MONTH	May	Jun	Jul	Aug
COUNTRY	USA			
TONNAGE	0-215			
15	-	-	7	-
16	-	-	-	-
17	-	7	-	-
18	-	-	19	-
19	6	36	26	-
20	-	53	-	-
21	17	19	11	24
22	29	17	-	63
23	23	20	22	-
24	41	20	48	32
25	81	18	48	-
26	150	18	141	48
27	165	99	180	70
28	154	178	126	24
29	81	243	56	56
30	51	137	48	78
31	63	64	115	56
32	46	6	63	-
33	6	8	11	56
34	23	21	11	79
35	17	-	11	48
36	12	-	22	71
37	11	22	-	103
38	12	2	11	24
39	-	-	-	24
40	6	-	-	24
41	-	12	11	48
42	-	-	-	24
43	6	-	-	-
44	-	-	11	24
--	-	-	-	-
47	-	-	-	24
Total %/oo	1000	1000	1000	1000
Serial Numbers	-	-	-	-
Number of Samples	2	8	5	4
Number of Fish Measured	174	339	148	34
Mean Length (cm)	27.97	27.84	28.06	32.70
Mean Weight (kg)	0.14	0.19	0.20	0.24
Total Weight Landed (tons)	304	272	5	3
Estimated Number Landed ¹	21714	14316	250	125
Mesh(mm) or Hook(no) Size	64	64	64	64
Range of Depths (fm)	18-32	18-31	18-30	15-24

¹ Numbers in hundreds

TABLE 74 LENGTH FREQUENCIES - RED HAKE - 6 - 1971
(CONT'D)

(FREQUENCIES IN ‰ - 2 CM GROUPS)

GEAR	Otter Trawl			OT (Stern)
	Commercial Catches			
MONTH	Apr	Nov	Dec	Dec
COUNTRY	USSR			Japan ¹
TONNAGE	BMRT, SRTM			>1800
16	-	3	-	5
18	-	18	-	30
20	5	98	-	75
22	9	189	30	130
24	208	195	195	105
26	282	147	80	135
28	180	116	220	105
30	167	110	215	140
32	74	46	125	100
34	42	32	75	85
36	28	22	30	45
38	5	11	15	25
40	-	5	5	10
42	-	3	10	10
44	-	1	-	5
46	-	2	-	-
48	-	-	-	-
50	-	2	-	-
Total ‰	1000	1000	1000	1005
Serial Numbers	-	-	-	-
Number of Samples	1	6	1	2
Number of Fish Measured	216	1200	200	201
Mean Length (cm)	28.2	26.4	29.4	28.7
Mean Weight (kg)	0.145	0.130	0.173	-
Total Weight Landed (tons)	128	5567	78	5
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no) Size	40	40	40	-
Range of Depths (fm)	52	33-63	57-63	60

¹ Reported from Division 6B

TABLE 75

AGE FREQUENCIES - RED HAKE - 52e - 1971

(FREQUENCIES IN ‰)

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Jul						Aug					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1969	2	36	8	44	29.7	28.5	29.5	11	70	81	28.5	29.8	29.7
68	3	117	168	285	32.4	35.5	34.2	103	357	460	32.7	34.2	33.9
67	4	73	292	365	35.3	37.4	36.9	23	231	254	38.5	38.0	38.1
66	5	37	197	234	36.9	41.1	40.4	-	126	126	-	42.0	42.0
65	6	7	51	58	36.5	42.8	42.0	-	57	57	-	42.5	42.5
64	7	-	14	14	-	42.5	42.5	-	11	11	-	40.5	40.5
63	8	-	-	-	-	-	-	-	11	11	-	50.5	50.5
Total ‰		270	730	1000	33.5	38.3	37.0	137	863	1000	33.3	36.8	36.3
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	2	-	-	-	-	-	1	-	-	-
Number of Fish Aged		37	100	137	-	-	-	12	75	87	-	-	-
Mean Age		3.49	4.22	4.02	-	-	-	3.08	3.80	3.71	-	-	-
Mean Weight (kg)		-	-	-	-	-	-	-	-	-	-	-	-
Total Weight Landed (tons)		-	-	786	-	-	-	-	-	396	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	-	-	-	-	-	-	60-105	-	-	-

GEAR		Otter Trawl											
CATCHES/LANDINGS		Commercial											
MONTH		Oct						Nov					
COUNTRY		USSR											
TONNAGE		BMRT, SRTM											
YEAR-CLASS	AGE	‰ Frequency			Mean Length			‰ Frequency			Mean Length		
		♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.	♂♂	♀♀	Tot.
1970	1	7	7	37	20.5	26.5	18.5	-	-	-	-	-	-
69	2	290	232	522	26.8	26.1	26.4	205	169	374	27.2	28.5	28.3
68	3	127	157	284	33.0	33.0	33.0	205	205	410	33.0	33.0	33.0
67	4	30	45	75	32.8	36.8	35.4	72	72	144	36.8	38.2	37.5
66	5	8	52	60	36.5	42.8	42.0	12	48	60	38.5	42.5	41.7
65	6	7	15	22	46.5	43.5	43.5	12	-	12	42.5	-	42.5
Total ‰		469	508	1000	29.9	33.0	31.0	506	494	1000	31.9	33.1	32.5
Serial Numbers		-	-	-	-	-	-	-	-	-	-	-	-
Number of Samples		-	-	1	-	-	-	-	-	1	-	-	-
Number of Fish Aged		63	68	134	-	-	-	42	41	83	-	-	-
Mean Age		2.49	2.90	2.67	-	-	-	2.86	3.00	2.91	-	-	-
Mean Weight (kg)		-	-	-	-	-	-	-	-	-	-	-	-
Total Weight Landed (tons)		-	-	404	-	-	-	-	-	291	-	-	-
Estimated Number Landed		-	-	-	-	-	-	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size		-	-	40	-	-	-	-	-	40	-	-	-
Range of Depths (fm)		-	-	-	-	-	-	-	-	70-95	-	-	-

TABLE 77

AGE/LENGTH KEYS - RED HAKE - 1970

(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

DIVISION	COUNTRY		QUARTER
5Ze	USSR	III.	August
	USSR	IV.	October-November
5Zw	USSR	IV.	October-December

TABLE 78 LENGTH FREQUENCIES - WHITE HAKE - 5Ze, 6A - 1971

(FREQUENCIES IN ‰ - 2 CM GROUPS)

DIVISION	5Ze	6A
GEAR	Otter Trawl	Otter Trawl
CATCHES/LANDINGS	Commercial	Commercial
MONTH	Oct	Jan
COUNTRY	Japan	Japan
TONNAGE	>1800	>1800
34	17	-
36	131	-
38	211	-
40	223	-
42	183	84
44	137	102
46	51	210
48	46	263
50	-	263
52	-	78
Total ‰	999	1000
Serial Numbers	-	-
Number of Samples	1	1
Number of Fish Measured	175	167
Mean Length (cm)	41.54	48.49
Mean Weight (kg)	-	-
Total Weight Landed (tons)	1	6
Estimated Number Landed	-	-
Mesh(mm) or Hook(no) Size	-	-
Range of Depths (fm)	40	-

TABLE 79

LENGTH FREQUENCIES HERRING - 3Pn - 1971

(FREQUENCIES IN % OF 1 CM GROUPS)

MONTH	Jan	Feb	Mar	Apr	Nov	Dec
COUNTRY	Can(N)					
CATCHES/LANDINGS	Catches					
COMMERCIAL/RESEARCH	Commercial					
9	-	-	-	1	-	-
22	-	-	9	15	-	-
23	1	-	14	92	-	-
24	-	1	12	75	-	-
25	-	2	5	31	-	10
26	-	1	1	9	-	-
27	2	4	4	4	-	-
28	5	6	5	11	20	-
29	3	7	3	9	60	-
30	9	14	9	8	150	-
31	32	46	30	19	240	-
32	85	115	73	47	240	60
33	168	183	158	116	240	70
34	233	227	226	187	50	140
35	272	242	245	200	-	360
36	138	117	152	129	-	230
37	41	28	42	41	-	110
38	9	6	8	5	-	20
39	2	1	2	1	-	-
Total %/oo	1000	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	30	66	48	11	1	1
Number of Fish Measured	2750	7350	5400	750	100	100
Mean Length (cm)	34.2	33.8	33.7	31.9	31.5	35.0
Mean Weight (kg)	0.30	0.31	0.28	0.24	0.31	0.30
Total Weight Landed (tons)	20667	23762	16734	3359	114	1680
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-	-	-
Range of Depths (fm)	-	-	-	-	-	-

TABLE 79
(CONT'D)

LENGTH FREQUENCIES - HERRING - 3Ps - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	Jan ¹	Feb ¹	Dec ¹	Jan ²
COUNTRY	Can(N)			
CATCHES/LANDINGS	Catches			
COMMERCIAL/RESEARCH	Commercial			
15	-	-	-	2
16	-	-	-	-
17	-	-	-	2
23	1	-	1	2
24	1	3	1	3
25	9	3	6	23
26	1	3	3	166
27	3	18	8	259
28	-	31	14	95
29	3	5	12	58
30	4	8	8	95
31	29	26	12	113
32	73	94	25	50
33	150	196	92	23
34	219	223	208	30
35	284	223	262	35
36	174	123	238	23
37	37	34	91	8
38	12	10	15	8
39	-	-	3	3
40	-	-	1	2
Total ‰	1000	1000	1000	1000
Serial Numbers	-	-	16	-
Number of Samples	10	2	-	6
Number of Fish Measured	700	382	1700	600
Mean Length (cm)	34.3	33.7	34.6	30.0
Mean Weight (kg)	0.30	0.28	0.30	0.19
Total Weight Landed (tons)	14267	1523	9712	5260
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-
Range of Depths (fm)	-	-	-	-

¹ Inshore, Burgeo to Pass Island, Nfld.

² Inshore, Fortune.

TABLE 80

LENGTH FREQUENCIES - HERRING - 4R - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	May ¹	May ²	Dec ³	Dec ⁴
COUNTRY	Can(N)			
CATCHES/LANDINGS	Catches			
COMMERCIAL/RESEARCH	Commercial			
23	-	-	-	2
24	-	-	10	22
25	-	-	20	133
26	-	-	90	337
27	-	-	200	259
28	-	-	190	144
29	-	-	110	27
30	10	2	120	22
31	80	24	50	22
32	110	80	30	11
33	80	207	40	4
34	230	250	10	4
35	260	191	40	7
36	160	173	40	2
37	50	56	30	-
38	20	13	20	2
39	-	4	-	2
Total ‰	1000	1000	1000	1000
Serial Numbers	-	-	-	-
Number of Samples	1	5	1	2
Number of Fish Measured	100	450	100	450
Mean Length (cm)	34.2	34.3	29.5	26.9
Mean Weight (kg)	0.29	0.28	0.22	0.15
Total Weight Landed (tons)	1219	943	160	355
Estimated Number Landed	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-
Range of Depths (fm)	-	-	-	-

¹ Port au Port Peninsula
² Bay of Islands

³ Bonne Bay
⁴ St. John Bay

TABLE 81

LENGTH FREQUENCIES - HERRING - 4T, 4Vn, 4W - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

DIVISION	4T ¹		4Vn ²		4W ³
	Apr	Dec	Jan	Dec	Feb
MONTH					
COUNTRY	Can(N)				
CATCHES/LANDINGS	Catches				
COMMERCIAL/RESEARCH	Commercial				
11	-	-	-	-	2
12	-	-	10	-	2
13	-	-	-	-	9
14	-	-	-	-	40
15	-	-	30	-	69
16	-	-	60	-	94
17	-	-	60	-	118
18	-	-	30	-	72
19	-	-	20	-	49
20	-	-	30	7	37
21	-	-	60	7	40
22	-	-	10	-	49
23	-	-	-	-	40
24	-	-	10	7	18
25	7	-	20	27	6
26	11	10	-	13	12
27	20	-	40	40	25
28	51	20	-	87	17
29	67	10	-	73	29
30	249	10	20	73	25
31	305	80	20	47	43
32	180	120	20	106	31
33	64	130	40	106	26
34	33	180	120	100	29
35	11	110	120	93	42
36	2	100	150	93	42
37	-	100	90	87	23
38	-	90	10	27	8
39	-	40	20	7	3
40	-	-	10	-	-
Total ‰	1000	1000	1000	1000	1000
Serial Numbers	-	-	-	-	-
Number of Samples	5	1	1	1	2
Number of Fish Measured	450	100	100	150	650
Mean Length (cm)	30.7	34.3	29.1	32.2	23.1
Mean Weight (kg)	0.22	0.30	0.21	0.25	0.12
Total Weight Landed (tons)	3200	97	1025	183	257
Estimated Number Landed	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	M	-	-
Range of Depths (fm)	-	-	-	-	-

¹ April - St. Paul Island; December - Antigonish area

² January - Gabarus Bay; December - Scatarì

³ Chedabucto Bay

TABLE 82

LENGTH FREQUENCIES - HERRING - 5Z - 1971

(FREQUENCIES IN ‰ - 1 CM GROUPS)

MONTH	Aug	Sep	Oct	May	Jun	Jun
COUNTRY	Japan ¹			Poland		USSR
CATCHES/LANDINGS	Catches					
COMMERCIAL/RESEARCH	Commercial					
16	-	-	1	-	-	-
17	-	-	6	-	-	3
18	-	-	8	-	-	12
19	-	-	9	-	-	32
20	-	-	1	-	-	13
21	-	-	-	-	-	16
22	14	-	4	-	-	31
23	124	19	20	-	2	58
24	138	57	76	-	12	183
25	133	103	107	-	50	215
26	110	136	131	-	96	136
27	143	151	136	6	114	94
28	126	168	147	7	172	51
29	96	136	118	69	205	41
30	58	103	90	90	149	33
31	49	74	65	133	94	33
32	2	44	39	170	56	15
33	-	5	29	275	35	13
34	7	5	9	163	14	15
35	-	-	4	78	2	6
36	-	-	-	9	-	-
Total ‰	1000	1001	1000	1000	1001	1000
Serial Numbers	-	-	-	-	-	-
Number of Samples	2	6	6	1	14	16
Number of Fish Measured	428	1077	788	331	5107	3171
Mean Length (cm)	26.90	28.24	27.98	-	-	25.60
Mean Weight (kg)	-	-	-	-	-	-
Total Weight Landed (tons)	47	1260	1789	-	-	-
Estimated Number Landed	-	-	-	-	-	-
Mesh(mm) or Hook(no.) Size	-	-	-	-	-	12
Range of Depths (fm)	50	27-50	27-71	-	-	-

¹ Data reported from 5Ze

TABLE 83

AGE/LENGTH KEY - HERRING - 3Pn - 1971 (1st QUARTER)

COUNTRY		Canada (M)										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 Age Group (cm)	68	67	66	65	64	63	62	61	60	59	Total No. of Ages Read	Months Within Quarter		
		3	4	5	6	7	8	9	10	11	12		Jan	Feb	Mar
10		-	-	-	-	-	-	-	-	-	-	-	1	-	-
21		-	-	-	-	-	-	-	-	-	-	-	4	-	-
22		-	-	-	-	-	-	-	-	-	-	-	9	-	-
23		-	-	-	-	-	-	-	-	-	-	-	8	-	-
24		-	-	-	-	-	-	-	-	-	-	-	7	-	-
25		1	-	1	-	-	-	-	-	-	-	2	3	-	1
26		-	-	1	-	-	-	-	-	-	-	1	4	-	1
27		-	2	2	-	-	-	-	-	-	-	4	15	2	4
28		-	-	2	-	-	-	-	-	-	-	2	8	-	5
29		-	-	2	-	-	-	-	-	-	-	2	12	-	5
30		-	-	-	8	3	-	-	-	-	-	11	20	23	15
31		-	-	-	4	12	3	1	-	-	-	20	53	72	47
32		-	-	-	-	19	7	1	-	-	-	27	128	109	101
33		-	-	-	-	9	31	3	-	-	-	43	206	160	183
34		-	-	-	-	-	11	15	2	1	-	29	232	246	236
35		-	-	-	-	-	4	11	6	1	-	22	185	234	226
36		-	-	-	-	-	-	3	4	2	-	9	89	109	129
37		-	-	-	-	-	-	-	1	-	1	2	14	42	41
38		-	-	-	-	-	-	-	-	-	1	1	2	2	6
Total No. of Ages Read		1	2	8	12	43	56	34	13	4	2	175			
Serial Numbers		No. of Age Samples										3			
		Number of fish measured each month										1231	431	1684	
		Mean length of fish (cm) each month										33.6	34.3	34.4	
		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	-	-	

S = Seines

TABLE 84

AGE/LENGTH KEY - HERRING - 4T - 1971 (2nd QUARTER)

COUNTRY		Canada (M)											Total No. of Ages Read	LENGTH COMPOSITION PER MILL		
CATCHES/LANDINGS		Catches												Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial											Apr	May	Jun	
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year-Class	Age	68	67	66	65	64	63	62	61	60	59	58	Total No. of Ages Read	MONTHS WITHIN QUARTER		
Length Group (cm)		3	4	5	6	7	8	9	10	11	12	13		Apr	May	Jun
17		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
24		-	1	-	-	-	-	-	-	-	-	-	1	-	-	1
25		8	22	-	-	-	-	-	-	-	-	-	30	5	12	8
26		117	254	-	-	-	-	-	-	-	-	-	371	103	142	75
27		109	378	24	-	-	-	-	-	-	-	-	511	129	236	185
28		23	150	114	1	-	-	-	-	-	-	-	288	144	136	144
29		3	46	152	6	-	-	-	-	-	-	-	207	154	76	48
30		1	15	171	40	1	-	-	-	-	-	-	228	194	79	44
31		1	10	53	105	19	-	-	-	-	-	-	188	116	62	71
32		-	3	16	94	125	14	-	-	-	-	-	252	96	92	90
33		-	-	6	27	150	90	2	-	-	-	-	275	28	106	91
34		-	-	-	1	37	88	21	3	-	-	-	150	18	48	91
35		-	-	-	-	4	48	34	9	2	2	-	99	13	9	83
36		-	-	-	-	-	1	18	18	8	2	-	47	-	1	54
37		-	-	-	-	-	-	1	-	2	2	1	6	-	-	12
38		-	-	-	-	-	-	-	1	2	-	-	3	-	-	2
Total No. of Ages Read		262	879	536	274	336	241	76	31	14	6	1	2656	1000	1000	1000
Serial Numbers		No. of Age Samples											18			
		Number of fish measured each month											396	1943	1681	
		Mean length of fish (cm) each month											29.7	29.6	30.9	
		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)											S,N	N,S	N,S	

