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PORTUGUESE RESEARCH REPORT FOR 1999

by

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A. Status of the fisheries

In 1999 the Portuguese nominal catches proceeding from NAFO Regulatory Area recorded 16,554 ton (Tab. I). Since 1991 the nominal catches have been decreasing continuously from 75,000 ton (1991) to 9,000 ton (1997), with a major drop from 1991 (75,314 ton) to 1992 (36,220 ton). Between 1994 (30,156 ton) and 1995 (11,441 ton) an important drop has also been observed. Since 1997 - the year in which was recorded the lowest level of the nominal catches for the modern history of the Portuguese Northwest Atlantic fisheries - the catches have been increasing continuously, with a clear increment between 1998 and 1999 (70%).

During 1999 only stern trawlers composed the Portuguese fleet (12 trawlers, one of them 46 days fishing for shrimp). However, the catch and effort of one trawler was almost null and so, the observed increase on both catch and effort for the Portuguese fleet on 1999 has been carried out by the same 11 trawlers already operating in previous years (Tab. II - A).

The nominal catches in division 3M decreased from 1998 to 1999 due, mainly, to the decrease in the cod catches (455 ton to 3 ton: -99%). Minor decreases have been observed on both redfish and Greenland halibut catches (259 ton to 96.1 ton: -63% and 694 ton to 602 ton: -13%, respectively). The increase on both roughhead grenadier and skates catches (123 ton to 271 ton: +120% and 112 ton to 187 ton: +70%, respectively) compensated, in part, the minor quantities of cod and redfish taken by the Portuguese fleet.

In the other divisions the data show that the Portuguese nominal catches for 1999 have had a very important increase: + 72% in division 3L; +40% in division 3N; + 200% in division 3O.

Since 1994 Greenland halibut has been the most important commercial species in Div. 3L and 3N, followed by roughhead grenadier and skates. In 1999, however, skates dominated catches in division 3N (1242 ton) while both Greenland halibut and roughhead grenadier catches declined from 1998. Greenland halibut and roughhead grenadier represented 87% of the 3L catches in 1999, a similar level to the one observed in 1998 (89%). But in division 3N, the specific weight of these two species is only 57% against 76% in 1998. In Div. 3M, due to the drop in the 1998 and 1999 cod catches, Greenland halibut is the species with higher catches for the second year in a row. In Div. 3O redfish has maintained its importance and represents 82% of the catches of this division in 1999 (85% in 1998 against 60% in 1997).

The total trawl fishing effort in the NAFO Regulatory Area increased from 1172 days in 1998 to 1631 days in 1999. More 383 fishing days in Divisions 3N and 3O (TAB. II-A) caused this increase. In division 3M, the trawl fishing effort decreased from 284 days in 1998 to 237 days in 1999.

From the monitored fishing vessels Greenland halibut was the priority species for the Portuguese trawl fleet during 1999, accounting for 64% of the total directed effort (Tab. II-B, Fig. 1). This value is above the 1998 one due to the raise of 3O redfish fishing effort (30% in 1999 against 15% in 1998). In 1999 the majority of the trawl fishing effort

(53%) has been made south (divisions 3N and 3O). Division 3M lost its importance for the Portuguese fleet (only 11% of the trawl fishing effort).

B. Portuguese Annual Sampling Program

1. Catch and effort sampling.

Effort and cpue data for 1999 Portuguese trawl fishery on the NAFO Regulatory Area were obtained through the revision of skipper logbooks from two trawlers, kindly supplied by their owners. All the information has been recorded and put on file on a daily basis as regards round weight of the catch by species and on a tow basis as regards fishing effort, positions and depths. The conversion factors used in each vessel were also used to convert its processed landings in catches. Effort data obtained through the revision of the 1999 logbooks available were processed in order to convert the 1999 Portuguese effort, reported in fishing days on the 1999 Portuguese STATLANT 21-B, into fishing hours (Tab. II-A).

The daily catch and effort data from the logbooks were used to estimate the directed effort and CPUE for each of the target species/stock, as well as the main by-catch species and depth range of the different fisheries, on a monthly basis. As mentioned before, the majority of the fishing effort was directed towards the Greenland halibut (Tab. II-B). Following the September 1996 recommendation of the NAFO Scientific Council as regards the availability of witch flounder fishery data, a column with the by-catch of this species on the Greenland halibut fishery is included in Tab. III.

Data regarding directed effort and catch rates are presented in Table II-B and Tab. III to IV-B, Fig. 1 and 2.

The Greenland halibut cpue series was update with the 1999 observed cpue's. The additive model (Ávila de Melo and Alpoim, 1995), was upgraded in 1998 (Alpoim et al., 1998), and used like in previous years to standardise the observed cpue's. From January 1988 till April 1995 each monthly observed cpue of this series was previously corrected for 130mm mesh size (Ávila de Melo and Alpoim, 1996). In this analysis, any observation corresponding to a month and a trawler with less than 10 hours of directed effort was rejected. The cpue's are presented in Tables IV and Fig. 2, with the associated standard errors (+/- 2 standard errors in the Figures) and coefficients of variation.