N = Gillnets; S = Seines

TABLE 84
(CONT'D)

AGE/LENGTH KEY - HERRING - 4T - 1971 (2nd QUARTER)

COUNTRY		France (SP)										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Research										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	68	67	66	65	64	63	62	Total No. of Ages Read	LENGTH COMPOSITION PER MILLIF		
		3	4	5	6	7	8	9		Months Within Quarter	Apr	May
23		3	-	-	-	-	-	-	3	-	24	-
24		6	1	-	-	-	-	-	7	-	58	-
25		1	7	-	-	-	-	-	8	-	56	-
26		1	11	2	-	-	-	-	14	-	101	-
27		-	33	34	-	-	-	-	67	-	340	-
28		1	5	30	2	-	-	-	38	-	203	-
29		-	1	5	15	1	-	1	23	-	90	-
30		-	-	-	7	1	-	-	8	-	52	-
31		-	-	-	1	2	-	-	3	-	34	-
32		-	-	-	-	1	5	-	6	-	22	-
33		-	-	-	-	-	1	2	3	-	10	-
34		-	-	-	-	-	-	-	-	-	6	-
35		-	-	-	-	-	-	-	-	-	2	-
36		-	-	-	-	-	-	-	-	-	2	-
Total No. of Ages Read		12	58	71	25	5	6	3	180	- 1000 -		
Serial Numbers		No. of Age Samples										
		Number of fish measured each month								-	502	-
		Mean length of fish (cm) each month								-	27.7	-
		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								-	130	-
		Mesh size (mm)								-	50	-

Stretch mesh

TABLE 84
(CONT'D)

AGE/LENGTH KEY - HERRING - 4T - 1971 (3rd QUARTER)

COUNTRY		Canada (M)												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	Age	69	68	67	66	65	64	63	62	61	60	59	58	Total No. of Ages Read	Months Within Quarter		
Length Group (cm)		2	3	4	5	6	7	8	9	10	11	12	13		Jul	Aug	Sep
21		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
22		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23		1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
24		-	4	-	-	-	-	-	-	-	-	-	-	4	1	2	
25		1	7	1	-	-	-	-	-	-	-	-	-	9	3	4	
26		1	25	3	-	-	-	-	-	-	-	-	-	29	6	8	
27		-	48	29	1	-	-	-	-	-	-	-	-	78	42	15	
28		-	21	64	7	1	-	-	-	-	-	-	-	93	61	53	
29		-	4	46	24	3	-	-	-	-	-	-	-	77	37	54	
30		-	1	21	66	24	2	-	-	-	-	-	-	114	50	48	
31		-	-	9	78	70	18	1	-	-	-	-	-	176	89	82	
32		-	1	-	27	166	70	9	1	-	-	-	-	274	142	131	
33		-	-	-	2	50	123	40	2	2	-	-	-	219	163	189	
34		-	-	-	-	-	34	68	26	5	4	1	-	138	149	161	
35		-	-	1	-	-	1	30	51	15	7	2	1	108	141	135	
36		-	-	-	-	-	-	3	14	11	8	2	-	38	84	91	
37		-	-	-	-	-	-	-	1	3	1	3	1	9	24	23	
38		-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	
39		-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	
Total No. of Ages Read		3	111	174	205	314	248	151	95	36	20	8	2	1367	1000	1000	1000
Serial Numbers		No. of Age Samples												19			
Number of fish measured each month														2283	1795	435	
Mean length of fish (cm) each month														33.0	33.2	32.2	
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, S, N	T, N, S	T, N, S	

N = Gillnets; S = Seines; T = Trawls

TABLE 84
(CONT'D)

AGE/LENGTH KEY - HERRING - 4T - 1971 (3rd QUARTER)

COUNTRY		Canada (M)				
CATCHES/LANDINGS		Catches				
COMMERCIAL/RESEARCH		Research				
STRUCTURES USED IN AGE DETERMINATION		Otoliths				
Year- Class Length Age Group (cm)	70	69	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	1	2		Months Within Quarter		
				Jul	Aug	Sep
7	-	-	-	-	31	-
8	1	-	1	-	104	-
9	4	-	4	-	218	-
10	7	1	8	-	197	-
11	4	3	7	-	132	-
12	-	47	47	-	208	-
13	-	23	23	-	97	-
14	-	-	-	-	7	-
15	-	1	1	-	3	-
16	-	1	1	-	3	-
Total No. of Ages Read			92	1000		
Serial Numbers		No. of Age Samples		1		
Number of fish measured each month			-	289		-
Mean length of fish (cm) each month			-	10.8		-
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 = Trawls

TABLE 84
(CONT'D)

AGE/LENGTH KEY - HERRING - 4T - 1971 (4th QUARTER)

COUNTRY		Canada (M)											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	Age	67	66	65	64	63	62	61	60	59	58	57	Total No. of Ages Read	Oct	Nov	Dec
Length Group (cm)		4	5	6	7	8	9	10	11	12	13	14				
30		1	-	-	-	-	-	-	-	-	-	-	1	-	10	-
31		2	1	-	-	-	-	-	-	-	-	-	3	-	30	-
32		-	-	4	1	-	-	-	-	-	-	-	5	-	50	-
33		-	-	2	2	2	-	-	-	-	-	-	6	-	60	-
34		-	-	1	10	4	-	-	-	-	-	-	15	-	150	-
35		-	-	-	1	9	4	-	-	-	-	-	14	-	140	-
36		-	-	-	-	4	9	4	2	-	-	-	19	-	200	-
37		-	-	-	-	1	6	12	2	3	-	-	24	-	260	-
38		-	-	-	-	-	-	-	2	1	1	-	4	-	70	-
39		-	-	-	-	-	-	-	-	-	-	1	1	-	30	-
Total No. of Ages Read		3	1	7	14	20	19	16	6	4	1	1	92			
Serial Numbers		No. of Age Samples											1			
		Number of fish measured each month											-	100	-	
		Mean length of fish (cm) each month											-	35.9	-	
		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)											-	T	-	

T = Trawls

TABLE 85

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (1st QUARTER)

COUNTRY		Canada (M)										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter	Jan	Feb
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year-Class	Age	68	67	66	65	64	63	62	61	60	59	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
Length Group (cm)	Age	3	4	5	6	7	8	9	10	11	12		Jan	Feb	Mar
20		1	-	-	-	-	-	-	-	-	-	1	3	-	-
21		-	-	-	-	-	-	-	-	-	-	-	3	-	-
22		-	1	-	-	-	-	-	-	-	-	1	17	-	-
23		1	-	-	-	-	-	-	-	-	-	1	41	-	-
24		-	-	1	-	-	-	-	-	-	-	1	41	-	-
25		-	-	4	-	-	-	-	-	-	-	4	35	-	-
26		-	1	1	-	-	-	-	-	-	-	2	68	-	-
27		-	-	1	-	-	-	-	-	-	-	1	87	-	-
28		-	-	4	2	1	-	-	-	-	-	7	94	-	-
29		-	-	5	6	-	-	-	-	-	-	11	105	-	-
30		-	-	4	5	1	1	-	-	-	-	11	89	-	-
31		-	-	-	4	3	2	-	-	-	-	9	91	-	-
32		-	-	-	1	8	3	-	-	-	1	13	89	-	-
33		-	-	-	1	4	4	3	1	-	-	13	65	-	-
34		-	-	-	-	1	2	-	1	-	-	4	57	-	-
35		-	-	-	-	-	3	1	1	-	-	5	47	-	-
36		-	-	-	-	-	-	2	1	4	-	7	39	-	-
37		-	-	-	-	-	-	-	3	2	2	7	24	-	-
38		-	-	-	-	-	-	-	-	-	-	-	5	-	-
Total No. of Ages Read		2	2	20	19	18	15	6	7	6	3	98			
Serial Numbers		No. of Age Samples										1			
		Number of fish measured each month										1579	-	-	-
		Mean length of fish (cm) each month										30.1	-	-	-
		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, T	-	-	-

S = Seines; T = Trawls

TABLE 85
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (1st QUARTER)

COUNTRY		France (SP)						Total No. of Ages Read	LENGTH COMPOSITION PER MONTH			
CATCHES/LANDINGS		Catches							Months Within Quarter	Jan	Feb	Mar
COMMERCIAL/RESEARCH		Research										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class	Age	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MONTH			
Length Group (cm)	Age	3	4	5	6	7	8		Jan	Feb	Mar	
19		-	-	-	-	-	-	-	3	-	-	
20		-	-	-	-	-	-	-	6	-	-	
21		-	-	-	-	-	-	-	22	-	-	
22		-	-	-	-	-	-	-	28	-	-	
23		2	-	-	-	-	-	2	34	-	-	
24		2	-	-	-	-	-	2	149	-	-	
25		2	-	-	-	-	-	2	364	-	-	
26		1	9	1	-	-	-	11	161	-	-	
27		-	19	21	-	-	-	40	84	-	-	
28		-	1	11	1	-	-	13	44	-	-	
29		-	-	-	7	2	-	9	56	-	-	
30		-	-	1	5	1	-	7	37	-	-	
31		-	-	-	-	2	1	3	12	-	-	
32		-	-	-	-	2	3	5	-	-	-	
33		-	-	-	-	1	2	3	-	-	-	
Total No. of Ages Read		7	29	34	13	8	6	97	1000	-	-	
Serial Numbers		No. of Age Samples										
		Number of fish measured each month						322	-	-	-	
		Mean length of fish (cm) each month						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						140	-	-	-	
		Mesh size (mm)						50	-	-	-	

¹ Stretch mesh

TABLE 85
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (2nd QUARTER)

COUNTRY		Canada (M)										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter	Apr	May
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Age Group (cm)		67	66	65	64	63	62	61	60	59	58				
		4	5	6	7	8	9	10	11	12	13				
29		-	3	-	-	-	-	-	-	-		3	-	-	11
30		2	1	1	-	-	-	-	-	-		4	-	-	15
31		1	2	9	2	-	-	-	-	-		14	-	-	52
32		-	1	12	10	-	-	-	-	-		23	-	-	89
33		-	-	5	20	5	2	-	-	-		32	-	-	122
34		-	-	-	18	30	9	2	-	-		59	-	-	218
35		-	-	-	-	21	34	2	1	1		59	-	-	230
36		-	-	-	-	7	15	12	3	1		38	-	-	181
37		-	-	-	-	-	6	4	2	1		13	-	-	67
38		-	-	-	-	-	-	-	-	1	2	3	-	-	15
Total No. of Ages Read		3	7	27	50	63	66	20	6	4	2	248			
Serial Numbers		No. of Age Samples										3			
		Number of fish measured each month										-	-	270	
		Mean length of fish (cm) each month										-	-	34.7	
		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)										-	-	W, N	

N = Gillnets; W = Weirs

TABLE 85
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (2nd QUARTER)

COUNTRY		France (SP)												Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches													Months	Within Quarter	
COMMERCIAL/RESEARCH		Research												Ages Read		May ¹	
STRUCTURES USED IN AGE DETERMINATION		Otoliths													Ages Read	Months	
Year-Class	Age	69	68	67	66	65	64	63	62	61	60	59	58	Ages Read		Months	
Length Group (cm)		2	3	4	5	6	7	8	9	10	11	12	13		May ¹	May ²	
13		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
14		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
18		-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
19		1	-	-	-	-	-	-	-	-	-	-	-	1	10	-	
20		-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	
21		2	1	-	-	-	-	-	-	-	-	-	-	3	30	-	
22		3	2	-	-	-	-	-	-	-	-	-	-	5	45	-	
23		3	20	1	-	-	-	-	-	-	-	-	-	24	142	-	
24		2	43	7	-	-	-	-	-	-	-	-	-	52	206	-	
25		-	30	16	-	-	-	-	-	-	-	-	-	46	126	-	
26		-	6	9	-	-	-	-	-	-	-	-	-	15	56	-	
27		-	2	19	4	-	-	-	-	-	-	-	-	25	70	5	
28		-	1	16	9	-	-	-	-	-	-	-	-	26	51	9	
29		-	-	8	6	10	1	-	-	-	-	-	-	25	50	27	
30		-	-	2	8	5	7	1	-	-	-	-	-	23	43	27	
31		-	-	-	1	8	14	1	-	-	-	-	-	24	41	59	
32		-	-	-	-	2	10	22	1	-	-	-	-	35	33	137	
33		-	-	-	-	-	4	23	19	-	-	-	-	46	34	242	
34		-	-	-	-	-	-	2	25	6	-	-	-	33	18	279	
35		-	-	-	-	-	-	-	7	9	4	-	-	20	8	110	
36		-	-	-	-	-	-	-	-	4	6	2	-	12	6	69	
37		-	-	-	-	-	-	-	-	1	4	1	-	6	3	18	
38		-	-	-	-	-	-	-	-	-	-	1	1	2	2	13	
39		-	-	-	-	-	-	-	-	-	1	-	-	1	1	5	
Total No. of Ages Read		11	105	78	28	25	36	49	52	20	15	4	1	424	1001	1000	
Serial Numbers		No. of Age Samples															
		Number of fish measured each month												1410	219		
		Mean length of fish (cm) each month												-	33.6		
		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												120	110		
		Mesh size (mm)												50 ³	50 ³		

1 May 11
2 May 12
3 Stretch mesh

TABLE 85
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (3rd QUARTER)

COUNTRY		France (SP)														
CATCHES/LANDINGS												Catches				
COMMERCIAL/RESEARCH												Research				
STRUCTURES USED IN AGE DETERMINATION												Otoliths				
Year- Class Length Group (cm)	Age	63	62	61	60	59	58	57	56	55	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE				
		8	9	10	11	12	13	14	15	16		Months Within Quarter				
												July			Aug	Sep
32		1	-	-	-	-	-	-	-	-	1	15	-	-		
33		1	2	-	-	-	-	-	-	-	3	35	-	-		
34		1	7	1	-	-	-	-	-	-	9	55	-	-		
35		-	3	9	1	1	-	-	-	-	14	150	-	-		
36		-	-	7	10	3	1	-	-	-	21	220	-	-		
37		-	-	-	12	17	6	1	-	-	36	290	-	-		
38		-	-	-	2	12	6	3	-	1	24	190	-	-		
39		-	-	-	-	1	-	2	1	-	4	40	-	-		
40		-	-	-	-	-	-	-	-	-	-	-	-	-		
41		-	-	-	-	-	-	-	1	-	1	5	-	-		
Total No. of Ages Read		3	12	17	25	34	13	6	2	1	113	1000	-	-		
Serial Numbers		No. of Age Samples														
		Number of fish measured each month										200	-	-		
		Mean length of fish (cm) each month										36.4	-	-		
		Mean weight of fish (kg) each month										0.42	-	-		
		Total weight caught or landed (tons) each month										-	-	-		
		Estimated number caught or landed (whole numbers) each month										-	-	-		
		Range of depths (m) each month										44	-	-		
		Mesh size (mm)										50 ¹	-	-		

¹ Stretch mesh

TABLE 85
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vn - 1971 (4th QUARTER)

COUNTRY		Canada (M)												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- Age Group (cm)		69	68	67	66	65	64	63	62	61	60	59	58	57	Total No. of Ages Read	Months Within Quarter		
		2	3	4	5	6	7	8	9	10	11	12	13	14		Oct	Nov	Dec
22		-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	2	
23		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
24		1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	12	
25		-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	
26		-	4	1	-	-	-	-	-	-	-	-	-	5	-	15	25	
27		-	5	1	-	-	-	-	-	-	-	-	-	6	-	30	17	
28		-	-	3	-	-	-	-	-	-	-	-	-	3	-	18	27	
29		-	-	4	1	-	-	-	-	-	-	-	-	5	-	15	17	
30		-	-	3	10	2	1	-	-	-	-	-	-	16	-	15	52	
31		-	-	4	17	7	2	1	-	-	-	-	-	31	-	57	91	
32		-	-	-	13	11	19	4	-	-	-	-	-	47	-	92	133	
33		-	-	-	2	9	39	13	1	-	-	-	-	64	-	187	135	
34		-	-	-	-	-	15	26	15	2	-	-	-	58	-	165	158	
35		-	-	-	-	-	1	10	21	17	3	-	1	54	-	162	113	
36		-	-	-	-	-	1	1	12	15	12	4	2	47	-	120	116	
37		-	-	-	-	-	-	-	1	4	5	9	1	23	-	87	64	
38		-	-	-	-	-	-	-	-	-	-	1	1	2	-	28	20	
39		-	-	-	-	-	-	-	-	-	-	1	1	2	-	5	5	
Total No. of Ages Read		1	10	16	43	29	78	55	50	38	20	15	6	4	365			
Serial Numbers		No. of Age Samples												4				
	Number of fish measured each month													-	400	406		
	Mean length of fish (cm) each month													-	34.1	33.4		
	Mean weight of fish (kg) each month													-	-	-		
	Total weight caught or landed (tonne) each month													-	-	-		
	Estimated number caught or landed (whole numbers) each month													-	-	-		
	Range of depths (m) each month													-	-	-		
	Mesh size (mm)													-	S	S		

S = Seines

TABLE 86

AGE/LENGTH KEY - HERRING - 4Va - 1971 (1st QUARTER)

COUNTRY		Canada (M)												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Research												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class Length Age Group (cm)	66	65	64	63	62	61	60	59	58	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter			
	5	6	7	8	9	10	11	12	13		Jan	Feb	Mar	
27	1	-	-	-	-	-	-	-	-	1	-	-	5	
28	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	1	1	-	-	-	-	-	-	-	2	-	-	15	
30	2	3	-	-	-	-	-	-	-	5	-	-	35	
31	-	1	1	-	-	-	-	-	-	2	-	-	25	
32	-	-	7	2	-	1	-	-	-	10	-	-	60	
33	-	-	4	13	-	-	-	-	-	17	-	-	115	
34	-	-	1	13	8	-	-	-	-	22	-	-	150	
35	-	-	-	2	37	7	-	1	-	47	-	-	325	
36	-	-	-	-	4	18	3	1	-	26	-	-	180	
37	-	-	-	-	-	6	2	2	-	10	-	-	70	
38	-	-	-	-	-	-	-	3	1	4	-	-	20	
Total No. of Ages Read	4	5	13	30	49	32	5	7	1	146	1000			
Serial Numbers	No. of Age Samples 1													
	Number of fish measured each month										-	-	200	
	Mean length of fish (cm) each month										-	-	34.9	
	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)										-	-	T	

T = Trawls

TABLE 86
(CONT'D)

AGE/LENGTH KEY - HERRING - 4Vs - 1971 (2nd QUARTER)

COUNTRY		France (SP)												
CATCHES/LANDINGS												Catches		
COMMERCIAL/RESEARCH												Research		
STRUCTURES USED IN AGE DETERMINATION												Otoliths		
Year- Class	Length Age Group (cm)	65	64	63	62	61	60	59	58	57	56	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE	
		6	7	8	9	10	11	12	13	14	15		Months Within Quarter	
												May ¹	May ²	
30		1	-	-	-	-	-	-	-	-	1	2	-	
31		-	-	-	-	-	-	-	-	-	-	-	4	
32		-	1	1	-	-	-	-	-	-	2	-	13	
33		-	-	6	1	-	-	-	-	-	7	16	13	
34		-	-	6	36	5	-	-	-	-	47	78	76	
35		-	-	-	13	47	9	-	1	1	71	206	182	
36		-	-	-	2	55	63	16	2	-	138	324	284	
37		-	-	-	-	5	55	27	5	1	93	255	288	
38		-	-	-	-	-	7	15	7	-	29	91	119	
39		-	-	-	-	-	-	1	2	1	6	22	17	
40		-	-	-	-	-	-	-	-	1	1	4	4	
Total No. of Ages Read		1	1	13	52	112	134	59	17	3	3	395		
Serial Numbers		No. of Age Samples												
		Number of fish measured each month										451	236	
		Mean length of fish (cm) each month										36.3	36.4	
		Mean weight of fish (kg) each month										0.36	0.37	
		Total weight caught or landed (tons) each month										-	-	
		Estimated number caught or landed (whole numbers) each month										-	-	
		Range of depths (m) each month										244	216	
		Mesh size (mm)										50 ³	50 ³	

¹ May 20
² May 22
³ Stretch mesh

TABLE 87

AGE/LENGTH KEY - HERRING - 4V - 1971 (1st QUARTER)

COUNTRY		U.S.S.R.													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	Age	68	67	66	65	64	63	62	61	60	59	58	57	56	Total No. of Ages Read	Months Within Quarter		
Length Group (cm)		3	4	5	6	7	8	9	10	11	12	13	14	15		Jan	Feb	Mar
24		1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
25		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26		-	3	-	-	-	-	-	-	-	-	-	-	3	1	+	-	
27		-	3	3	-	-	-	-	-	-	-	-	-	6	1	1	-	
28		-	-	11	-	-	-	-	-	-	-	-	-	11	3	1	2	
29		-	-	8	-	-	-	-	-	-	-	-	-	8	9	4	2	
30		-	-	5	5	-	-	-	-	-	-	-	-	10	25	11	5	
31		-	-	3	17	12	-	-	-	-	-	-	-	32	32	14	18	
32		-	-	-	10	17	5	-	-	-	-	-	-	32	45	24	35	
33		-	-	-	2	13	10	2	-	-	-	-	-	27	75	56	55	
34		-	-	-	-	10	36	12	-	-	-	-	-	58	123	119	88	
35		-	-	-	-	-	5	47	38	-	-	-	-	90	209	216	185	
36		-	-	-	-	-	-	10	69	51	3	-	-	133	242	259	320	
37		-	-	-	-	-	-	4	18	62	35	1	-	120	159	185	207	
38		-	-	-	-	-	-	-	1	8	30	6	-	45	52	79	60	
39		-	-	-	-	-	-	-	-	1	2	6	5	14	18	24	18	
40		-	-	-	-	-	-	-	-	-	-	-	1	6	5	6	5	
41		-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	
42		-	-	-	-	-	-	-	-	-	-	-	1	2	-	+	-	
Total No. of Ages Read		1	6	30	34	52	56	75	126	122	70	13	7	8	600			
Serial Numbers		No. of Age Samples													6			
		Number of fish measured each month													1800	6590	400	
		Mean length of fish (cm) each month													35.1	35.5	35.5	
		Mean weight of fish (kg) each month													0.319	0.324	0.315	
		Total weight caught or landed (tons) each month													2	88	3	
		Estimated number caught or landed (whole numbers) each month													-	-	-	
		Range of depths (m) each month													45-70	35-95	20-140	
		Mesh size (mm)													40	40	40	

TABLE 87
(CONT'D)

AGE/LENGTH KEY - HERRING - 4V - 1971 (2nd QUARTER)

COUNTRY		U.S.S.R.										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Apr	May	Jun
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class	66	65	64	63	62	61	60	59	58						
Length Age Group(cm)	5	6	7	8	9	10	11	12	13						
22	-	-	-	-	-	-	-	-	-	-	-	+	-	-	
23	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
24	-	-	-	-	-	-	-	-	-	-	-	2	-	-	
25	-	-	-	-	-	-	-	-	-	-	-	4	-	-	
26	-	-	-	-	-	-	-	-	-	-	-	11	1	-	
27	-	-	-	-	-	-	-	-	-	-	-	22	1	-	
28	-	-	-	-	-	-	-	-	-	-	-	42	15	-	
29	3	-	-	-	-	-	-	-	-	-	-	52	49	-	
30	1	2	-	-	-	-	-	-	-	-	-	69	71	-	
31	1	5	1	-	-	-	-	-	-	-	-	105	116	-	
32	-	-	15	4	-	-	-	-	-	-	-	127	204	-	
33	-	-	18	10	1	-	-	-	-	-	-	149	188	-	
34	-	-	8	25	21	1	-	-	-	-	-	178	127	-	
35	-	-	-	8	19	21	6	-	-	-	-	147	117	-	
36	-	-	-	-	10	34	25	8	-	-	-	70	75	-	
37	-	-	-	-	-	7	15	11	6	-	-	17	30	-	
38	-	-	-	-	-	-	2	4	6	-	-	3	6	-	
39	-	-	-	-	-	-	-	-	2	-	-	1	-	-	
Total No. of Ages Read	5	7	42	47	51	63	48	23	14	300		1000	1000	-	
Serial Numbers	No. of Age Samples										3				
	Number of fish measured each month										7125	1000	-		
	Mean length of fish (cm) each month										32.5	32.8	-		
	Mean weight of fish (kg) each month										0.277	0.265	-		
	Total weight caught or landed (tons) each month										2	49	-		
	Estimated number caught or landed (whole numbers) each month										-	-	-		
	Range of depths (m) each month										15-130	15-120	-		
	Mesh size (mm)										40	40	-		

TABLE 88

AGE/LENGTH KEY - HERRING - 4W - 1971 (1st QUARTER)

COUNTRY		Canada (M)												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	Age	69	68	67	66	65	64	63	62	61	60	59	58	Total No. of Ages Read	Months Within Quarter		
Length Group (cm)	Age	2	3	4	5	6	7	8	9	10	11	12	13		Jan	Feb	Mar
10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
11		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13		-	-	-	-	-	-	-	-	-	-	-	-	1	5	1	
14		2	2	-	-	-	-	-	-	-	-	-	-	9	22	9	
15		3	10	-	-	-	-	-	-	-	-	-	-	41	62	32	
16		6	30	-	-	-	-	-	-	-	-	-	-	133	133	66	
17		12	34	-	-	-	-	-	-	-	-	-	-	137	138	103	
18		12	47	6	-	-	-	-	-	-	-	-	-	84	101	82	
19		9	22	17	-	-	-	-	-	-	-	-	-	45	51	56	
20		-	30	30	-	-	-	-	-	-	-	-	-	64	61	44	
21		-	37	37	-	-	-	-	-	-	-	-	-	90	60	65	
22		-	29	54	1	-	-	-	-	-	-	-	-	109	58	67	
23		-	13	52	2	-	-	-	-	-	-	-	-	84	44	61	
24		-	1	27	3	1	-	-	-	-	-	-	-	48	24	31	
25		-	-	4	9	-	-	-	-	-	-	-	-	16	8	18	
26		-	-	2	24	1	-	-	-	-	-	-	-	2	13	19	
27		-	-	-	31	1	-	-	-	-	-	-	-	7	13	29	
28		-	-	1	44	11	-	-	-	-	-	-	-	9	15	41	
29		-	-	-	39	42	4	-	-	-	-	-	-	16	27	49	
30		-	-	-	13	56	19	3	-	-	-	-	-	30	24	42	
31		-	-	-	2	17	60	4	1	-	-	-	-	23	19	44	
32		-	-	-	-	5	57	13	1	-	-	-	-	28	38	48	
33		-	-	-	-	2	27	29	5	1	-	-	-	13	35	41	
34		-	-	-	-	-	1	26	8	2	-	-	-	10	18	22	
35		-	-	-	-	-	-	3	7	5	1	3	-	3	14	15	
36		-	-	-	-	-	-	2	1	4	3	-	-	6	8	7	
37		-	-	-	-	-	-	-	-	-	3	-	2	3	5	4	
38		-	-	-	-	-	-	-	-	-	-	1	-	2	2	2	
39		-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	
Total No. of Ages Read		44	255	230	168	136	168	80	23	12	7	5	2	1130			
Serial Numbers		No. of Age Samples												12			
Number of fish measured each month														1279	2631	3218	
Mean length of fish (cm) each month														21.7	21.8	23.9	
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)														S	S, T	S, T	

S = Seines; T = Trawls

TABLE 88
(CONT'D)

AGE/LENGTH KEY - HERRING - 4W - 1971 (1st QUARTER)

COUNTRY		U.S.S.R.											Total No. of Ages Read	LENGTH COMPOSITION PER MILE		
CATCHES/LANDINGS		Catches												Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial												Jan	Feb	Mar
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Class	Length Age Group (cm)	68	67	66	65	64	63	62	61	60	59					
		3	4	5	6	7	8	9	10	11	12					
21	-	-	-	-	-	-	-	-	-	-	-	-	80	3	-	
22	9	-	-	-	-	-	-	-	-	-	-	9	205	10	-	
23	30	-	-	-	-	-	-	-	-	-	-	30	260	28	-	
24	37	10	-	-	-	-	-	-	-	-	-	47	210	42	-	
25	12	28	-	-	-	-	-	-	-	-	-	40	100	38	-	
26	-	23	-	-	-	-	-	-	-	-	-	23	25	26	-	
27	-	13	2	-	-	-	-	-	-	-	-	15	30	15	-	
28	-	-	5	-	-	-	-	-	-	-	-	5	30	37	-	
29	-	-	23	-	-	-	-	-	-	-	-	23	25	112	-	
30	-	-	58	10	-	-	-	-	-	-	-	68	15	159	-	
31	-	-	22	41	15	-	-	-	-	-	-	78	15	147	-	
32	-	-	-	28	22	2	-	-	-	-	-	52	5	118	-	
33	-	-	-	4	30	11	-	-	-	-	-	45	-	93	-	
34	-	-	-	1	9	22	-	-	-	-	-	32	-	75	-	
35	-	-	-	-	-	4	7	-	-	-	-	11	-	46	-	
36	-	-	-	-	-	-	5	2	-	-	-	7	-	25	-	
37	-	-	-	-	-	-	-	2	2	2	-	6	-	14	-	
38	-	-	-	-	-	-	-	-	1	-	1	2	-	8	-	
39	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
Total No. of Ages Read		88	74	110	84	76	39	12	5	2	3	493	1000	1000	-	
Serial Numbers		No. of Age Samples											5			
Number of fish measured each month													200	910	-	
Mean length of fish (cm) each month													23.8	30.5	-	
Mean weight of fish (kg) each month													0.101	0.217	-	
Total weight caught or landed (tons) each month													2	653	-	
Estimated number caught or landed (whole numbers) each month													-	-	-	
Range of depths (m) each month													45-50	30-75	-	
Mesh size (mm)													40	40	-	

TABLE 88
(CONT'D)

AGE/LENGTH KEY - HERRING - 4W - 1971 (2nd QUARTER)

COUNTRY		Canada (M)										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Age Group (cm)	67	66	65	64	63	62	61	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	4	5	6	7	8	9	10		Months Within Quarter			
									Apr	May	Jun	
19	-	-	-	-	-	-	-	-	2	-	-	
20	-	-	-	-	-	-	-	-	-	-	-	
21	-	-	-	-	-	-	-	-	7	-	-	
22	-	-	-	-	-	-	-	-	3	-	-	
23	-	-	-	-	-	-	-	-	20	-	-	
24	-	-	-	-	-	-	-	-	25	-	-	
25	-	-	-	-	-	-	-	-	32	-	-	
26	9	2	-	-	-	-	-	11	84	-	-	
27	4	6	-	-	-	-	-	10	119	-	-	
28	-	10	-	-	-	-	-	10	163	-	-	
29	1	12	1	-	-	-	-	14	124	-	-	
30	-	3	9	2	-	-	-	14	114	-	-	
31	-	1	5	7	-	-	-	13	64	-	-	
32	-	-	2	18	-	-	-	20	96	-	-	
33	-	-	-	6	4	-	-	10	49	-	-	
34	-	-	-	-	10	-	-	10	47	-	-	
35	-	-	-	-	2	3	-	5	27	-	-	
36	-	-	-	-	-	3	-	3	12	-	-	
37	-	-	-	-	-	-	2	2	10	-	-	
38	-	-	-	-	-	-	-	-	2	-	-	
Total No. of Ages Read	14	34	17	33	16	6	2	122	1000	-	-	
Serial Numbers								No. of Age Samples	2			
	Number of fish measured each month								405	-	-	
	Mean length of fish (cm) each month								29.6	-	-	
	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, T	-	-	

S = Seines; T = Trawls

TABLE 88
(CONT'D)

AGE/LENGTH KEY - HERRING - 4W - 1971 (3rd QUARTER)

COUNTRY		U.S.S.R.							Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches								Months Within Quarter		
COMMERCIAL/RESEARCH		Commercial								July	Aug	Sep
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class	Age	67	66	65	64	63	62	61				
Length Group (cm)		4	5	6	7	8	9	10				
27		3	-	-	-	-	-	-	3	-	-	2
28		5	2	-	-	-	-	-	7	-	-	8
29		-	5	-	-	-	-	-	5	-	-	12
30		-	4	4	-	-	-	-	8	-	-	28
31		-	4	8	1	-	-	-	13	-	-	37
32		-	1	6	7	1	-	-	15	-	-	153
33		-	-	5	10	4	3	-	22	-	-	295
34		-	-	-	8	5	4	1	18	-	-	223
35		-	-	-	2	2	-	-	4	-	-	130
36		-	-	-	-	-	1	1	2	-	-	65
37		-	-	-	-	-	-	-	-	-	-	22
38		-	-	-	-	-	-	-	-	-	-	20
39		-	-	-	-	-	-	-	-	-	-	5
Total No. of Ages Read		8	16	23	28	12	8	2	97	1000		
Serial Numbers		No. of Age Samples							1			
		Number of fish measured each month							-	-	-	400
		Mean length of fish (cm) each month							-	-	-	33.5
		Mean weight of fish (kg) each month							-	-	-	0.309
		Total weight caught or landed (tons) each month							-	-	-	704
		Estimated number caught or landed (whole numbers) each month							-	-	-	-
		Range of depths (m) each month							-	-	-	20-30
		Mesh size (mm)							-	-	-	40

TABLE 88
(CONT'D)

AGE/LENGTH KEY - HERRING - 4W - 1971 (4th QUARTER)

COUNTRY		Canada (M)										Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Catches										No. of	PER MILLE		
COMMERCIAL/RESEARCH		Commercial										Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths										Read			
Year- Class	70	69	68	67	66	65	64	63	62	61					
Length Age Group (cm)	1	2	3	4	5	6	7	8	9	10		Oct	Nov	Dec	
15	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
16	1	2	-	-	-	-	-	-	-	-	-	-	-	52	
17	1	4	-	-	-	-	-	-	-	-	-	-	-	64	
18	-	4	-	-	-	-	-	-	-	-	-	-	-	37	
19	-	2	1	-	-	-	-	-	-	-	-	-	-	22	
20	-	10	2	-	-	-	-	-	-	-	-	-	-	32	
21	-	7	5	-	-	-	-	-	-	-	-	-	-	38	
22	-	17	10	-	-	-	-	-	-	-	-	-	-	108	
23	-	25	30	-	-	-	-	-	-	-	-	-	-	178	
24	-	3	28	-	-	-	-	-	-	-	-	-	-	135	
25	-	3	21	-	-	-	-	-	-	-	-	-	-	95	
26	-	-	11	-	-	-	-	-	-	-	-	-	-	48	
27	-	-	14	6	-	-	-	-	-	-	-	-	-	44	
28	-	-	11	2	-	-	-	-	-	-	-	-	-	49	
29	-	-	4	5	2	-	-	-	-	-	-	-	-	28	
30	-	-	-	1	3	-	-	-	-	-	-	-	-	14	
31	-	-	-	-	3	1	-	-	-	-	-	-	-	21	
32	-	-	-	-	2	-	1	-	-	-	-	-	-	13	
33	-	-	-	-	-	1	2	-	-	-	-	-	-	11	
34	-	-	-	-	-	-	-	1	-	-	-	-	-	5	
35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
36	-	-	-	-	-	-	-	-	-	1	-	-	-	3	
Total No. of Ages Read	2	77	137	14	10	2	3	1	-	1	247	1000			
Serial Numbers	No. of Age Samples										3				
	Number of fish measured each month										-	-	-	870	
	Mean length of fish (cm) each month										-	-	-	23.8	
	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)										-	-	-	S	