1.1. Comments on catch and effort data (based on the vessels sampled)

1.1.1. Greenland halibut in Div. 3L, 3M and 3N

In Division 3L catch rates declined prior to the boom of the deep-water fishery (Tab. IV-A, Fig. 2). However, it is from 1990 to 1991, *i.e.* from the first to the second year of this new fishery in the Regulatory Area, that cpue's fell by more than half (0.338 ton/h to 0.141 ton/h). From 1991 to 1994 catch rates remained stable at a low level. Since then catch rates gradually increased, reaching 0.296 ton/h in 1999. In Division 3N no trend is apparent on Greenland halibut trawl cpue's. As for Div. 3M, the Greenland halibut catch rate was bigger than any value recorded in previous years.

For all three divisions combined (Tab. IV-A, Fig. 2) the catch rates series follows the same pattern as the one for Div. 3L, since this is the division of Sub Area 3 with the highest concentration of Greenland halibut fishing effort. Division 3L has also recorded the highest Greenland halibut catch rates during the 1988-1999 period (Tab. IV-B).

2. Biological Sampling

In 1999 biological sampling was obtained from two stern trawlers fishing in Div. 3L, 3M, 3N and 3O during all the year. Apart from cod, a priority species always to be sampled whenever it appeared in the catch, biological sampling was conducted for the two most abundant species in each haul, following the NAFO sampling recommendations.

Greenland halibut and redfish (*S. mentella)* were sampled in Div. 3L, 3M, 3N and 3O (Tab. V). American plaice and witch flounder were sampled in Div. 3L, 3N and 3O. Cod was sampled in Div. 3M, 3N and 3O. Roughhead grenadier was sampled in Div. 3L, 3M and 3N. Redfish (*S. marinus)* and the yellowtail flounder were sampled in Div. 3N and 3O. As usual, information on age composition of cod and Greenland halibut catches was obtained from

those sampled catches. In the case of the Greenland halibut an age/length key for the Divisions 3L, 3M, 3N and 3O was compiled and in the case of cod this was done for division 3M. Age composition for the 3M redfish (*S. mentella*) was obtained using the respective age/length keys of the July 99 EU survey (Vazquez, 1999).

Except for division 3O, where the fishing effort for redfish was concentrated, most of the redfish catches were in fact a by-catch of the Greenland halibut fishery, dominated by *S. mentella* in all the divisions sampled. *S. marinus* was found only in small portions of the catches in Div. 3N and 3O.

For the above-mentioned species, length and age structure of the catches, respective mean lengths, mean weights in the catch, mean length and mean weight at age by Division are presented in Tables VI to XXIX and Fig. 3 to 32.

Since 1996, all commercial sampling information is representative of the catch as a whole, although sampling of redfish, Greenland halibut, American plaice, roughhead grenadier and witch flounder has been carried out by sex as in previous years. Mean length and weight at age are the mean of mean lengths and weights at age by sex, weighted by the abundance in the sampled catches of males and females at each age. For all species mean weight at age and mean weight in the catch are derived from the adopted length-weight relationships (appendix).

2.1. Comments on length and age composition of the 1999 trawl catches.

2.1.1. Cod Div. 3M

Biological information of cod catches in Div. 3M is available for July only from 255m to 712m depth. Because the sampling is very small (one sample, 27 fish measured), the data don't have statistic prominence. But the sampling suggests that lengths around 60 cm dominated catches, with no clear modal class. The mean length and the mean weight in the catches are 59.2 cm and 2083g (Tab. VI, Fig. 4).

As in 1998, the 1994 and 1993 year classes, 5 and 6 years old in 1999, dominated the trawl catches (Tab. VI-B, Fig. 5).

2.1.2. Cod Div. 3N

Information on length composition of the cod by-catch is available for May and July, and September to November (Tab. VII, Fig. 5) from 55m to 1100 m depth.

Lengths between 36cm and 66cm dominated catches, with a several abundant classes between 51-60 cm (mean length and weight of 51.8cm and 1348g).

2.1.3. Cod Div. 3O

Information on length composition of the cod by-catch is available for February to August, October and November (Tab. VIII, Fig. 6) from 68m to 1154m depth.

Lengths between 45cm and 66 cm dominated catches, with a mode at 57cm (mean length and weight of 55.9cm and 1642g).

2.1.4. Redfish (*S. mentella)* **Div. 3L**

Information on length composition of the redfish (*S. mentella)* trawl by-catch is available from February to May and September, from depths 667m and 1250m (Tab. IX, Fig.7).

Lengths between 25cm and 34cm dominated catches, with three modal classes at 27cm, 28cm and 29cm (mean length and weight of 29.3cm and 376g).