S = Seines

TABLE 89

AGE/LENGTH KEY - HERRING - 4X - 1971 (1st QUARTER)

COUNTRY		Canada (M)					
CATCHES/LANDINGS		Catches					
COMMERCIAL/RESEARCH		Commercial					
STRUCTURES USED IN AGE DETERMINATION		Otoliths					
Year- Class Length Age Group (cm)	69 68		Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2 3			Months Within Quarter			
				Jan	Feb	Mar	
8	-	-	-	7	-	-	
9	-	-	-	30	-	-	
10	4	-	4	124	-	-	
11	23	-	23	287	-	-	
12	30	-	30	276	-	-	
13	25	-	25	166	-	-	
14	10	1	11	70	-	-	
15	2	1	3	26	-	-	
16	1	1	2	7	-	-	
17	-	2	2	5	-	-	
--							
21	-	-	-	2	-	-	
Total No. of Ages Read		95 5	100	1000	-	-	
Serial Numbers		No. of Age Samples 2					
		Number of fish measured each month		428	-	-	
		Mean length of fish (cm) each month		12.3	-	-	
		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)		S	-	-	

S - Seines

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (1st QUARTER)

COUNTRY		Canada (M)										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Research										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Group (cm)	Age	70	69	68	67	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE					
		1	2	3	4		Months Within Quarter					
							Jan	Feb	Mar			
7		-	-	-	-	-	-	-	-	5		
8		3	1	-	-	4	-	-	-	31		
9		2	11	-	-	13	-	-	-	95		
10		-	15	-	-	15	-	-	-	106		
11		-	25	-	-	25	-	-	-	93		
12		-	32	-	-	32	-	-	-	136		
13		-	43	-	-	43	-	-	-	245		
14		-	26	1	-	27	-	-	-	144		
15		-	14	3	-	17	-	-	-	93		
16		-	2	2	-	4	-	-	-	23		
17		-	1	3	-	4	-	-	-	15		
18		-	-	2	-	2	-	-	-	8		
19		-	-	1	-	1	-	-	-	3		
20		-	-	-	1	1	-	-	-	3		
							-	-	-	1000		
Total No. of Ages Read		5	170	12	1	188						
Serial Numbers						No. of Age Samples	2					
		Number of fish measured each month					-	-	-	388		
		Mean length of fish (cm) each month					-	-	-	12.8		
		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 = Trawls

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (2nd QUARTER)

COUNTRY		Canada (M)											Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Catches											No. of	PER MILLE		
COMMERCIAL/RESEARCH		Commercial											Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths											Read			
Year-Class	Age	70	69	68	67	66	65	64	63	62	61	60				
Length Group (cm)		1	2	3	4	5	6	7	8	9	10	11	Apr	May	Jun	
7		7	-	-	-	-	-	-	-	-	-	-	-	-	-	
8		-	-	-	-	-	-	-	-	-	-	-	-	1	-	
9		1	-	-	-	-	-	-	-	-	-	-	-	13	-	
10		1	7	-	-	-	-	-	-	-	-	-	-	25	2	
11		1	28	-	-	-	-	-	-	-	-	-	-	32	8	
12		2	64	1	-	-	-	-	-	-	-	-	-	50	20	
13		-	87	1	-	-	-	-	-	-	-	-	-	55	27	
14		-	87	4	-	-	-	-	-	-	-	-	-	57	29	
15		-	47	16	-	-	-	-	-	-	-	-	-	49	23	
16		-	35	24	-	-	-	-	-	-	-	-	-	37	22	
17		-	22	30	-	-	-	-	-	-	-	-	-	22	23	
18		-	11	16	1	-	-	-	-	-	-	-	-	9	16	
19		-	8	11	-	-	-	-	-	-	-	-	-	7	9	
20		-	8	14	3	-	-	-	-	-	-	-	-	12	6	
21		-	13	40	11	-	-	-	-	-	-	-	-	13	17	
22		-	25	44	28	1	-	-	-	-	-	-	-	15	30	
23		-	12	56	28	-	-	-	-	-	-	-	-	11	41	
24		-	5	58	30	7	-	-	-	-	-	-	-	15	41	
25		-	3	22	21	8	-	-	-	-	-	-	-	11	35	
26		-	-	9	20	17	-	-	-	-	-	-	-	14	29	
27		-	-	1	41	50	1	-	-	-	-	-	-	39	25	
28		-	-	-	27	111	1	-	-	-	-	-	-	60	37	
29		-	-	-	33	167	27	-	-	-	-	-	-	65	83	
30		-	-	-	15	145	102	9	-	-	-	-	-	67	95	
31		-	-	-	2	57	193	149	1	-	-	-	-	109	101	
32		-	-	-	1	9	114	360	9	-	-	-	-	120	129	
33		-	-	-	-	-	16	280	54	1	-	-	-	65	93	
34		-	-	-	-	-	1	47	65	2	-	-	-	18	41	
35		-	-	-	-	-	-	2	20	18	1	-	-	7	13	
36		-	-	-	-	-	-	-	-	8	3	-	-	1	4	
37		-	-	-	-	-	-	-	-	-	-	1	-	1	-	
Total No. of Ages Read		12	462	347	261	572	455	847	149	29	4	1	3139			
Serial Numbers		No. of Age Samples											32			
Number of fish measured each month													-	3368	8417	
Mean length of fish (cm) each month													-	24.3	27.1	
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)													-	W,N,S	W,N,S	

W = Weirs; S = Seines; N = Gillnets

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (2nd QUARTER)

COUNTRY		Canada (M)					
CATCHES/LANDINGS		Catches					
COMMERCIAL/RESEARCH		Research					
STRUCTURES USED IN AGE DETERMINATION		Otoliths					
Year- Class Length Age Group (cm)	69	68	67	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	2	3	4		Months Within Quarter		
					Apr	May	Jun
8	-	-	-	-	5	-	-
9	5	-	-	5	55	-	-
10	13	-	-	13	130	-	-
11	7	-	-	7	120	-	-
12	7	-	-	7	60	-	-
13	14	-	-	14	100	-	20
14	24	2	-	26	80	-	230
15	19	8	-	27	55	-	270
16	7	15	-	22	75	-	200
17	4	20	-	24	85	-	160
18	2	20	-	22	75	-	110
19	-	5	-	5	20	-	10
20	-	-	7	7	35	-	-
21	-	-	13	13	70	-	-
22	-	-	7	7	35	-	-
Total No. of Ages Read	102	70	27	199	1000	-	1000
Serial Numbers	No. of Age Samples			3			
	Number of fish measured each month			200	-	100	
	Mean length of fish (cm) each month			14.9	-	16.1	
	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	-	T	

T = Trawls

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (2nd QUARTER)

COUNTRY		U.S.S.R.									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Commercial & Exploratory ¹									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year-Class Length Age Group (cm)	68	67	66	65	64	63	62	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	3	4	5	6	7	8	9		Months Within Quarter		
									Apr	May	Jun
18	-	-	-	-	-	-	-	-	-	-	3
24	1	-	-	-	-	-	-	1	-	-	7
25	-	-	-	-	-	-	-	-	-	-	-
26	1	2	-	-	-	-	-	3	-	-	17
27	-	7	1	-	-	-	-	8	-	4	23
28	-	1	6	-	-	-	-	7	-	2	20
29	-	-	5	-	-	-	-	5	-	16	17
30	-	-	10	7	-	-	-	17	-	69	87
31	-	-	4	12	4	-	-	20	-	78	261
32	-	-	-	7	11	1	-	19	-	129	354
33	-	-	-	1	1	1	3	6	-	237	187
34	-	-	-	-	-	2	1	3	-	249	17
35	-	-	-	-	-	-	-	-	-	193	7
36	-	-	-	-	-	-	-	-	-	21	-
37	-	-	-	-	-	-	-	-	-	2	-
Total No. of Ages Read								89	- 1000 1000		
Serial Numbers								No. of Age Samples 1			
Number of fish measured each month								-	425	298	
Mean length of fish (cm) each month								-	33.1	31.4	
Mean weight of fish (kg) each month								-	0.278	-	
Total weight caught or landed (tons) each month								-	-	-	
Estimated number caught or landed (whole numbers) each month								-	-	-	
Range of depths (m) each month								-	65-70	-	
Mesh size (mm)								-	40	12	

¹ Commercial (May), Exploratory (June)

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (2nd QUARTER)

COUNTRY		U.S.A.													
CATCHES/LANDINGS		Catches and Landings													
COMMERCIAL/RESEARCH		Research and Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Age Group (cm)	69	68	67	66	65	64	63				Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2	3	4	5	6	7	8	8+	Months Within Quarter						
												Apr	May	Jun	
20	-	1	-	-	-	-	-	-	-	-	1	6	-	-	
21	-	1	-	-	-	-	-	-	-	-	1	6	-	-	
22	-	10	-	-	-	-	-	-	-	-	10	18	-	8	
23	-	24	-	-	-	-	-	-	-	-	24	24	3	21	
24	-	26	2	-	-	-	-	-	-	-	28	-	-	32	
25	-	11	29	-	-	-	-	-	-	-	40	12	-	43	
26	-	-	36	6	-	-	-	-	-	-	42	49	17	32	
27	-	-	2	54	-	-	-	-	-	-	56	49	28	43	
28	-	-	-	103	19	-	-	-	-	-	122	18	72	105	
29	-	-	-	4	134	3	-	-	-	-	141	67	69	119	
30	-	-	-	-	85	117	-	-	-	-	202	165	133	143	
31	-	-	-	-	2	219	86	-	-	-	307	317	284	171	
32	-	-	-	-	-	11	221	33	-	-	265	207	273	149	
33	-	-	-	-	-	-	8	116	-	-	124	61	83	95	
34	-	-	-	-	-	-	-	36	-	-	36	-	28	29	
35	-	-	-	-	-	-	-	12	-	-	12	-	8	10	
36	-	-	-	-	-	-	-	1	-	-	1	-	3	-	
Total No. of Ages Read	-	73	69	167	240	350	315	198				1412			
Serial Numbers	No. of Age Samples														
	Number of fish measured each month										164	362	886		
	Mean length of fish (cm) each month										30.4	31.3	30.2		
	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)										-	-	-		

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (3rd QUARTER)

COUNTRY		Canada (M)													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														Total No. of Ages Read	Months Within Quarter	
Year-Class	Age	70	69	68	67	66	65	64	63	62	61	60	59	58	Total No. of Ages Read		Months Within Quarter	
Length Group (cm)		1	2	3	4	5	6	7	8	9	10	11	12	13		Jul	Aug	Sep
7		10	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	24
8		20	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	43
9		85	-	-	-	-	-	-	-	-	-	-	-	-	85	-	-	67
10		147	-	-	-	-	-	-	-	-	-	-	-	-	147	-	-	68
11		93	5	-	-	-	-	-	-	-	-	-	-	-	98	4	-	42
12		29	26	-	-	-	-	-	-	-	-	-	-	-	55	26	1	48
13		8	63	-	-	-	-	-	-	-	-	-	-	-	71	47	5	42
14		-	68	-	-	-	-	-	-	-	-	-	-	-	68	56	10	6
15		-	73	-	-	-	-	-	-	-	-	-	-	-	73	43	19	11
16		-	94	-	-	-	-	-	-	-	-	-	-	-	94	28	25	21
17		-	76	1	-	-	-	-	-	-	-	-	-	-	77	17	34	16
18		-	74	6	-	-	-	-	-	-	-	-	-	-	80	7	30	17
19		-	65	6	-	-	-	-	-	-	-	-	-	-	71	4	24	27
20		-	38	9	-	-	-	-	-	-	-	-	-	-	47	4	19	35
21		-	47	10	-	-	-	-	-	-	-	-	-	-	57	3	13	41
22		-	49	13	-	-	-	-	-	-	-	-	-	-	62	2	13	54
23		-	6	4	-	-	-	-	-	-	-	-	-	-	10	2	11	20
24		-	2	32	-	-	-	-	-	-	-	-	-	-	34	13	19	6
25		-	-	104	3	-	-	-	-	-	-	-	-	-	107	25	44	7
26		-	-	211	13	-	-	-	-	-	-	-	-	-	224	53	86	20
27		-	-	210	58	3	-	-	-	-	-	-	-	-	271	49	103	43
28		-	-	50	146	21	-	-	-	-	-	-	-	-	217	40	68	35
29		-	-	5	270	124	4	-	-	-	-	-	-	-	403	74	83	41
30		-	-	-	212	361	26	1	-	-	-	-	-	-	600	127	97	67
31		-	-	-	39	348	126	25	-	-	-	-	-	-	538	111	94	74
32		-	-	-	8	93	204	127	6	-	-	-	-	-	438	98	70	43
33		-	-	-	1	4	80	290	34	1	-	-	-	-	410	82	63	40
34		-	-	-	-	-	2	115	132	13	-	-	-	-	262	49	44	21
35		-	-	-	-	-	1	6	49	39	4	1	-	-	100	26	16	14
36		-	-	-	-	-	-	3	14	7	2	-	-	-	26	7	5	6
37		-	-	-	-	-	-	-	1	4	2	2	1	-	10	3	3	1
38		-	-	-	-	-	-	-	-	-	1	1	-	-	2	-	1	-
Total No. of Ages Read		392	686	661	750	954	443	564	224	68	15	6	3	1	4767			
Serial Numbers		No. of Age Samples													57			
		Number of fish measured each month													5576	5745	5261	
		Mean length of fish (cm) each month													27.0	27.5	21.3	
		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)													W,N,S	W,N,SN,S,W,T		

N = Gillnets; S = Seines; T = Trawls; W = Weirs

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (3rd QUARTER)

COUNTRY		U.S.A.											
CATCHES/LANDINGS		Catches and Landings											
COMMERCIAL/RESEARCH		Research and Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8		8+	Months Within Quarter	Jul	Aug
22		-	2	-	-	-	-	-	2	-	4	-	
23		-	6	-	-	-	-	-	6	1	11	-	
24		-	29	2	-	-	-	-	31	10	47	3	
25		-	34	12	-	-	-	-	46	24	54	-	
26		-	23	40	1	-	-	-	64	35	49	30	
27		-	1	82	18	-	-	-	101	45	51	109	
28		-	-	17	80	6	-	-	103	66	43	71	
29		-	-	-	100	160	-	-	260	182	81	168	
30		-	-	-	8	218	28	-	254	142	98	239	
31		-	-	-	-	46	155	9	211	133	96	136	
32		-	-	-	-	-	58	152	212	139	145	59	
33		-	-	-	-	-	-	43	197	110	157	77	
34		-	-	-	-	-	-	-	132	72	101	62	
35		-	-	-	-	-	-	-	61	27	54	35	
36		-	-	-	-	-	-	-	20	13	9	12	
37		-	-	-	-	-	-	-	1	1	-	-	
Total No. of Ages Read		-	95	153	207	430	241	204	371	1701			
Serial Numbers		No. of Age Samples											
	Number of fish measured each month										915	447	339
	Mean length of fish (cm) each month										30.9	30.8	30.7
	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)										-	-	-

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (4th QUARTER)

COUNTRY		Canada (M)											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	Age	70	69	68	67	66	65	64	63	62	61	60	Total No. of Ages Read	PER MILLE		
Length Group (cm)	Age	1	2	3	4	5	6	7	8	9	10	11		Oct	Nov	Dec
7		5	-	-	-	-	-	-	-	-	-	-	5	-	-	27
8		9	-	-	-	-	-	-	-	-	-	-	9	-	-	91
9		28	-	-	-	-	-	-	-	-	-	-	28	2	-	285
10		2	-	-	-	-	-	-	-	-	-	-	2	44	-	246
11		6	-	-	-	-	-	-	-	-	-	-	6	83	-	200
12		-	-	-	-	-	-	-	-	-	-	-	-	73	-	82
13		-	-	-	-	-	-	-	-	-	-	-	-	37	-	18
14		-	-	-	-	-	-	-	-	-	-	-	-	7	-	18
15		-	-	-	-	-	-	-	-	-	-	-	-	5	-	15
16		-	-	-	-	-	-	-	-	-	-	-	-	7	-	9
17		-	1	-	-	-	-	-	-	-	-	-	1	7	-	3
18		-	1	1	-	-	-	-	-	-	-	-	2	11	-	3
19		-	3	-	-	-	-	-	-	-	-	-	3	14	-	-
20		-	4	-	-	-	-	-	-	-	-	-	4	31	22	-
21		-	11	9	-	-	-	-	-	-	-	-	20	43	43	-
22		-	8	4	-	-	-	-	-	-	-	-	12	42	43	3
23		-	2	5	-	-	-	-	-	-	-	-	7	16	87	-
24		-	-	9	-	-	-	-	-	-	-	-	9	7	109	-
25		-	-	12	1	-	-	-	-	-	-	-	13	12	22	-
26		-	-	64	2	1	-	-	-	-	-	-	67	59	152	-
27		-	-	107	2	-	-	-	-	-	-	-	109	102	196	-
28		-	-	57	19	7	-	-	-	-	-	-	83	120	87	-
29		-	-	5	19	28	-	-	-	-	-	-	52	77	87	-
30		-	-	-	12	29	1	-	-	-	-	-	42	67	65	-
31		-	-	-	2	27	1	3	-	-	-	-	33	48	-	-
32		-	-	-	-	9	6	4	-	-	-	-	19	28	22	-
33		-	-	-	-	-	5	15	3	-	-	-	23	20	43	-
34		-	-	-	-	-	-	5	12	4	-	-	21	19	-	-
35		-	-	-	-	-	-	-	3	7	1	-	11	9	-	-
36		-	-	-	-	-	-	-	2	2	2	-	6	5	-	-
37		-	-	-	-	-	-	-	-	-	3	1	4	5	22	-
Total No. of Ages Read		50	30	273	57	101	13	27	20	13	6	1	591			
Serial Numbers		No. of Age Samples											8			
		Number of fish measured each month											1696	46	330	
		Mean length of fish (cm) each month											23.6	27.0	10.6	
		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,N,S	S	T,W	