2.1.5. Redfish (*S. mentella*) **Div. 3M**

Information on length composition of the redfish (*S. mentella)* trawl by-catch is available from February to May and July, from depths 255m and 1098m (Tab. X-A, Fig.8).

Lengths between 25cm and 37cm dominated catches, with several modal classes between 27cm and 32cm (mean length and weight of 30.7cm and 416g).

The 1989-1991 year classes, 8-10 years old in 1999, dominated the trawl catches, with a clear mode at age 9 and with a second mode at age 13 (Tab. X-B, Fig. 9).

2.1.6. Redfish (*S. mentella*) **Div. 3N**

Information on length composition of the redfish (*S. mentella)* trawl by-catch is available from April, May and July to December, from depths 42m and 1564m (Tab. XI, Fig.10).

Lengths between 20cm and 37cm dominated catches, with most abundant classes between 27cm and 34cm (mean length and weight of 30cm and 418g).

2.1.7. Redfish (*S. mentella*) **Div. 3O**

Information on length composition of the redfish (*S. mentella)* trawl by-catch is available from March to December, from depths 66m and 1083m (Tab. XII, Fig.11).

Lengths between 17cm and 32cm dominated catches, with a mode at 22cm (mean length and weight of 24cm and 218g).

2.1.8. Redfish (*S. marinus*) **Div. 3N**

Information on length composition of the redfish (*S. marinus)* trawl by-catch is available for September and October, from depths 268m and 780m (Tab. XIII, Fig.12).

Lengths between 24cm and 35cm dominated catches, with most abundant classes between 27cm and 29cm, and at 32cm (mean length and weight of 30cm and 392g).

2.1.9. Redfish (*S. marinus*) **Div. 3O**

Information on length composition of the redfish (*S. marinus)* trawl by-catch is available from April to July and from September to November, from depths 110m and 562m (Tab. XIV, Fig.13).

Lengths between 19cm and 30cm dominated catches, with a mode at 22cm (mean length and weight of 25cm and 235g).

2.1.10. American plaice Div. 3L

Information on length composition of the American plaice by-catch is available from February to May and December from depths 667m to 1240m (Tab. XV, Fig.14).

Lengths between 30cm and 50cm dominated catches, with a mode at 36cm (mean length and weight of 40cm and 663g).

2.1.11. American plaice Div. 3N

Information on length composition of the American plaice by-catch is available for all year, except June from depths 55m to 1860m (Tab. XVI, Fig.15).

Lengths between 30cm and 50cm dominated catches, with a mode at 38cm (mean length and weight of 40cm and 644g).

2.1.12. American plaice Div. 3O

Information on length composition of the American plaice by-catch is available from March to May, August and September to December from depths 68m to 935m (Tab. XVII, Fig.16).

Lengths between 30cm and 44cm dominated catches, with most abundant classes between 30cm and 34cm (mean length and weight of 38cm and 587g).

2.1.13. Yellowtail flounder Div. 3N

Information on length composition of the yellowtail flounder is available from July to December from depths 55m to 100m (Tab. XVIII, Fig.17).

Lengths between 26cm and 40cm dominated catches, with most abundant classes between 30cm and 36cm (mean length and weight of 34cm and 776g).

2.1.14. Yellowtail flounder Div. 3O

Information on length composition of the yellowtail flounder is available for August and September from depths 68m to 152m (Tab. XIX, Fig.18).

Lengths between 28cm and 48cm dominated catches, with most abundant classes between 36cm and 42cm (mean length and weight of 40cm and 1239g).

2.1.15. Greenland halibut Div. 3L

Information on length composition of the Greenland halibut is available from January to May, July to September and December from depths 667m to 1312m (Tab. XX-A, Fig. 19).

Lengths between 34cm and 48cm dominated catches, with a mode around 38cm (mean length and weight of 44cm and 805g).

A range of age groups between 5 and 8 dominates age composition. The 1993 and 1994 year classes are the most abundant (Tab. XX-B, Fig. 20).

2.1.16. Greenland halibut Div. 3M

Information on length composition of the Greenland halibut catches in Div. 3M is available from January to May, July and August from depths 266m to 1250m (Tab. XXI-A, Fig. 21).

Lengths between 36cm and 50cm dominated catches, with most abundant classes between 38cm and 44cm (mean length and weight of 45cm and 824g).

The dominant year classes are the same of Div. 3L (1991 to 1994 year classes). As in Div.3L, the 1993 and 1994 year classes are the most abundant (Tab. XXI-B, Fig. 22).

2.1.17. Greenland halibut Div. 3N

Information on length composition of the Greenland halibut catches in Div. 3N is available for all year, except June, from depths 55m to 1860m (Tab. XXII-A, Fig. 23).

Lengths between 34cm and 50cm dominated catches, with a mode around 38cm (mean length and weight of 44cm and 794g).

The dominant year classes are the same of the Div.3L and 3M (1991 to 1994 year classes). The 1993 and 1994 year classes are the most abundant (Tab. XXII-B, Fig. 24).

2.1.18. Greenland halibut Div. 3O

Information on length composition of the Greenland halibut catches in Div. 30 is available from April and July to October, from depths 68m to 1154m (Tab. XXIII-A, Fig. 25).

Lengths between 34cm and 54cm dominated catches, with most abundant classes between 36cm and 46cm (mean length and weight of 44cm and 765g).

A range of age groups between 4 and 8 dominates age composition. The 1993 year class is the most abundant (Tab. XXIII-B, Fig. 26).

2.1.19. Roughhead grenadier Div. 3L

Information on length composition of the roughhead grenadier catches in Div. 3L is available from January to May and July to September, from depths 667m to 1300m (Tab. XXIV, Fig. 27).

Anal lengths between 8cm and 16cm dominated catches, with a clear modal class at 12 cm (mean length and weight of 13cm and 255g).

2.1.20. Roughhead grenadier Div. 3M

Information on length composition of the roughhead grenadier catches in Div. 3M is available from January to May, July and August from depths 266m to 1243m (Tab. XXV, Fig. 28).

Anal lengths between 9cm and 17cm dominated catches, with a mode at 13cm (mean length and weight of 14cm and 322g).

2.1.21. Roughhead grenadier Div. 3N

Information on length composition of the roughhead grenadier catches in Div. 3N is available from January to May, July, September and December from depths 56m to 1860m (Tab XXVI, Fig. 29).

Anal lengths between 11cm and 17cm dominated catches, with a mode around 14cm (mean length and weight of 15cm and 362g).

2.1.22. Witch flounder Div. 3L

Information on length composition of the witch flounder catches in Div. 3L is available from March to May from depths 705m to 1220m (Tab. XXVII, Fig. 30).

Lengths between 30cm and 50cm dominated catches, with most abundant classes between 34cm and 42cm (mean length and weight of 40cm and 466g).

2.1.23. Witch flounder Div. 3N

Information on length composition of the witch flounder catches in Div. 3N is available for May, July and November from depths 82m to 1312m (Tab. XXVIII, Fig. 31).

Lengths between 32cm and 42cm dominated catches, with most abundant classes between 36cm and 40cm (mean length and weight of 39cm and 415g).

2.1.24. Witch flounder Div. 3O

Information on length composition of the witch flounder catches in Div. 3O is available for April, October and November from depths 73m to 935m (Tab. XXIX, Fig. 32).

Lengths between 30cm and 44cm dominated catches, with most abundant classes between 32cm and 42cm (mean length and weight of 39cm and 411g).

3. Acknowledgements

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4. References

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TABLE I : PORTUGUESE NOMINAL TRAWL CATCHES (mt) IN NAFO AREA, 1999

	DIVISION				TOTAL
SPECIES	3L	3M	3N	3O	1999
Cod	1.7	2.9	135.7	186.3	326.6
Redfish	177.3	96.1	337.4	5469.7	6080.5
American plaice	159.0	19.0	345.0	195.7	718.7
Yellowtail	0.2		363.1	62.6	425.9
Witch flounder	101.5	110.8	195.9	100.2	508.4
Greenland halibut	2722.4	602.3	603.4	66.9	3995.0
Atlantic halibut	2.2	0.2	25.5	23.4	51.3
Roughhead grenadier (1)	471.2	270.6	520.4	37.0	1299.2
Anarhichas spp.	92.6	44.9	340.7	71.2	549.4
Hadocck				10.3	10.3
Pollock					
Red hake	10.3	3.2	13.5	49.8	76.8
Capelin					
Skates	341.7	186.9	1241.5	397.8	2167.9
Monkfish					
Squid					
Shrimp		227.1			227.1
Unidentified	25.9	22.2	48.2	20.2	116.5
TOTAL	4106.0	1586.2	4170.3	6691.1	16553.6

(1) Reported as Roundnose grenadier in years before.

TABLE I : cont.

SPECIES / YEAR	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988
Cod	327	549	1546	1318	1353	2636	3651	5984	13357	15138	24129	12931
Redfish	6081	2368	1125	2152	2590	8609	9828	6581	12163	17810	18870	17072
American plaice	719	357	389	298	175	344	347	451	1288	714	1821	1791
Yellowtail	426	85						1	10	11	5	
Witch flounder	508	381	347	236	375	573	289	849	1982	2254	16	12
Greenland halibut	3995	3242	3343	3308	1814	5967	8805	10539	13961	11170	3614	4194
Atlantic halibut	51	30	17	12	18	45	53	81	228	91		
Roughhead grenadier(1)	1299	1089	762	784	1402	2223	1969	2000	4486	3211	290	914
Anarhichas spp.	549	140	185	122	1401	3219	2302	1696	2843	1940		
Hadocck	10	6	39		2	10	10	166	83	17		
Pollock						13	41	28	421	11		
Red hake	77	18	56	124	230	267	366	466	1009	467		
Capelin										77		
Skates	2168	1105	904	788	2068	6238	7626	7017	23301	13569	663	1097
Monkfish					2		8	37	10	2		
Squid		1		3								
Shrimp	227	203	170									
Unidentified	117	40	116	22	14	12	238	325	174	852		
TOTAL	16554	9614	9000	9167	11441	30156	35532	36220	75314	67334	49408	38011