N = Gillnets; S = Seines; T = Trawls; W = Weirs

TABLE 89
(CONT'D)

AGE/LENGTH KEY - HERRING - 4X - 1971 (4th QUARTER)

COUNTRY		U.S.A.											
CATCHES/LANDINGS		Catches and Landings											
COMMERCIAL/RESEARCH		Research and Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class	Length Age Group (cm)	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8		8+	Months Within Quarter	Oct	Nov
	24	-	3	-	-	-	-	-	3	15	-	-	
	25	-	15	-	-	-	-	-	15	75	-	-	
	26	-	37	7	-	-	-	-	44	220	-	-	
	27	-	-	55	-	-	-	-	55	275	-	-	
	28	-	-	21	15	-	-	-	36	180	-	-	
	29	-	-	-	22	-	-	-	22	90	62	-	
	30	-	-	-	10	25	-	-	35	80	292	-	
	31	-	-	-	-	16	7	-	23	35	246	-	
	32	-	-	-	-	-	11	1	12	15	138	-	
	33	-	-	-	-	-	-	11	13	10	169	-	
	34	-	-	-	-	-	-	-	4	5	46	-	
	35	-	-	-	-	-	-	-	2	-	31	-	
	36	-	-	-	-	-	-	-	1	-	15	-	
Total No. of Ages Read		-	55	83	47	41	18	12	9	265	1000	999	-
Serial Numbers		No. of Age Samples											
		Number of fish measured each month								200	65	-	
		Mean length of fish (cm) each month								27.9	31.8	-	
		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)								-	-	-	

TABLE 90

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1971 (2nd QUARTER)

COUNTRY		Canada (M)						
CATCHES/LANDINGS		Catches						
COMMERCIAL/RESEARCH		Commercial						
STRUCTURES USED IN AGE DETERMINATION		Otoliths						
Year-Class	Length Age Group (cm)	69	68	67	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		2	3	4		Months Within Quarter		
						Apr	May	Jun
12		-	-	-	-	-	-	6
13		9	-	-	9	-	-	83
14		13	-	-	13	-	-	194
15		13	-	-	13	-	-	200
16		8	6	-	14	-	-	144
17		2	9	-	11	-	-	111
18		1	4	-	5	-	-	39
19		-	5	-	5	-	-	33
20		-	10	-	10	-	-	61
21		-	12	-	12	-	-	89
22		-	3	1	4	-	-	22
23		-	3	-	3	-	-	17
Total No. of Ages Read		46	52	1	99	999		
Serial Numbers						No. of Age Samples		2
		Number of fish measured each month				-	-	180
		Mean length of fish (cm) each month				-	-	16.8
		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

W = Weirs

TABLE 90
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Y (WEST) - 1971 (2nd QUARTER)

COUNTRY		U.S.A.											
CATCHES/LANDINGS		Catches and Landings											
COMMERCIAL/RESEARCH		Research and Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8		8+	Months Within Quarter		
										Apr	May	Jun	
10		2	-	-	-	-	-	-	2	6	-	-	
11		5	-	-	-	-	-	-	5	16	-	-	
12		1	-	-	-	-	-	-	1	3	-	-	
13		1	-	-	-	-	-	-	1	3	-	-	
14		1	-	-	-	-	-	-	1	3	-	-	
19		-	1	-	-	-	-	-	1	3	-	-	
20		-	-	-	-	-	-	-	-	-	-	-	
21		-	4	-	-	-	-	-	4	-	-	2	
22		-	13	-	-	-	-	-	13	-	5	7	
23		-	28	1	-	-	-	-	29	-	22	13	
24		-	41	7	-	-	-	-	48	-	54	17	
25		-	26	37	-	-	-	-	63	-	70	23	
26		-	1	55	6	-	-	-	62	-	70	22	
27		-	-	9	115	1	-	-	125	10	157	39	
28		-	-	-	161	29	-	-	190	29	105	87	
29		-	-	-	38	275	6	-	319	80	119	153	
30		-	-	-	-	149	172	-	321	159	78	148	
31		-	-	-	1	4	242	95	344	178	62	162	
32		-	-	-	-	-	14	219	360	261	81	152	
33		-	-	-	-	-	-	4	254	159	92	104	
34		-	-	-	-	-	-	-	130	73	68	50	
35		-	-	-	-	-	-	-	40	16	14	18	
36		-	-	-	-	-	-	-	4	-	3	2	
37		-	-	-	-	-	-	-	1	-	-	1	
Total No. of Ages Read		10	114	109	321	458	434	318	554	2318	999	1000	1000
Serial Numbers		No. of Age Samples 24											
		Number of fish measured each month								314	370	1634	
		Mean length of fish (cm) each month								31.2	29.3	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)								-	-	-	

TABLE 90
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Y (NORTH) - 1971 (3rd QUARTER)

COUNTRY						Canada (M)			
CATCHES/LANDINGS						Catches			
COMMERCIAL/RESEARCH						Commercial			
STRUCTURES USED IN AGE DETERMINATION						Otoliths			
Year- Class	70	69	68	67	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
						1	2	3	4
Length Group (cm)	Age	1	2	3	4				
8		2	-	-	-	2	-	-	13
9		17	-	-	-	17	-	-	152
10		17	-	-	-	17	-	-	253
11		11	-	-	-	11	-	-	147
12		25	-	-	-	25	-	-	160
13		25	-	-	-	25	-	-	98
14		3	-	-	-	3	-	-	18
19		-	1	7	-	8	-	-	13
20		-	7	15	-	22	-	-	37
21		-	10	14	-	24	-	-	40
22		-	10	12	-	22	-	-	37
23		-	6	3	-	9	-	-	15
24		-	-	2	-	2	-	-	3
25		-	-	2	-	2	-	-	3
26		-	-	5	-	5	-	-	8
27		-	-	-	1	1	-	-	2
						999			
Total No. of Ages Read		100	34	60	1	195			
Serial Numbers						No. of Age Samples 3			
		Number of fish measured each month				-	-	-	600
		Mean length of fish (cm) each month				-	-	-	12.9
		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)				-	-	-	W

W = Wiers

TABLE 90
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Y (WEST) - 1971 (3rd QUARTER)

COUNTRY		U.S.A.													
CATCHES/LANDINGS		Catches and Landings													
COMMERCIAL/RESEARCH		Research and Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class	Length Age	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE					
		2	3	4	5	6	7	8		8+	Months Within Quarter				
Group(cm)										Jul			Aug	Sep	
20		2	-	-	-	-	-	-	2	-	-	-	-	1	
21		-	1	-	-	-	-	-	1	1	-	-	-	-	
22		-	5	-	-	-	-	-	5	1	1	-	-	1	
23		-	73	-	-	-	-	-	73	17	12	-	-	4	
24		-	190	-	-	-	-	-	190	31	28	-	-	39	
25		-	310	4	-	-	-	-	314	45	48	-	-	72	
26		-	155	262	-	-	-	-	417	68	50	-	-	107	
27		-	6	445	14	-	-	-	465	68	72	-	-	103	
28		-	-	142	541	-	-	-	683	112	111	-	-	121	
29		-	-	1	656	270	-	-	927	143	163	-	-	156	
30		-	-	-	51	855	10	-	916	147	169	-	-	131	
31		-	-	-	-	214	450	6	670	111	125	-	-	88	
32		-	-	-	-	-	262	339	615	109	104	-	-	89	
33		-	-	-	-	-	-	133	427	89	61	-	-	61	
34		-	-	-	-	-	-	-	226	44	41	-	-	22	
35		-	-	-	-	-	-	-	54	9	11	-	-	5	
36		-	-	-	-	-	-	-	16	4	3	-	-	-	
39		-	-	-	-	-	-	-	1	1	-	-	-	-	
40		-	-	-	-	-	-	-	1	-	-	-	-	-	
Total No. of Ages Read		2	740	854	1262	1339	722	478	606	6003					
Serial Numbers										No. of Age Samples		56			
		Number of fish measured each month								2131	2509	1363			
		Mean length of fish (cm) each month								29.9	29.9	29.5			
		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 90
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Y (SOUTH) - 1971 (4th QUARTER)

COUNTRY		Canada (M)							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	68	67	66	65	64	63	62	Total No. of Ages Read	Months Within Quarter			
Length Age Group (cm)	3	4	5	6	7	8	9		Oct	Nov	Dec	
22	-	-	-	-	-	-	-	-	5	-	-	
23	-	-	-	-	-	-	-	-	-	-	-	
24	3	-	-	-	-	-	-	3	10	-	-	
25	10	-	-	-	-	-	-	10	43	-	-	
26	13	-	-	-	-	-	-	13	83	-	-	
27	6	2	-	-	-	-	-	8	80	-	-	
28	4	10	2	-	-	-	-	16	77	-	-	
29	1	10	6	-	-	-	-	17	150	-	-	
30	-	11	16	1	-	-	-	28	138	-	-	
31	-	2	11	6	-	-	-	19	113	-	-	
32	-	-	4	17	3	-	-	24	118	-	-	
33	-	-	-	6	15	2	-	23	118	-	-	
34	-	-	-	-	4	5	2	11	50	-	-	
35	-	-	-	-	-	1	3	4	15	-	-	
Total No. of Ages Read	37	35	39	30	22	8	5	176	1000	-	-	
Serial Numbers	No. of Age Samples							2				
	Number of fish measured each month							399	-	-	-	
	Mean length of fish (cm) each month							30.2	-	-	-	
	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 = Seines

TABLE 90
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Y (WEST) - 1971 (4th QUARTER)

COUNTRY		U.S.A.											
CATCHES/LANDINGS		Catches and Landings											
COMMERCIAL/RESEARCH		Research and Commercial											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Age Group (cm)		69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		2	3	4	5	6	7	8		8+	Months Within Quarter Oct Nov Dec		
22	-	1	-	-	-	-	-	-	1	-	2	-	
23	-	11	-	-	-	-	-	-	11	18	8	-	
24	-	28	-	-	-	-	-	-	28	40	27	-	
25	-	46	-	-	-	-	-	-	46	45	60	-	
26	-	56	14	-	-	-	-	-	70	85	79	-	
27	-	5	56	-	-	-	-	-	61	48	85	43	
28	-	-	25	24	-	-	-	-	49	40	68	22	
29	-	-	-	65	14	-	-	-	79	85	89	87	
30	-	-	-	14	79	2	-	-	95	96	118	43	
31	-	-	-	-	65	61	8	2	136	162	135	217	
32	-	-	-	-	-	108	24	14	146	141	166	283	
33	-	-	-	-	1	1	59	59	120	152	108	239	
34	-	-	-	-	-	-	-	49	49	69	41	65	
35	-	-	-	-	-	-	-	11	11	16	10	-	
36	-	-	-	-	-	-	-	3	3	3	4	-	
Total No. of Ages Read	-	147	95	103	159	172	91	138	905	1000	1000	999	
Serial Numbers		No. of Age Samples							10				
	Number of fish measured each month								376	483	46		
	Mean length of fish (cm) each month								30.7	30.1	32.0		
	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								-	-	-		
	Mesh size (mm)								-	-	-		

TABLE 91

AGE/LENGTH KEY - HERRING - 52e - 1971 (3rd QUARTER)

COUNTRY		France (SP)										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	Age	67	66	65	64	63	62	61				Total No. of Ages Read	Months Within Quarter		
Length Group (cm)		4	5	6	7	8	9	10	July	Aug	Sep				
25		2	-	-	-	-	-	-				2	-	-	4
26		10	11	-	-	-	-	-				21	-	-	72
27		14	27	2	-	-	-	-				43	-	-	196
28		2	51	3	-	-	-	-				56	-	-	180
29		-	21	15	-	1	-	-				37	-	-	144
30		-	3	34	8	1	-	-				46	-	-	141
31		-	1	12	23	5	-	-				41	-	-	110
32		-	-	1	8	10	-	-				19	-	-	72
33		-	-	-	1	3	9	-				13	-	-	42
34		-	-	-	-	1	5	2				8	-	-	26
35		-	-	-	-	-	2	1				3	-	-	11
36		-	-	-	-	-	1	-				1	-	-	2
Total No. of Ages Read		28	114	67	40	21	17	3				290			
Serial Numbers		No. of Age Samples													
		Number of fish measured each month										-	-	1924	
		Mean length of fish (cm) each month										-	-	29.1	
		Mean weight of fish (kg) each month										-	-	0.22	
		Total weight caught or landed (tons) each month										-	-	-	
		Estimated number caught or landed (whole numbers) each month										-	-	-	
		Range of depths (m) each month										-	-	50	
		Mesh size (mm)										-	-	50 ¹	

¹ Stretch mesh

TABLE 91
(CONT'D)

AGE/LENGTH KEY - HERRING - 52e - 1971 (3rd QUARTER)

COUNTRY		Germany, Fed. Rep.										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months Within Quarter	Jul	Aug
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Scales & Otoliths													
Year- Class Length Group (cm)	Age	70	69	68	67	66	65	64	63	62	<62	Total No. of Ages Read	MONTHS WITHIN QUARTER		
		1	2	3	4	5	6	7	8	9	>9		Jul	Aug	Sep
20		-	4	-	-	-	-	-	-	-	4	-	11	-	
21		-	6	-	-	-	-	-	-	-	6	-	16	-	
22		-	4	6	-	-	-	-	-	-	10	-	27	-	
23		-	9	16	-	-	-	-	-	-	25	-	68	-	
24		-	4	49	-	-	-	-	-	-	53	-	140	+	
25		-	-	99	-	-	-	-	-	-	99	-	233	11	
26		-	-	101	6	-	-	-	-	-	107	-	162	74	
27		-	-	52	43	2	-	-	-	-	97	-	79	138	
28		-	-	20	84	9	2	-	-	-	115	-	82	146	
29		-	-	3	62	42	3	-	-	-	110	-	79	169	
30		-	-	-	25	44	13	3	2	-	87	-	52	161	
31		-	-	-	2	28	19	4	4	-	57	-	19	111	
32		-	-	-	-	4	15	4	10	5	47	-	19	81	
33		-	-	-	-	-	3	3	2	-	19	-	8	60	
34		-	-	-	-	-	-	-	2	-	7	-	5	36	
35		-	-	-	-	-	-	-	-	-	1	-	-	12	
36		-	-	-	-	-	-	-	-	-	-	-	-	1	
Total No. of Ages Read		-	27	346	222	129	55	14	20	5	26	844	-	1000	1000
Serial Numbers		No. of Age Samples										9			
		Number of fish measured each month										-	366	11347	
		Mean length of fish (cm) each month										-	26.51	29.93	
		Mean weight of fish (kg) each month										-	0.178	0.221	
		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 91
(CONT'D)

AGE/LENGTH KEY - HERRING - 52e - 1971 (3rd QUARTER)

COUNTRY		Poland											Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Catches											No. of	PER MILLE		
COMMERCIAL/RESEARCH		Commercial											Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths											Read			
Year- Class	Age	69	68	67	66	65	64	63	62	61			Jul	Aug	Sep	
Length Group (cm)		2	3	4	5	6	7	8	9	10	10+					
23		1	-	-	-	-	-	-	-	-	-	1	3	-	-	
24		-	7	-	-	-	-	-	-	-	-	7	24	4	1	
25		-	20	1	-	-	-	-	-	-	-	21	67	34	9	
26		-	36	4	-	-	-	-	-	-	-	40	117	80	28	
27		-	38	5	-	-	-	-	-	-	-	43	112	100	75	
28		-	10	33	2	-	-	-	-	-	-	45	155	156	115	
29		-	1	25	34	3	-	-	-	-	-	63	221	259	109	
30		-	-	14	22	14	1	-	-	-	-	51	169	180	155	
31		-	-	5	24	7	2	-	-	-	-	38	92	105	180	
32		-	-	-	6	8	4	-	-	-	-	18	29	46	154	
33		-	-	-	-	3	-	5	3	1	-	12	5	27	103	
34		-	-	-	-	1	-	4	1	-	-	6	6	7	55	
35		-	-	-	-	-	-	-	-	2	-	2	1	1	9	
36		-	-	-	-	-	-	-	-	-	1	1	-	-	6	
37		-	-	-	-	-	-	-	-	-	-	-	-	-	1	
Total No. of Ages Read		1	112	87	88	36	7	9	4	3	1	348	1001	999	1000	
Serial Numbers		No. of Age Samples											7			
		Number of fish measured each month											3731	1823	1714	
		Mean length of fish (cm) each month											28.4	28.9	30.4	
		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)											-	-	-	

TABLE 91
(CONT'D)

AGE/LENGTH KEY - HERRING - 52e - 1971 (4th QUARTER)

COUNTRY		France (SP)											
CATCHES/LANDINGS		Catches											
COMMERCIAL/RESEARCH		Research											
STRUCTURES USED IN AGE DETERMINATION		Otoliths											
Year- Class Length Group (cm)	Age	67	66	65	64	63	62	61	60	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		4	5	6	7	8	9	10	11		Months Within Quarter	Oct	Nov
26		-	1	-	-	-	-	-	-	1	9	-	-
27		4	1	-	-	-	-	-	-	5	61	-	-
28		1	8	2	-	-	-	-	-	11	104	-	-
29		-	8	2	-	-	-	-	-	10	70	-	-
30		-	-	11	2	-	-	-	-	13	130	-	-
31		-	1	4	6	1	-	-	-	12	130	-	-
32		-	-	-	2	6	1	-	-	9	104	-	-
33		-	-	-	1	6	8	-	-	15	148	-	-
34		-	-	-	-	-	6	5	1	12	104	-	-
35		-	-	-	-	-	2	4	1	7	104	-	-
36		-	-	-	-	-	1	2	-	3	26	-	-
37		-	-	-	-	-	-	-	1	1	9	-	-
Total No. of Ages Read		5	19	19	11	13	18	11	3	99	999		
Serial Numbers		No. of Age Samples											
		Number of fish measured each month									115	-	-
		Mean length of fish (cm) each month									31.6	-	-
		Mean weight of fish (kg) each month									0.23	-	-
		Total weight caught or landed (tons) each month									-	-	-
		Estimated number caught or landed (whole numbers) each month									-	-	-
		Range of depths (m) each month									92	-	-
		Mesh size (mm)									50	-	-