TABLE II - A : PORTUGUESE TRAWL EFFORT IN FISHING DAYS AND FISHING HOURS IN NAFO AREA IN 1999.

MONTH	DIVISION 3 L		3 M		3 N		3 O		TOTAL 1999		MONTH
	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS	
JAN.	43	572.6	10	151.3	25	295.2	2	15.5	80	1035	JAN.
FEB.	63	827.1	32	336.0	30	370.8	9	69.8	134	1604	FEB.
MAR.	87	1219.8	60	539.5	40	555.9	13	150.9	200	2466	MAR.
APR.	134	2119.3	55	585.1	26	390.2	24	199.4	239	3294	APR.
MAY	57	908.4	32	404.4	24	233.5	22	201.3	135	1748	MAY
JUN.	16	229.7	3	41.0	13	19.5	22	204.1	54	494	JUN.
JUL.	15	191.6	12	170.3	35	466.3	82	868.7	144	1697	JUL.
AUG.	39	669.5	18	133.7	36	255.3	84	1123.8	177	2182	AUG.
SEP.	15	258.9	2	14.9	55	333.8	88	1198.4	160	1806	SEP.
OCT.			3	22.3	62	483.1	44	485.3	109	991	OCT.
NOV.	25	284.7	5	37.1	51	385.7	56	665.5	137	1373	NOV.
DEC.	23	261.9	5	37.1	23	185.4	11	60.7	62	545	DEC.
TOTAL	517	7544	237	2473	420	3975	457	5243	1631	19234	TOTAL

Note: Fishing hours and number of nets estimated from their monthly rates to fishing days observed in the trawlers and gilnetters sampled by the IPIMAR.

Monthly effort of gillnetters is given by the sum of nets per fishing day

TABLE II - A: cont.

YEAR	GEAR OT		GNS		YEAR
	DAYS	HOURS	DAYS	NETS	
1999	1631	19234			1999
1998	1172	16517			1998
1997	1428				1997
1996	1912	27206	166		1996
1995	1425	19083	612	173833	1995
1994	1553	22065	676	166735	1994
1993	2496	32481	731	209536	1993
1992	2670	32662	672	266141	1992
1991	5297	74829	712	302407	1991
1990	5026	72536	714	238732	1990
1989	3850	54833	692	268885	1989

Table II - B : Breakdown of the 1999 sampled Portuguese directed trawl effort by species and division (%).

DIVISION	G.HALIBUT	ROUGHHEAD G.	SKATES	REDFISH	TOTAL/DIV.
3L	34.8	0.5			35.4
3M	11.1	0.3			11.3
3N	15.6	0.8	3.4		19.8
3O	2.4		1.3	29.8	33.5
TOTAL/SPECIES	63.9	1.6	4.7	29.8	

TABLE III: Portuguese trawl fishery cpue's and bycatch by month and division for 1999

DIVISION	TARGET SPECIES	MONTH	DEPTH RANGE MIN.	DEPTH RANGE MAX.	CPUE	MAIN BYCATCH SPECIES	MAIN BYCATCH %	WITCH FLOUNDER BY-CATCH	TOTAL BYCATCH (%)
3M	REDFISH	JUL.	255	712	0.105	G. HALIBUT	41.7		49.5
3O	REDFISH	APR.	242	1154	0.893	COD	19.6		26.0
3O	REDFISH	MAY	147	565	1.310	COD	12.4		15.9
3O	REDFISH	JUN.	235	614	0.719	COD	3.5		6.5
3O	REDFISH	JUL.	128	756	0.946	G. HALIBUT	2.1		5.5
3O	REDFISH	AUG.	69	570	0.295	G. HALIBUT	8.0		27.5
3O	REDFISH	SEP.	66	1083	0.406	G. HALIBUT	7.4		24.0
3O	REDFISH	OCT.	76	640	0.789	G. HALIBUT	4.0		12.4
3O	REDFISH	NOV.	73	935	1.141	A. PLAICE	4.9		12.0
3O	REDFISH	DEC.	171	436	0.795	A. PLAICE	38.2		42.9
3L	G. HALIBUT	JAN.	808	1260	0.207	ROUGHEAD G.	3.9	1.0	8.0
3L	G. HALIBUT	FEB.	667	1155	0.476	REDFISH	3.5	1.6	12.4
3L	G. HALIBUT	MAR.	705	1250	0.330	REDFISH	4.7	1.3	14.1
3L	G. HALIBUT	ABR.	715	1220	0.372	ROUGHEAD G.	5.6	2.0	17.1
3L	G. HALIBUT	MAY	711	1220	0.254	ROUGHEAD G.	15.0	2.7	31.0
3L	G. HALIBUT	JUL.	780	1200	0.219	ROUGHEAD G.	7.9	0.0	11.1
3L	G. HALIBUT	AUG.	703	1183	0.235	ROUGHEAD G.	4.0	0.0	5.7
3L	G. HALIBUT	SEP.	744	1300	0.182	ROUGHEAD G.	3.2	0.2	5.7
3L	G. HALIBUT	DEC.	850	1250	0.188	A. PLAICE	14.9	2.3	29.0
3M	G. HALIBUT	JAN.	852	1136	0.290	ROUGHEAD G.	7.0	0.5	9.2
3M	G. HALIBUT	FEB.	855	1081	0.493	ROUGHEAD G.	2.1	0.6	5.2
3M	G. HALIBUT	MAR.	764	1201	0.319	ROUGHEAD G.	6.4	3.3	15.3
3M	G. HALIBUT	ABR.	865	1108	0.463	ROUGHEAD G.	3.6	2.6	9.5
3M	G. HALIBUT	MAY	846	1186	0.297	ROUGHEAD G.	18.6	0.4	22.0
3M	G. HALIBUT	JUL.	266	1243	0.211	REDFISH	8.7	0.0	18.4
3M	G. HALIBUT	AUG.	710	1099	0.215	ROUGHEAD G.	5.0	0.0	8.6
3N	G. HALIBUT	JAN.	706	1860	0.257	A. PLAICE	19.5	2.7	51.2
3N	G. HALIBUT	FEB.	770	1740	0.231	SKATES	18.6	4.6	51.0
3N	G. HALIBUT	MAR.	628	1600	0.251	A. PLAICE	20.9	3.5	47.0
3N	G. HALIBUT	APR.	56	1439	0.312	A. PLAICE	18.7	3.1	38.4
3N	G. HALIBUT	MAY	896	1312	0.316	A. PLAICE	17.8	3.4	41.5
3N	G. HALIBUT	JUL.	823	1240	0.277	ROUGHEAD G.	8.2	2.1	10.9
3N	G. HALIBUT	AUG.	975	1190	0.051	WITCH FLOUNDER	14.6	14.6	31.2
3N	G. HALIBUT	NOV.	190	1100	0.065	SKATES	26.4	17.2	77.0
3N	G. HALIBUT	DEC.	502	1100	0.250	REDFISH	24.0	3.1	46.6
3O	G. HALIBUT	APR.	304	1154	0.129	COD	33.5	3.8	83.7
3O	G. HALIBUT	AUG.	69	499	0.062	A. PLAICE	24.0	0.7	84.7
3O	G. HALIBUT	SEP.	200	1052	0.061	REDFISH	36.0	3.8	70.3
3O	G. HALIBUT	OCT.	209	225	0.161	COD	41.2	6.4	62.3
3L	ROUGHEAD G.	MAY	922	1126	0.140	G. HALIBUT	44.5		59.6
3M	ROUGHEAD G.	MAR.	1127	1201	0.098	G. HALIBUT	53.4		64.4
3N	ROUGHEAD G.	JAN.	974	1690	0.201	G. HALIBUT	30.4		75.8
3N	ROUGHEAD G.	FEB.	955	1423	0.163	G. HALIBUT	33.2		68.8
3N	SKATES	JAN.	974	1690	0.140	G. HALIBUT	35.8		74.4
3N	SKATES	FEB.	770	1520	0.178	G. HALIBUT	38.4		70.0
3N	SKATES	MAR.	860	1140	0.089	G. HALIBUT	43.4		73.9
3N	SKATES	OCT.	304	1100	0.135	REDFISH	31.4		57.2
3N	SKATES	NOV.	190	1100	0.129	G. HALIBUT	16.6		61.5
3O	SKATES	AUG.	68	438	0.178	A. PLAICE	29.9		77.6
3O	SKATES	SEP.	68	440	0.106	REDFISH	25.3		74.4

TABLE IV - A: GREENLAND HALIBUT TRAWL CATCH RATES, 1988-99: mean annual cpue's corrected for the month, division and vessel of each observation.