1 Stretch mesh

TABLE 91
(CONT'D)

AGE/LENGTH KEY - HERRING - 52e - 1971 (4th QUARTER)

COUNTRY		Germany, Fed. Rep.													
CATCHES/LANDINGS		Catches													
COMMERCIAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Scales & Otoliths													
Year-Class Length Group (cm)	Age	70	69	68	67	66	65	64	63	62	<62	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
		1	2	3	4	5	6	7	8	9	>9		Months Within Quarter		
												Oct	Nov	Dec	
23		-	1	-	-	-	-	-	-	-	-	1	-	-	-
24		-	-	-	-	-	-	-	-	-	-	-	+	-	-
25		-	-	20	-	-	-	-	-	-	-	20	18	-	-
26		-	-	66	5	-	-	-	-	-	-	71	174	-	-
27		-	-	59	15	-	-	-	-	-	-	74	306	-	-
28		-	-	14	31	1	-	-	-	-	-	46	185	-	-
29		-	-	1	24	7	-	-	-	-	-	32	120	-	-
30		-	-	-	14	10	3	-	-	-	-	27	87	-	-
31		-	-	-	3	4	-	-	-	-	-	7	48	-	-
32		-	-	-	-	1	2	1	-	-	-	5	27	-	-
33		-	-	-	-	-	-	-	-	-	-	3	14	-	-
34		-	-	-	-	-	-	-	1	-	-	2	11	-	-
35		-	-	-	-	-	-	-	-	-	-	2	7	-	-
36		-	-	-	-	-	-	-	-	-	-	-	3	-	-
Total No. of Ages Read		-	1	160	92	23	5	1	1	-	7	290	1000		
Serial Numbers		No. of Age Samples 3													
		Number of fish measured each month											6753	-	-
		Mean length of fish (cm) each month											28.53	-	-
		Mean weight of fish (kg) each month											0.200	-	-
		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 91
(CONT'D)

AGE/LENGTH KEY - HERRING - 52e - 1971 (4th QUARTER)

COUNTRY		Poland										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months	Within	Quarter
COMMERCIAL/RESEARCH		Research													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year- Class Length Group (cm)	Age	68	67	66	65	64	63	62	61			Total No. of Ages Read			
		3	4	5	6	7	8	9	10	10+	Oct		Nov	Dec	
25		8	-	-	-	-	-	-	-	-	8	3	-	-	
26		36	1	-	-	-	-	-	-	-	37	35	-	-	
27		68	27	2	-	-	-	-	-	-	97	123	-	-	
28		18	56	20	1	-	-	-	-	-	95	137	-	-	
29		-	33	43	3	1	-	-	-	-	80	113	-	-	
30		-	15	70	26	-	1	-	-	-	112	131	-	-	
31		-	-	56	41	9	1	-	-	-	107	149	-	-	
32		-	-	20	50	16	5	-	-	-	91	121	-	-	
33		-	-	2	12	35	15	3	2	-	69	103	-	-	
34		-	-	-	-	7	20	7	3	1	38	50	-	-	
35		-	-	-	-	1	7	7	7	4	26	25	-	-	
36		-	-	-	-	-	-	3	2	3	8	9	-	-	
37		-	-	-	-	-	-	-	-	2	2	1	-	-	
Total No. of Ages Read		130	132	213	133	69	49	20	14	10	770	1000	-	-	
Serial Numbers		No. of Age Samples										8			
		Number of fish measured each month										4086	-	-	
		Mean length of fish (cm) each month										30.2	-	-	
		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										60-105	-	-	
		Mesh size (mm)										-	-	-	

TABLE 92

AGE/LENGTH KEY - HERRING - 52w - 1971 (2nd QUARTER)

COUNTRY		Poland												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year-Class Length Group (cm)	Age	68	67	66	65	64	63	62	61	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	9	10		10+	Months Within Quarter		
											Apr	May	Jun	
21		-	-	-	-	-	-	-	-	-	2	-	-	
22		2	1	-	-	-	-	-	-	3	13	-	-	
23		7	-	-	-	-	-	-	-	7	86	-	-	
24		11	-	-	-	-	-	-	-	11	103	-	-	
25		10	5	-	-	-	-	-	-	15	110	-	-	
26		-	9	1	-	-	-	-	-	10	57	-	-	
27		-	6	-	-	-	-	-	-	6	50	-	-	
28		-	2	-	1	-	-	-	-	3	57	-	-	
29		-	-	11	2	-	-	-	-	13	74	-	-	
30		-	-	2	5	-	-	-	-	7	105	-	-	
31		-	-	1	6	1	-	-	-	8	95	-	-	
32		-	-	-	1	3	1	-	-	5	70	-	-	
33		-	-	-	-	-	1	1	-	2	68	-	-	
34		-	-	-	-	-	3	-	2	5	72	-	-	
35		-	-	-	-	-	-	-	-	-	27	-	-	
36		-	-	-	-	-	-	-	2	2	11	-	-	
Total No. of Ages Read		30	23	15	15	4	5	1	2	2	97	1000		
Serial Numbers		No. of Age Samples												
		Number of fish measured each month										561	-	-
		Mean length of fish (cm) each month										28.5	-	-
		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										60	-	-
		Mesh size (mm)										-	-	-

TABLE 92
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Zw - 1971 (4th QUARTER)

COUNTRY		Poland										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 Group (cm)	Age	69	68	67	66	65	64	63	62	61	Total No. of Ages Read	Months Within Quarter			
		2	3	4	5	6	7	8	9	10		10+	Oct	Nov	Dec
23		9	5	-	-	-	-	-	-	-	14	5	-	-	
24		-	6	-	-	-	-	-	-	-	6	4	-	-	
25		-	9	-	-	-	-	-	-	-	9	15	-	-	
26		-	18	-	-	-	-	-	-	-	18	58	-	-	
27		-	22	4	1	-	-	-	-	-	27	98	-	-	
28		-	8	16	1	1	-	-	-	-	26	105	-	-	
29		-	-	19	14	1	-	-	-	-	34	109	-	-	
30		-	-	3	28	10	1	-	-	-	42	132	-	-	
31		-	-	1	24	26	1	-	-	-	52	153	-	-	
32		-	-	-	5	35	12	-	-	-	52	124	-	-	
33		-	-	-	1	7	20	15	2	1	46	88	-	-	
34		-	-	-	-	-	4	13	9	3	32	74	-	-	
35		-	-	-	-	-	-	3	3	3	11	27	-	-	
36		-	-	-	-	-	-	-	2	2	6	8	-	-	
Total No. of Ages Read		9	68	43	74	80	38	31	16	9	7	375	1000	-	-
Serial Numbers		No. of Age Samples										4			
		Number of fish measured each month										3349	-	-	-
		Mean length of fish (cm) each month										30.2	-	-	-
		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										67-140	-	-	-
		Mesh size (mm)										-	-	-	-

TABLE 93

AGE/LENGTH KEY - HERRING - 5Z - 1971 (1st QUARTER)

COUNTRY		U.S.A.									
CATCHES/LANDINGS		Landings									
COMMERCIAL/RESEARCH		Commercial									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year-Class Length Age Group (cm)	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	2	3	4	5	6	7	8		Months Within Quarter		
									Jan	Feb	Mar
14	1	-	-	-	-	-	-	1	-	-	1
15	2	-	-	-	-	-	-	2	-	-	2
16	1	-	-	-	-	-	-	1	-	-	1
17	2	-	-	-	-	-	-	2	-	-	2
18	-	1	-	-	-	-	-	1	5	-	-
19	-	4	-	-	-	-	-	4	18	-	-
20	-	7	-	-	-	-	-	7	28	-	1
21	-	29	-	-	-	-	-	29	124	-	2
22	-	38	-	-	-	-	-	38	175	-	-
23	-	39	2	-	-	-	-	41	189	-	-
24	-	7	16	-	-	-	-	23	106	-	-
25	-	-	12	-	-	-	-	12	55	-	-
26	-	1	10	9	-	-	-	20	92	-	-
27	-	-	1	20	-	-	-	21	97	-	-
28	-	-	-	9	1	-	-	10	46	-	-
29	-	-	-	-	5	-	-	5	23	-	-
30	-	-	-	-	-	7	-	7	32	-	-
31	-	-	-	-	-	-	2	2	9	-	-
Total No. of Ages Read	6	126	41	38	6	7	2	226	999	-	-
Serial Numbers	No. of Age Samples										
	Number of fish measured each month							217	-	9	
	Mean length of fish (cm) each month							1	-	5	
	Mean weight of fish (kg) each month							24.4	-	17.8	
	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 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 52 - 1971 (1st QUARTER)

COUNTRY		U.S.S.R.						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							PER MILLE		
Year- Class Length Group (cm)	Age	68	67	66	65	64	63	Total No. of Ages Read	MONTHS WITHIN QUARTER		
		3	4	5	6	7	8		Jan	Feb	Mar
19		1	-	-	-	-	-	1	12	-	-
20		10	-	-	-	-	-	10	33	-	-
21		6	-	-	-	-	-	6	100	-	-
22		41	-	-	-	-	-	41	188	-	-
23		36	1	-	-	-	-	37	270	-	-
24		17	16	-	-	-	-	33	236	-	-
25		-	10	-	-	-	-	10	96	-	-
26		-	6	-	-	-	-	6	29	-	-
27		-	-	1	-	-	-	1	19	-	-
28		-	-	-	-	-	-	-	6	-	-
29		-	-	-	2	-	-	2	6	-	-
30		-	-	-	-	1	-	1	2	-	-
31		-	-	-	-	-	1	1	1	-	-
32		-	-	-	-	-	-	-	2	-	-
								1000	-	-	-
Total No. of Ages Read		111	33	1	2	1	1	149			
Serial Numbers		No. of Age Samples						2			
		Number of fish measured each month						3600	-	-	-
		Mean length of fish (cm) each month						23.2	-	-	-
		Mean weight of fish (kg) each month						0.078	-	-	-
		Total weight caught or landed (tons) each month						382	-	-	-
		Estimated number caught or landed (whole numbers) each month						-	-	-	-
		Range of depths (m) each month						20-30	-	-	-
		Mesh size (mm)						40	-	-	-

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (2nd QUARTER)

COUNTRY		Canada (M)									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Commercial									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year- Class Length Age Group(cm)	68 67 66 65 64 63						Total No. of Ages Read	LENGTH COMPOSITION PER MILE			
	3 4 5 6 7 8	Months Within Quarter			Apr	May		Jun			
24	2	-	-	-	-	-	2	-	-	39	
25	5	-	-	-	-	-	5	-	-	118	
26	8	3	-	-	-	-	11	-	-	140	
27	1	16	-	-	-	-	17	-	-	169	
28	-	18	6	-	-	-	24	-	-	202	
29	-	12	8	-	-	-	20	-	-	174	
30	-	3	6	-	-	-	9	-	-	84	
31	-	-	7	3	-	-	10	-	-	62	
32	-	-	-	1	-	-	1	-	-	6	
33	-	-	-	-	-	-	-	-	-	-	
34	-	-	-	-	-	1	1	-	-	6	
Total No. of Ages Read		16	52	27	4	-	1	100	1000		
Serial Numbers		No. of Age Samples						1			
Number of fish measured each month								-	-	-	178
Mean length of fish (cm) each month								-	-	-	28.1
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 - Seines

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (2nd QUARTER)

COUNTRY		U.S.A.								Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches									Months Within Quarter		
COMMERCIAL/RESEARCH		Research								Total No. of Ages Read	MONTHS		
STRUCTURES USED IN AGE DETERMINATION		Otoliths									Apr May Jun		
Year- Class	Age	69	68	67	66	65	64	63	8+	Total No. of Ages Read	PER MILLE		
Length Group (cm)		2	3	4	5	6	7	8	8+		Apr	May	Jun
12		1	-	-	-	-	-	-	-	1	-	-	-
13		-	-	-	-	-	-	-	-	-	-	-	-
14		1	-	-	-	-	-	-	-	1	-	-	-
22		-	1	-	-	-	-	-	-	1	-	-	-
23		-	1	-	-	-	-	-	-	1	-	-	-
24		-	-	-	-	-	-	-	-	-	-	-	-
25		-	-	1	-	-	-	-	-	1	-	-	-
26		-	-	-	3	-	-	-	-	3	-	-	-
27		-	-	-	3	1	-	-	-	4	-	-	-
28		-	-	-	1	-	-	-	-	1	-	-	-
29		-	-	-	-	1	-	-	-	1	-	-	-
30		-	-	-	-	-	-	-	-	-	-	-	-
31		-	1	-	-	-	-	-	-	1	-	-	-
32		-	-	-	-	-	-	-	1	1	-	-	-
Total No. of Ages Read		2	3	1	7	2	-	-	1	16			
Serial Numbers		No. of Age Samples											
		Number of fish measured each month								-	16	-	
		Mean length of fish (cm) each month								-	25.5	-	
		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 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (2nd QUARTER)

COUNTRY		U.S.S.R.												
CATCHES/LANDINGS		Catches												
COMMERCIAL/RESEARCH		Commercial												
STRUCTURES USED IN AGE DETERMINATION		Otoliths												
Year- Class	Age	68	67	66	65	64	63	62	61	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
		3	4	5	6	7	8	9	10		Months Within Quarter			
Length Group (cm)										Apr	May	Jun		
16		-	-	-	-	-	-	-	-	-	-	-	10	
17		-	-	-	-	-	-	-	-	-	-	-	120	
18		-	-	-	-	-	-	-	-	-	-	-	85	
19		-	-	-	-	-	-	-	-	-	-	-	25	
20		-	-	-	-	-	-	-	-	-	-	9	35	
21		-	-	-	-	-	-	-	-	-	-	70	95	
22		-	-	-	-	-	-	-	-	-	-	171	140	
23		4	-	-	-	-	-	-	-	4	-	155	195	
24		11	-	-	-	-	-	-	-	11	-	98	85	
25		8	17	-	-	-	-	-	-	25	-	185	85	
26		-	31	2	-	-	-	-	-	33	-	105	75	
27		-	12	6	-	-	-	-	-	18	-	63	30	
28		-	9	18	9	-	-	-	-	36	-	82	10	
29		-	-	30	13	-	-	-	-	43	-	40	10	
30		-	-	11	20	4	-	-	-	35	-	16	-	
31		-	-	-	12	19	-	-	-	31	-	4	-	
32		-	-	-	-	7	6	-	-	13	-	-	-	
33		-	-	-	-	5	10	-	-	15	-	2	-	
34		-	-	-	-	8	7	8	-	23	-	-	-	
35		-	-	-	-	-	5	6	5	16	-	-	-	
36		-	-	-	-	-	-	-	2	2	-	-	-	
Total No. of Ages Read		23	69	67	54	43	28	14	7	305				
Serial Numbers										No. of Age Samples	3			
		Number of fish measured each month									-	425	200	
		Mean length of fish (cm) each month									-	24.5	22.0	
		Mean weight of fish (kg) each month									-	0.126	0.083	
		Total weight caught or landed (tons) each month									-	1254	1893	
		Estimated number caught or landed (whole numbers) each month									-	-	-	
		Range of depths (m) each month									-	15-80	36	
		Mesh size (mm)									-	40	40	

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (3rd QUARTER)

COUNTRY		Canada (M)									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Commercial									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year-Class Length Age Group (cm)	69	68	67	66	65	64	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2	3	4	5	6	7		Months Within Quarter			
								Jul	Aug	Sep	
19	1	-	-	-	-	-	1	-	3	-	
20	-	-	-	-	-	-	-	-	2	-	
21	1	4	-	-	-	-	5	1	8	3	
22	-	4	-	-	-	-	4	8	5	1	
23	-	15	-	-	-	-	15	26	17	-	
24	-	40	-	-	-	-	40	137	66	12	
25	-	115	6	-	-	-	121	232	223	96	
26	-	132	21	-	-	-	153	260	278	236	
27	-	61	40	3	-	-	104	157	142	250	
28	-	9	52	5	-	-	66	89	117	141	
29	-	1	39	13	-	-	53	49	72	132	
30	-	-	6	11	-	-	17	35	32	56	
31	-	-	2	3	4	1	10	5	17	32	
32	-	-	-	-	1	2	3	1	10	15	
33	-	-	-	-	1	2	3	-	4	17	
34	-	-	-	-	-	-	-	-	1	7	
35	-	-	-	-	-	-	-	-	2	1	
Total No. of Ages Read	2	381	166	35	6	5	595	1000	999	999	
Serial Numbers	No. of Age Samples						6				
	Number of fish measured each month							778	2486	907	
	Mean length of fish (cm) each month							26.5	26.9	27.9	
	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)							S	S	S	

S = Seines

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (3rd QUARTER)

COUNTRY		U.S.A.										
CATCHES/LANDINGS		Catches and Landings										
COMMERCIAL/RESEARCH		Research and Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year- Class Length Age Group (cm)	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE			
	2	3	4	5	6	7	8		8+	Months Within Quarter		
									Jul	Aug	Sep	
21	1	-	-	-	-	-	-	1	-	3	-	
22	-	2	-	-	-	-	-	2	9	-	-	
23	-	18	-	-	-	-	-	18	47	27	-	
24	-	104	-	-	-	-	-	104	208	183	23	
25	-	179	-	-	-	-	-	179	330	320	59	
26	-	60	59	-	-	-	-	119	156	207	109	
27	-	-	79	1	-	-	-	80	94	110	122	
28	-	-	7	73	-	-	-	80	99	60	186	
29	-	-	-	40	17	-	-	57	43	43	158	
30	-	-	-	2	28	1	-	31	14	13	109	
31	-	-	-	-	13	10	-	23	-	20	77	
32	-	-	-	-	-	13	16	29	-	7	122	
33	-	-	-	-	-	-	4	9	-	7	32	
34	-	-	-	-	-	-	-	1	-	-	4	
Total No. of Ages Read	1	363	145	116	58	24	20	6	733	1000	1000	1001
Serial Numbers	No. of Age Samples											
	Number of fish measured each month								212	300	221	
	Mean length of fish (cm) each month								26.0	26.3	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)								-	-	-	