	3L			3M			3N			3LMN			
	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	CPUE	ST.ERROR	C.V.	
1988	0.427	0.094	38.0							0.454	0.107	40.8	1988
1989	0.384	0.050	38.7							0.365	0.059	48.3	1989
1990	0.338	0.033	33.4	0.214			0.173			0.320	0.033	38.3	1990
1991	0.141	0.036	56.8				0.175	0.026	25.9	0.142	0.021	41.8	1991
1992	0.118	0.032	85.8				0.213	0.025	40.0	0.167	0.024	68.7	1992
1993	0.128	0.017	18.8				0.171	0.017	35.5	0.152	0.016	40.6	1993
1994	0.106	0.031	41.2				0.163	0.012	18.6	0.138	0.017	34.2	1994
1995	0.156	0.027	48.2	0.188	0.018	21.8	0.161	0.017	27.8	0.164	0.016	44.1	1995
1996	0.222	0.022	36.4	0.218	0.024	33.5	0.203	0.015	19.9	0.200	0.009	25.5	1996
1997	0.232	0.020	28.1	0.261	0.020	22.0	0.171	0.009	7.6	0.220	0.017	36.3	1997
1998	0.263	0.019	27.2	0.174	0.032	63.5	0.193	0.015	26.5	0.228	0.010	27.5	1998
1999	0.296	0.024	25.8	0.271	0.021	23.3	0.240	0.023	27.3	0.274	0.018	36.6	1999

TABLE IV - B: GREENLAND HALIBUT TRAWL CATCH RATES, 1988-99: mean cpue's by division corrected for the year, month and vessel of each observation.

	CPUE	ST.ERROR	C.V.	
3L	0.247	0.010	39.3	3L
3M	0.221	0.015	44.7	3M
3N	0.191	0.008	34.2	3N
3LMN	0.221	0.006	42.6	3LMN

TABLE V: Intensity of the trawl sampling during 1999, by species, division and month.

SPECIES	DIV.	MONTH	Nº OF SAMPLES	Nº FISH MEASURED	SAMPLING WEIGHT(Kg)	OTOLITHS Nº	OTOLITHS LENGTH RANGE
COD	3M	JUL.	1	27	58	27	46-67 cm
	3N	MAY	2	105	168	83	22-80 cm
		JUL.	1	67	74	72	25-71 cm
		SEP.	3	309	511	60	44-122 cm
		OUT.	2	132	175	-	-
		NOV.	4	206	480	-	-
	3O	FEB.	1	117	211	79	39-75 cm
		MAR.	2	278	492	112	38-77 cm
		APR.	6	502	877	283	26-90 cm
		MAY	8	1101	1923	190	23-89 cm
		JUN.	2	141	301	58	46-76 cm
		JUL.	2	82	208	84	26-87 cm
		AUG.	3	314	790	113	39-88 cm
		OUT.	1	127	253	-	-
		NOV.	17	940	1969	-	-
REDFISH (*S. mentella*)	3L	FEB.	4	428	212	119	23-42 cm
		MAR.	14	1693	632	282	21-44 cm
		APR.	9	1155	391	143	20-43 cm
		MAY	1	53	23	53	25-37 cm
		SEP.	1	13	7	13	25-43 cm
	3M	FEB.	1	98	38	68	22-35 cm
		MAR.	4	447	205	123	24-45 cm
		APR.	2	158	57	114	24-38 cm
		MAY	5	57	24	52	24-40 cm
		JUL.	7	50	23	50	25-39 cm
	3N	APR.	1	118	43	70	25-35 cm
		MAY	1	56	25	52	22-43 cm
		JUL.	2	137	62	113	17-40 cm
		AUG.	7	854	437	164	24-44 cm
		SEP.	12	1590	613	264	19-44 cm
		OUT.	8	1409	548	355	20-43 cm
		NOV.	3	766	297	112	20-42 cm
		DEC.	2	220	86	72	25-38 cm
	3O	MAR.	1	111	18	55	19-27 cm
		APR.	5	828	204	189	17-44 cm
		MAY	9	1720	669	234	18-45 cm
		JUN.	5	675	148	157	17-41 cm
		JUL.	13	2964	576	177	16-43 cm
		AUG.	23	2853	801	176	18-37 cm
		SEP.	22	3419	813	189	17-41 cm
		OCT.	10	2283	609	242	13-40 cm
		NOV.	23	5943	1189	294	12-38 cm
		DEC.	6	590	146	100	19-36 cm
REDFISH (*S. marinus*)	3N	SEP.	1	39	14	38	21-35 cm
		OUT.	3	224	91	51	21-37 cm
	3O	APR.	4	508	171	159	17-43 cm
		MAY	8	1234	468	201	20-45 cm
		JUN.	4	302	81	130	17-39 cm
		JUL.	13	2119	437	192	12-39 cm
		SEP.	1	149	37	-	-
		OCT.	4	577	190	52	23-40 cm
		NOV.	19	3537	677	119	15-37 cm

TABLE V: count.