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (3rd QUARTER)

COUNTRY		U.S.S.R.														
CATCHES/LANDINGS		Catches														
COMMERCIAL/RESEARCH		Commercial														
STRUCTURES USED IN AGE DETERMINATION		Otoliths														
Year- Class	Length Age Group (cm)	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE							
		3	4	5	6	7	8		Months Within Quarter							
								July			Aug			Sep		
20		-	-	-	-	-	-	-	6	1	-					
21		-	-	-	-	-	-	-	16	2	+					
22		-	-	-	-	-	-	-	50	-	+					
23		2	-	-	-	-	-	2	63	3	1					
24		5	-	-	-	-	-	5	142	48	1					
25		9	11	-	-	-	-	20	220	121	8					
26		7	84	-	-	-	-	91	178	144	49					
27		-	69	22	-	-	-	91	135	181	111					
28		-	40	50	-	-	-	90	92	88	118					
29		-	-	54	3	-	-	57	60	75	115					
30		-	-	38	24	-	-	62	28	89	182					
31		-	-	2	22	3	-	27	10	47	141					
32		-	-	-	13	16	-	29	+	67	116					
33		-	-	-	-	10	1	11	-	64	78					
34		-	-	-	-	4	7	11	-	54	52					
35		-	-	-	-	-	2	2	-	13	23					
36		-	-	-	-	-	-	-	-	3	5					
37		-	-	-	-	-	-	-	-	-	+					
38		-	-	-	-	-	-	-	-	-	+					
Total No. of Ages Read		23	204	166	62	33	10	498				1000	1000	1000		
Serial Numbers		No. of Age Samples						5								
		Number of fish measured each month						600	1191	9414						
		Mean length of fish (cm) each month						25.6	28.4	30.0						
		Mean weight of fish (kg) each month						0.154	0.240	0.228						
		Total weight caught or landed (tons) each month						2964	2257	7960						
		Estimated number caught or landed (whole numbers) each month						-	-	-						
		Range of depths (m) each month						15-30	15-25	25-95						
		Mesh size (mm)						40	40	40						

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (4th QUARTER)

COUNTRY		U.S.A.								Total	LENGTH COMPOSITION		
CATCHES/LANDINGS										No. of	PER MILLE		
COMMERCIAL/RESEARCH										Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION										Read	Oct	Nov	Dec
Year-Class	Age	69	68	67	66	65	64	63					
Length Group (cm)		2	3	4	5	6	7	8	8+				
25		-	6	-	-	-	-	-	-	6	79	-	-
26		-	4	9	-	-	-	-	-	13	171	-	-
27		-	-	10	-	-	-	-	-	10	132	-	-
28		-	-	8	8	-	-	-	-	16	210	-	-
29		-	-	-	12	-	-	-	-	12	158	-	-
30		-	-	-	1	8	-	-	-	9	118	-	-
31		-	-	-	-	1	1	-	-	2	26	-	-
32		-	-	-	-	-	1	1	-	2	26	-	-
33		-	-	-	-	-	-	1	3	4	53	-	-
34		-	-	-	-	-	-	-	2	2	26	-	-
Total No. of Ages Read		-	10	27	21	9	2	2	5	76	999	-	-
Serial Numbers		No. of Age Samples											
		Number of fish measured each month								76	-	-	-
		Mean length of fish (cm) each month								28.7	-	-	-
		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)								-	-	-	-

TABLE 93
(CONT'D)

AGE/LENGTH KEY - HERRING - 5Z - 1971 (4th QUARTER)

COUNTRY		U.S.S.R.													Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches														PER MILLE		
COMMERCIAL/RESEARCH		Commercial														PER MILLE		
STRUCTURES USED IN AGE DETERMINATION		Otoliths														PER MILLE		
Year- Class Length Age Group (cm)	69	68	67	66	65	64	63	62	61	60	59	58	57	Months Within Quarter				
														2	3	4	5	6
20	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
21	2	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	5	
22	15	-	-	-	-	-	-	-	-	-	-	-	-	15	-	12	53	
23	4	15	-	-	-	-	-	-	-	-	-	-	-	19	4	55	130	
24	1	30	5	-	-	-	-	-	-	-	-	-	-	36	4	35	158	
25	-	9	17	-	-	-	-	-	-	-	-	-	-	26	20	55	102	
26	-	3	34	6	-	-	-	-	-	-	-	-	-	43	64	68	136	
27	-	-	66	19	-	-	-	-	-	-	-	-	-	85	125	165	160	
28	-	-	36	61	5	-	-	-	-	-	-	-	-	102	126	105	108	
29	-	-	2	79	8	-	-	-	-	-	-	-	-	89	96	73	70	
30	-	-	-	64	56	1	-	-	-	-	-	-	-	121	144	120	40	
31	-	-	-	13	55	29	-	-	-	-	-	-	-	97	144	80	18	
32	-	-	-	1	30	53	5	-	-	-	-	-	-	89	121	112	12	
33	-	-	-	-	12	44	14	1	-	-	-	-	-	71	95	45	5	
34	-	-	-	-	-	15	23	2	1	-	-	-	-	41	33	50	2	
35	-	-	-	-	-	2	6	16	1	-	-	-	-	25	20	25	1	
36	-	-	-	-	-	-	1	10	14	6	2	-	-	33	4	-	-	
37	-	-	-	-	-	-	-	-	6	6	4	-	-	16	-	-	-	
38	-	-	-	-	-	-	-	-	-	6	4	4	2	16	-	-	-	
39	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	
40	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
Total No. of Ages Read	23	57	160	243	166	144	49	29	22	18	10	6	3	930				
Serial Numbers	No. of Age Samples													10				
	Number of fish measured each month													1000	400	1600		
	Mean length of fish (cm) each month													29.8	28.8	25.9		
	Mean weight of fish (kg) each month													0.195	0.175	0.133		
	Total weight caught or landed (tons) each month													6859	76	321		
	Estimated number caught or landed (whole numbers) each month													-	-	-		
	Range of depths (m) each month													60-85	90	10-35		
	Mesh size (mm)													40	40	40		

TABLE 94

AGE/LENGTH KEY - HERRING - 6 - 1971 (1st QUARTER)

COUNTRY		U.S.A.									
CATCHES/LANDINGS		Catches									
COMMERCIAL/RESEARCH		Research									
STRUCTURES USED IN AGE DETERMINATION		Otoliths									
Year-Class Length Age Group (cm)	69	68	67	66	65	64	63	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE Months Within Quarter		
	2	3	4	5	6	7	8		8+	Jan	Feb
10	1	-	-	-	-	-	-	1	-	-	6
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	2	-	-	-	-	-	-	2	-	-	12
14	7	-	-	-	-	-	-	7	-	-	40
15	10	-	-	-	-	-	-	10	-	-	58
16	8	-	-	-	-	-	-	8	-	-	46
17	3	1	-	-	-	-	-	4	-	-	23
18	3	-	-	-	-	-	-	3	-	-	17
19	2	3	-	-	-	-	-	5	-	-	29
20	-	16	-	-	-	-	-	16	-	-	93
21	-	26	-	-	-	-	-	26	-	-	150
22	-	32	-	-	-	-	-	32	-	-	185
23	-	21	-	-	-	-	-	21	-	-	121
24	-	7	1	-	-	-	-	8	-	-	46
25	-	1	3	-	-	-	-	4	-	-	23
26	-	-	4	-	-	-	-	4	-	-	23
27	-	-	-	5	-	-	-	5	-	-	29
28	-	-	-	5	1	-	-	6	-	-	35
29	-	-	-	-	4	-	-	4	-	-	23
30	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	3	3	-	-	17
32	-	-	-	-	-	-	-	-	-	-	-
33	-	-	-	-	-	-	-	2	-	-	12
34	-	-	-	-	-	-	-	2	-	-	12
Total No. of Ages Read	36	107	8	10	5	-	3	4	173	1000	
Serial Numbers	No. of Age Samples										
	Number of fish measured each month								-	-	173
	Mean length of fish (cm) each month								-	-	21.4
	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)								-	-	-

TABLE 94
(CONT'D)

AGE/LENGTH KEY - HERRING - 6 - 1971 (1st QUARTER)

COUNTRY								U.S.S.R.						
CATCHES/LANDINGS								Catches						
COMMERCIAL/RESEARCH								Commercial						
STRUCTURES USED IN AGE DETERMINATION								Otoliths						
Year- Class	Length Age Group (cm)	67	66	65	64	63	62	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE					
		4	5	6	7	8	9		Months Within Quarter					
								Jan			Feb		Mar	
24		-	-	-	-	-	-	-	-	-	3	12		
25		3	-	-	-	-	-	3	-	8	6			
26		2	-	-	-	-	-	2	-	16	69			
27		3	12	-	-	-	-	15	-	47	196			
28		4	37	2	-	-	-	43	-	110	260			
29		-	69	3	-	-	-	72	-	182	183			
30		-	69	37	-	-	-	106	-	219	189			
31		-	9	47	16	-	-	72	-	130	54			
32		-	-	29	35	-	-	64	-	100	25			
33		-	-	7	43	5	1	56	-	94	6			
34		-	-	-	27	17	3	47	-	62	-			
35		-	-	-	4	7	5	16	-	25	-			
36		-	-	-	-	-	2	2	-	4	-			
Total No. of Ages Read		12	196	125	125	29	11	498		-	1000	1000		
Serial Numbers								No. of Age Samples	5					
		Number of fish measured each month						-	1200	158				
		Mean length of fish (cm) each month						-	30.3	28.4				
		Mean weight of fish (kg) each month						-	0.197	0.234				
		Total weight caught or landed (tons) each month						-	1702	813				
		Estimated number caught or landed (whole numbers) each month						-	-	-				
		Range of depths (m) each month						-	10-30	15				
		Mesh size (mm)						-	40	40				

TABLE 94
(CONT'D)

AGE/LENGTH KEY - HERRING - 6 - 1971 (2nd QUARTER)

COUNTRY		Poland										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	68	67	66	65	64	63	62	61			Total No. of Ages Read	PER MILLE				
Length Age Group (cm)	3	4	5	6	7	8	9	10	10+			Apr	May	Jun		
21	1	-	-	-	-	-	-	-	-	-	1	1	-	-		
22	2	2	-	-	-	-	-	-	-	-	4	2	-	-		
23	13	-	-	-	-	-	-	-	-	-	13	13	-	-		
24	13	10	-	-	-	-	-	-	-	-	23	34	-	-		
25	10	26	-	-	-	-	-	-	-	-	36	39	6	-		
26	3	41	3	-	-	-	-	-	-	-	47	29	11	-		
27	2	39	1	-	-	-	-	-	-	-	42	27	34	-		
28	-	48	34	5	-	1	-	-	-	-	88	38	105	-		
29	-	13	105	5	1	-	-	-	-	-	124	60	155	-		
30	-	1	109	52	2	-	-	-	-	-	164	100	212	-		
31	-	1	35	90	35	9	-	-	-	-	170	142	175	-		
32	-	-	1	40	47	32	4	3	3	-	130	160	91	-		
33	-	-	-	9	34	51	14	21	10	-	139	177	101	-		
34	-	-	-	-	2	38	12	32	24	-	108	125	83	-		
35	-	-	-	-	-	7	4	15	9	-	35	45	19	-		
36	-	-	-	-	-	1	1	-	8	-	10	8	7	-		
37	-	-	-	-	-	-	-	-	-	-	-	-	1	-		
Total No. of Ages Read											1134	1000	1000	-		
Serial Numbers											No. of Age Samples		12			
Number of fish measured each month											1963	2420	-			
Mean length of fish (cm) each month											30.9	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)											-	-	-			

TABLE 94
(CONT'D)

AGE/LENGTH KEY - HERRING - 6 - 1971 (2nd QUARTER)

COUNTRY		U.S.A.								Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Catches								No. of	PER MILLE		
COMMERCIAL/RESEARCH		Research								Ages	Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths								Read	Apr	May	Jun
Year-Class	Age	69	68	67	66	65	64	63					
Length Group (cm)		2	3	4	5	6	7	8	8+				
16		1	-	-	-	-	-	-	-	1	8	-	-
20		-	2	-	-	-	-	-	-	2	15	-	-
21		-	14	-	-	-	-	-	-	14	106	-	-
22		3	12	-	-	-	-	-	-	15	114	-	-
23		-	14	-	-	-	-	-	-	14	106	-	-
24		-	1	2	-	-	-	-	-	3	23	-	-
25		-	-	8	-	-	-	-	-	8	61	-	-
26		-	-	5	-	-	-	-	-	5	38	-	-
27		-	-	1	4	-	-	-	-	5	38	-	-
28		-	-	-	5	11	-	-	-	16	121	-	-
29		-	-	-	-	16	-	-	-	16	121	-	-
30		-	-	-	-	9	4	-	-	13	98	-	-
31		-	-	-	-	-	4	4	-	8	61	-	-
32		-	-	-	-	-	-	4	2	6	45	-	-
33		-	-	-	-	-	-	1	5	6	45	-	-
Total No. of Ages Read		4	43	16	9	36	8	9	7	132			
Serial Numbers		No. of Age Samples											
		Number of fish measured each month								132	-	-	-
		Mean length of fish (cm) each month								26.8	-	-	-
		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)								-	-	-	-

TABLE 94
(CONT'D)

AGE/LENGTH KEY - HERRING - 6 - 1971 (2nd QUARTER)

COUNTRY		U.S.S.R.										
CATCHES/LANDINGS		Catches										
COMMERCIAL/RESEARCH		Commercial										
STRUCTURES USED IN AGE DETERMINATION		Otoliths										
Year-Class Length Age Group (cm)	68	67	66	65	64	63	62	61	Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
	3	4	5	6	7	8	9	10		Months Within Quarter		
										Apr	May	Jun
22	-	-	-	-	-	-	-	-	-	3	-	-
23	-	-	-	-	-	-	-	-	-	5	-	-
24	4	-	-	-	-	-	-	-	4	20	-	-
25	1	10	-	-	-	-	-	-	11	31	-	-
26	-	8	-	-	-	-	-	-	8	31	-	-
27	-	6	9	-	-	-	-	-	15	51	4	-
28	-	8	21	1	-	-	-	-	30	90	26	-
29	-	-	64	6	-	-	-	-	70	169	55	-
30	-	-	45	33	-	-	-	-	78	289	135	-
31	-	-	8	46	11	-	-	-	65	164	140	-
32	-	-	-	4	41	1	-	-	46	71	210	-
33	-	-	-	5	19	4	1	-	29	57	245	-
34	-	-	-	-	11	10	4	-	25	18	155	-
35	-	-	-	-	-	4	6	3	13	1	30	-
36	-	-	-	-	-	-	1	-	1	-	-	-
Total No. of Ages Read	5	32	147	95	82	19	12	3	395	1000	1000	-
Serial Numbers	No. of Age Samples 4											
	Number of fish measured each month									541	230	-
	Mean length of fish (cm) each month									29.6	31.9	-
	Mean weight of fish (kg) each month									0.189	0.287	-
	Total weight caught or landed (tons) each month									555	856	-
	Estimated number caught or landed (whole numbers) each month									-	-	-
	Range of depths (m) each month									20-40	40-45	-
	Mesh size (mm)									40	40	-

TABLE 95 LENGTH FREQUENCIES - MACKEREL - 6A - 1971

(FREQUENCIES IN % - 1 CM GROUPS)

GEAR	Otter Trawl (Stern)
CATCHES/LANDINGS	Commercial
MONTH	Jul
COUNTRY	Japan
TONNAGE	>1800
27	5
28	5
29	20
30	60
31	211
32	256
33	181
34	116
35	50
36	35
37	30
38	5
39	5
40	15
41	5
Total %	999
Serial Numbers	-
Number of Samples	1
Number of Fish Measured	199
Mean Length (cm)	33.15
Mean Weight (kg)	-
Total Weight Landed (tons)	0
Estimated Number Landed	-
Mesh(mm) or Hook(no) Size	-
Range of Depths (fm)	57

TABLE 96

AGE/LENGTH KEY - MACKEREL - 5Z - 1971 (2ndQUARTER)

COUNTRY		Poland										Total	LENGTH COMPOSITION		
CATCHES/LANDINGS		Catches										No. of Ages Read	PER MILLE		
COMMERCIAL/RESEARCH		Commercial											Months Within Quarter		
STRUCTURES USED IN AGE DETERMINATION		Otoliths										Total No. of Ages Read	Apr	May	Jun
Year- Class	70	69	68	67	66	65	64	63	62	61					
Length Age Group (cm)	1	2	3	4	5	6	7	8	9	10					
23	3	-	-	-	-	-	-	-	-	-	3	-	-	2	
24	8	-	-	-	-	-	-	-	-	-	8	1	2	12	
25	3	3	-	-	-	-	-	-	-	-	6	-	1	25	
26	6	8	-	-	-	-	-	-	-	-	14	3	4	35	
27	4	18	1	-	-	-	-	-	-	-	23	10	17	80	
28	7	42	2	-	-	-	-	-	-	-	51	13	39	163	
29	7	59	3	1	-	-	-	-	-	-	70	25	39	156	
30	-	45	2	-	-	-	-	-	-	-	47	23	35	89	
31	-	26	3	13	-	-	-	-	-	-	42	26	42	48	
32	-	6	6	63	-	-	-	-	-	-	75	85	57	81	
33	-	-	7	164	6	-	-	-	-	-	177	192	102	101	
34	-	-	1	171	10	-	-	-	-	-	182	187	135	69	
35	-	-	2	110	21	-	-	-	-	-	133	130	137	60	
36	-	-	-	71	36	2	-	-	-	-	109	96	124	43	
37	-	-	-	35	59	6	-	-	-	-	100	66	99	23	
38	-	-	-	12	42	13	-	-	-	-	67	41	67	5	
39	-	-	-	4	32	7	-	-	-	-	43	22	35	5	
40	-	-	-	-	12	10	1	-	-	-	23	15	14	1	
41	-	-	-	-	9	3	7	4	1	-	24	14	11	1	
42	-	-	-	-	-	3	10	11	6	2	32	22	16	-	
43	-	-	-	-	-	1	4	7	6	4	22	17	14	1	
44	-	-	-	-	-	-	2	2	6	1	11	6	6	-	
45	-	-	-	-	-	-	-	2	7	1	10	2	3	-	
46	-	-	-	-	-	-	-	1	3	1	5	2	1	-	
47	-	-	-	-	-	-	-	1	-	1	2	1	-	-	
48	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
49	-	-	-	-	-	-	-	-	-	1	1	1	-	-	
Total No. of Ages Read	38	207	27	644	227	45	24	28	29	12	1281	1000	1000	1000	
Serial Numbers	No. of Age Samples														
	Number of fish measured each month										1736	4559	1835		
	Mean length of fish (cm) each month										34.8	34.8	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										100-200	100-200	-		
	Mesh size (mm)										45	45	45		

TABLE 97

AGE/LENGTH KEY - MACKEREL - 6 - 1971 (2nd QUARTER)

COUNTRY		Poland										Total No. of Ages Read	LENGTH COMPOSITION PER MILLE		
CATCHES/LANDINGS		Catches											Months	Within	Quarter
COMMERICAL/RESEARCH		Commercial													
STRUCTURES USED IN AGE DETERMINATION		Otoliths													
Year-Class Length Age Group (cm)	70	69	68	67	66	65	64	63	62	10+	Total No. of Ages Read	PER MILLE			
												1	2	3	4
21	1	-	-	-	-	-	-	-	-	-	1	-	-	-	
22	2	-	-	-	-	-	-	-	-	-	2	2	-	-	
23	5	-	-	-	-	-	-	-	-	-	5	2	1	-	
24	6	-	-	-	-	-	-	-	-	-	6	1	1	-	
25	1	1	-	-	-	-	-	-	-	-	2	1	1	-	
26	-	8	-	-	-	-	-	-	-	-	8	5	2	-	
27	-	22	-	-	-	-	-	-	-	-	22	15	27	-	
28	-	30	-	-	-	-	-	-	-	-	30	22	39	-	
29	-	38	3	1	-	-	-	-	-	-	42	18	46	-	
30	-	24	2	1	-	-	-	-	-	-	27	12	39	-	
31	-	13	17	4	-	-	-	-	-	-	34	20	28	-	
32	-	3	13	69	-	-	-	-	-	-	85	64	57	-	
33	-	1	14	117	2	-	-	-	-	-	134	130	144	-	
34	-	-	5	155	7	-	-	-	-	-	167	151	223	-	
35	-	-	6	113	31	-	-	-	-	-	150	139	168	-	
36	-	-	-	58	52	7	-	-	-	-	117	121	97	-	
37	-	-	-	28	75	13	-	-	-	-	116	112	57	-	
38	-	-	-	8	56	17	-	-	-	-	81	80	25	-	
39	-	-	-	2	29	11	1	1	-	-	44	42	17	-	
40	-	-	-	1	14	3	5	-	-	-	23	20	6	-	
41	-	-	-	-	7	8	2	4	2	3	26	13	3	-	
42	-	-	-	-	1	3	8	8	6	-	26	14	9	-	
43	-	-	-	-	-	2	4	9	8	2	25	13	5	-	
44	-	-	-	-	-	-	-	1	7	2	10	2	5	-	
45	-	-	-	-	-	-	1	-	6	-	7	1	-	-	
46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
Total No. of Ages Read	15	140	60	557	274	64	21	23	29	8	1191				
Serial Numbers	No. of Age Samples														
	Number of fish measured each month										4999	1500	-		
	Mean length of fish (cm) each month										34.9	33.7	-		
	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										00-200	00-200	-		
	Mesh size (mm)										45	45	-		

TABLE 98

OTHER SPECIES

Length frequencies for the following species are available on request from the Secretariat:

Species	Country	Division	Month	No. Measured
<i>Gadus ogac</i>	Den(G)	1D	July	124
<i>Gadus saida</i>	Den(G)	1D	June	157
Arctic char	Den(G)	1D	July	150
Argentine	Japan	3P	Aug	?
		4V	Apr, Sep	340
		4X	Feb, May, June, Aug	552
		5Y	Feb	199
		5Ze	Feb-June, Aug	2,038
Butterfish	Japan	5Ze	Jan, Feb, Dec	315
		6A	Jan-Feb, Aug-Sep, Dec	1,106
		6B	July, Sep, Nov-Dec	743
<i>Alosa aestivalis</i>	USSR	5Ze	July	200
		5Zw	Aug	200
<i>Alosa medioeris</i>	USSR	6	Apr	203
Common American Squid	Japan	5Ze	Jan-Feb	562
		5Zw	Jan, Nov	142
		6A	Jan-Feb	618
		6B	Oct-Dec	1,541
		6C	Dec	199
Sea Scallops	USA	5Y	June, Aug	502
		5Ze	Jan-Dec	16,622
		6A	Feb, Aug, Sep, Nov	2,529

APPENDIX

Table I. Numbers of fish sampled for length and age by species, divisions, country and gear in relation to catch for the year 1971 (* = inadequate sampling; ** = no sampling).

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages	
					Commercial	Research		
Cod	1A-B	Den(G)	2.1	PN	812	-	262	
				HL	-	459	-	
		Spain	1.6	PT	-	-	-	
	1C-D	Den(G)	5.8	OT	4,983	3,628	2,858	
				PN	2,718	-	552	
				LL	-	254	254	
				HL	-	112	-	
		Fr(M)	3.6	OT	-	-	-	**
		Ger(FR)	14.7	OT	6,785	2,720	1,646	
		Portugal	6.2	OT,DV	-	-	-	**
		Spain	19.8	PT	-	-	-	**
	Others	4.1	...	-	-	-		
	1E-F	Den(G)	5.6	OT	2,393	-	840	
					199	-	198	
		Ger(FR)	26.1	OT	13,815	1,550	3,818	
	Others	2.8	...	-	-	-		
	1NK	Den(F)	16.4	...	-	-	-	**
		Den(G)	5.9	...	-	-	-	**
		Norway	5.4	...	-	-	-	**
2G-J	Can(N)	3.3	Trap	3,351	-	-		
			GN	514	-	-		
	Fr(M)	5.9	OT	-	-	-	**	
	Ger(FR)	19.6	OT	-	-	-	**	
	Norway	5.9	OT	-	-	-	**	
	Poland	17.0	OT	16,859	-	-		
	Portugal	34.2	OT	2,900	-	700	*	
	Spain	5.6	OT	-	-	-	**	
	USSR	61.5	OT	-	74,028	300		
Others	10.5	...	-	-	-			
3K-L	Can(N)	70.1	OT	5,569	-	-		
			Trap	11,479	-	-		
			LL	1,543	-	-		
			GN	10,258	-	-		
			HL	2,416	-	-		
	Fr(M)	3.4	OT	-	-	-	**	
	Ger(FR)	10.5	OT	-	-	-	**	
	Norway	2.3	OT	-	-	-	**	
	Poland	12.1	OT	3,182	-	-		
	Portugal	79.7	DV,OT	6,395	-	1,115	*	
	Spain	61.2	PT,OT	2,145	-	93	*	
	USSR	19.1	OT	-	11,716	300		

Table I. Cont'd

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages	
					Commercial	Research		
Cod (Cont'd)	3K-L	UK	4.6	OT	-	-	-	**
		Others	9.5	...	-	-	-	
3M	Fr(M)	Fr(M)	9.0	OT	-	-	-	**
		Ger(FR)	1.6	OT	-	-	-	**
		Portugal	7.2	OT,DV	-	-	-	**
		USSR	5.5	OT	-	-	-	**
		Others	1.2	...	-	-	-	
		3N-O	Portugal	7.2	DV,OT	-	-	-
3P	Spain	Spain	89.9	PT,OT	-	-	-	**
		USSR	19.3	OT	-	-	-	**
		Others	2.6	...	-	-	-	
		Can(M)	0.7	OT	326	-	-	
4R-T	Can(N)	Can(N)	41.9	OT	-	-	-	**
		Trap			5,149	-	-	
		GN			3,515	-	-	
	Fr(M)	2.7	OT	-	-	-	**	
	Fr(SP)	1.6	OT	-	1,958	-		
	Spain	19.3	OT,PT	2,459	-	94	*	
	Others	1.5	...	-	-	-		
4V	Can(M)	Can(M)	49.3	OT	1,168	-	-	* }
		DS			2,284	-	-	
		GN			178	-	-	
	Can(N)	Can(N)	19.9	Trap	201	-	-	* }
		GN			120	-	-	
		OT			-	-	-	
	Fr(M)	24.3	OT	-	-	-	**	
	Portugal	17.1	OT	-	-	-	**	
Spain	5.7	OT	-	-	-	**		
4W	Can(M)	Can(M)	19.1	OT	6,181	-	-	* }
		LL			1,018	-	-	
	Japan	+	OT	111	-	-		
	Spain	26.7	PT,OT	4,829	-	267	*	
	Others	3.1	...	-	-	-		
4X	Spain	Spain	11.1	OT	711	-	-	* }
		LL			304	-	-	
		PT			-	-	-	
USSR	4.3	OT	-	-	-	**		
5Y-Z	Can(M)	Can(M)	20.1	OT	905	-	-	* }
		LL			425	-	-	
		PT			-	-	-	
Spain	2.6	PT	-	-	-	**		
5Y-Z	Japan	Can(M)	3.0	OT	288	-	-	*
		Japan	+	OT	27	-	-	

Table I. Cont'd

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages		
					Commercial	Research			
Cod (Cont'd)	5Y-Z	Spain	7.6	PT	-	-	-	**	
		USA	22.9	OT	4,425	-	-		
		Others	1.6	...	-	-	-		
Haddock	3L-P	Fr(SP)	+	OT	-	318	-		
		Spain	3.1	OT	-	-	-	**	
		Others	1.9	...	-	-	-		
	4V-W	Can(M)		9.4	OT	5,598	-	-	
					LL	966	-	-	
		Fr(SP)	+	OT	-	355	-		
		Japan	+	OT	108	-	-		
		Spain	2.8	PT	-	-	-	**	
		Others	1.1	...	-	-	-		
	4X	Can(M)		16.4	OT	5,866	-	-	
					LL	436	-	-	
		Others	1.2	...	-	-	-		
	5Y-Z	Can(M)		1.7	OT	474	-	-	
		Japan	+		OT	149	-	-	
		Spain	1.3		PT	-	-	-	
USA		8.4		OT	11,542	-	2,300		
Redfish	1A-F	Den(G)		0.3	OT	-	5,988	-	
					LL	-	171	-	
		Others	2.4	...	-	-	-		
	2G-J	Poland		0.8	OT	1,295	-	285	
		USSR		5.5	OT	-	2,751	-	
		Others	0.3	...	-	-	-		
	3K-M	Japan		4.0	OT	1,950	-	-	
		Poland		6.0	OT	-	-	-	**
		USSR		10.9	OT	-	-	-	**
		Non-m		8.7	OT	-	-	-	
	3N-O	Japan		1.0	OT	212	-	-	
		Poland		0.2	OT	293	-	104	
		USSR		42.2	OT	-	-	-	**
		Others	0.6	OT	-	-	-		
	3P	Can(N)		5.2	OT	-	-	-	**
Fr(SP)			1.4	OT	-	11,654	1,639		
Japan			2.4	OT	1,420	-	-		
USSR			18.0	OT	-	-	-	**	
4R-T	Can(M)		58.0	OT	2,437	-	-	*	
	Can(N)		16.6	OT	-	-	-	**	
	USA		4.7	OT	3,000	-	-		

Table I. Cont'd

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages
					Commercial	Research	
Redfish (Cont'd)	4V-X	Can(M)	24.9	OT	6,801	-	-
		Can(N)	4.3	OT	-	-	- **
		Fr(SP)	0.3	OT	-	3,102	264
		Japan	1.1	OT	450	-	-
		USSR	20.5	OT	-	-	- **
		USA	6.2	OT	3,600	-	-
		Others	5.3	OT	-	-	-
	5Y-Z	Poland	0.1	OT	903	-	197
		USSR	3.3	OT	-	-	-
		USA	16.3	OT	7,400	-	-
Silver Hake	4V-X	Fr(SP)	-	OT	-	2,600	363
		USSR	128.6	OT	11,924	-	1,528
		Fr(SP)	-	OT	-	2,932	455
		Japan	0.1	OT	1,206	-	-
		USSR	81.5	OT	35,750	-	2,785
		USA	13.3	OT	3,059	-	-
	6A-C	Japan	+	OT	353	-	-
		USA	0.6	OT	-	-	-
		USSR	7.0	OT	9,236	-	1,042
	American Plaice	1	Den(G)	+	OT	-	7,403
3		Can(M)	6.0	OT	175	-	- *
		Can(N)	51.8	OT	9,618	-	- *
		Fr(SP)	1.1	OT	-	2,853	-
		USSR	19.5	OT	-	-	- **
		Others	1.4	...	-	-	-
4		Can(M)	14.5	OT	484	-	- *
		Fr(SP)	+	OT	-	6,772	-
		USSR	6.7	OT	-	-	- **
		Others	2.2	...	-	-	-
5		USA	2.1	OT	-	-	-
		Others	0.9	...	-	-	-
Yellowtail		3	Can(M)	4.5	OT	400	-
	Can(N)		19.8	OT	2,026	-	- *
	USSR		13.1	OT	-	-	- **
	4	USSR	0.7	...	200	-	-
	5	USA	22.3	OT	20,157	-	8,617
		Others	1.0	...	-	-	-
	6	USA	2.9	OT	-	-	-
		Others	0.9	...	-	-	-

Table I. Cont'd

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages		
					Commercial	Research			
Witch	3	Canada	10.3	OT	216	-	-	*	
		Poland	4.3	OT	-	-	-	**	
		USSR	15.8	OT	-	-	-	**	
		Others	0.9	...	-	-	-		
	4	Can (M)	7.8	OT	1,255	-	-	*	
		USSR	10.9	OT	-	-	-	**	
		Others	2.1	...	-	-	-		
	5	USSR	2.7	OT	-	-	-		
		USA	3.1	OT	-	-	-		
	Greenland Halibut	1	Den (G)	1.2	OT	-	3,568	-	
Others			1.9	...	-	-	-		
2		Poland	2.4	OT	-	-	-	**	
		USSR	7.4	OT	-	-	-	**	
3		Can (N)	9.5	OT	-	-	-	**	
		Poland	2.8	OT	-	-	-	**	
		Others	2.1	...	-	-	-		
Pollock		4	Can (M)	10.1	OT	853	-	-	*
			Others	2.0	...	-	-	-	
		5	Can (M)	1.6	OT	259	-	-	
	USA		4.7	OT	-	-	-	**	
	Non-m		6.0	OT	-	-	-	**	
Others	2.0	...	-	-	-				
Red Hake	5	USSR	25.3	OT	13,415	-	766		
		USA	2.8	OT	2,092	-	-		
		Others	2.0	...	-	-	-		
	6	Japan	+	OT	201	-	-		
		USSR	8.2	OT	1,616	-	-		
		USA	0.4	OT	695	-	-		
	Herring	3P	Can (M)	-	-	3,346	-	175	
Can (N)			114.4	-	19,832	-	-	*	
4R-T		Can (M)	131.8	-	8,633	791	4,387	*	
		Can (N)	14.3	-	1,650	-	-	*	
4V		Can (M)	8.0	-	2,655	200	857		
		Can (N)	3.3	-	250	-	-	*	
		Fr (SP)	-	-	-	2,838	1,029		
		USSR	5.6	-	-	-	-		
	Others	1.5	-	-	-	-			

Table I. Cont'd

Species	Division	Country	Catch ('000 tons)	Gear	Number Measured		No. of Ages	
					Commercial	Research		
Herring (Cont'd)	4W-X	Can(M)	121.3	-	39,270	688	10,483	
		Can(N)	0.3	-	650	-	-	
		USSR	23.3	-	2,233	-	679	*
		USA	-	-	-	3,378	3,378	
		Others	1.0	-	-	-	-	
	5Y	Can(M)	15.1	-	1,179	-	470	*
		USA	31.4	-	-	9,226	9,226	
		Others	4.1	-	-	-	-	
	5Z	Can(M)	12.8	-	4,349	-	695	
		Fr(SP)	-	-	-	2,039	389	
		Ger(FR)	54.7	-	18,466	-	1,134	
		Japan	2.4	-	2,293	-	-	
		Poland	69.0	-	13,267	7,435	1,590	
		USSR	59.0	-	21,601	-	1,882	
		USA	2.3	-	-	1,051	1,051	
		Non-m	15.2	-	-	-	-	
		Others	0.9	-	-	-	-	
	6	Poland	19.2	-	4,383	-	1,134	
		USSR	17.3	-	2,129	-	893	*
		USA	0.3	-	-	305	305	
Others		3.3	-	-	-	-		
Mackerel	4	Can(M)	13.3	-	-	-	-	**
		USSR	9.5	-	-	-	-	**
	5	Poland	43.7	-	8,130	-	1,281	
		USSR	59.1	-	-	-	-	**
		Non-m	7.1	-	-	-	-	**
		Others	4.7	-	-	-	-	
	6	Japan	0.8	-	199	-	-	
		Poland	68.6	-	6,499	-	1,191	*
		Romania	5.0	-	-	-	-	**
		USSR	68.8	-	-	-	-	**
		Non-m	62.1	-	-	-	-	**

Catches used in this Table are based on those given in ICNAF Res. Doc. 72/124 (Revised 11 August 1972).

ERRATA

On the pages listed insert on the line "Number of Fish Measured" the following:

Page 126	Can(N)	Feb	541	967	1508
		Mar	31	170	201
		May	930	1107	2037
Page 127	Can(N)	Aug	1079	1758	2837
		Nov	1411	1624	3035