SPECIES	DIV.	MONTH	Nº OF SAMPLES	Nº FISH MEASURED	SAMPLING WEIGHT(Kg)	OTOLITHS Nº	OTOLITHS LENGTH RANGE
AMERICAN PLAICE	3L	FEB.	2	207	108	91	28-49 cm
		MAR.	10	1181	971	189	26-58 cm
		APR.	19	2243	1452	249	24-58 cm
		MAY	3	195	153	147	26-54 cm
		DEC.	1	114	86	65	29-50 cm
	3N	JAN.	6	606	371	138	27-63 cm
		FEB.	4	428	286	108	25-58 cm
		MAR.	9	1050	654	147	25-61 cm
		APR.	16	1901	1179	164	25-61 cm
		MAY	4	367	200	176	25-56 cm
		JUL.	2	124	77	108	26-53 cm
		AUG.	3	334	247	120	29-61 cm
		SET.	6	729	553	169	30-57 cm
		OUT.	5	788	530	179	27-57 cm
		NOV.	4	397	345	211	18-72 cm
		DEC.	2	218	175	91	29-53 cm
	3O	MAR.	2	254	123	83	25-46 cm
		APR.	1	55	47	55	28-60 cm
		MAY	2	122	92	108	28-59 cm
		AUG.	9	1031	667	98	26-60 cm
		SET.	7	766	515	151	28-60 cm
		OUT.	1	193	127	-	-
		NOV.	19	3370	2194	392	10-66 cm
		DEC.	6	634	396	129	27-66 cm
YELLOWTAIL FLOUNDER	3N	JUL.	1	60	28	60	25-48 cm
		AUG.	1	127	72	64	29-45 cm
		SET.	1	122	58	73	27-48 cm
		OUT.	1	114	47	62	29-47 cm
		NOV.	2	338	151	128	16-49 cm
		DEC.	2	205	73	66	26-43 cm
	3O	AUG.	1	811	509	143	25-52 cm
		SET.	1	572	333	112	25-51 cm
GREENLAND HALIBUT	3L	JAN.	10	1016	861	107	34-65 cm
		FEB.	11	1265	1080	201	28-78 cm
		MAR.	28	3410	3036	568	29-97 cm
		APR.	24	3629	2785	486	28-95 cm
		MAY	8	1008	865	300	22-89 cm
		JUL.	7	707	904	291	33-89 cm
		AUG.	28	4563	5052	384	32-90 cm
		SET.	10	1041	1364	335	31-94 cm
		DEC.	3	321	271	98	35-68 cm
	3M	JAN.	6	312	538	160	32-76 cm
		FEB.	4	444	385	142	32-65 cm
		MAR.	8	885	752	312	31-85 cm
		APR.	5	391	345	277	33-65 cm
		MAY	3	161	345	161	28-87 cm
		JUL.	4	429	438	154	25-88 cm
		AUG.	5	585	547	51	35-57 cm
	3N	JAN.	13	1307	1266	266	30-81 cm
		FEB.	11	1278	1295	223	32-85 cm
		MAR.	13	1556	1378	226	28-81 cm
		APR.	18	2234	1740	210	28-79 cm
		MAY	2	109	90	104	31-64 cm
		JUL.	5	448	465	204	23-93 cm
		AUG.	5	540	473	165	30-79 cm
		SET.	11	1175	988	229	30-84 cm
		OCT.	6	701	562	170	30-69 cm
		NOV.	3	519	465	-	-
		DEC.	5	534	421	146	30-73 cm
	3O	APR.	1	119	118	82	33-66 cm
		JUL.	2	194	141	62	28-65 cm
		AUG.	15	1729	1477	177	30-66 cm
		SET.	14	1584	1258	192	27-81 cm
		OCT.	5	635	495	130	28-66 cm

TABLE V: count.

SPECIES	DIV.	MONTH	Nº OF SAMPLES	Nº FISH MEASURED	SAMPLING WEIGHT(Kg)	OTOLITHS Nº	OTOLITHS LENGTH RANGE
ROUGHHEAD GRENADIER	3L	JAN.	7	605	307	85	10.5-22 cm
		FEB.	4	383	182	102	10-26 cm
		MAR.	15	1971	974	283	7-35 cm
		APR.	21	3058	1265	366	6.5-33 cm
		MAY	8	1079	580	268	7-29.5 cm
		JUL.	7	668	352	206	8-35.5 cm
		AUG.	28	4534	1823	297	7-32.5 cm
		SEP.	10	1192	508	223	7.5-33.5 cm
	3M	JAN.	6	557	324	137	10-25 cm
		FEB.	1	100	41	52	10.5-21 cm
		MAR.	4	441	254	128	8.5-35 cm
		APR.	3	257	92	102	7.5-21.5 cm
		MAY	2	132	113	118	8-29.5 cm
		JUL.	3	123	108	109	8-30 cm
		AUG.	3	387	159	54	9-21.5 cm
	3N	JAN.	9	807	474	163	10-27.5 cm
		FEB.	4	375	252	133	10-26.5 cm
		MAR.	3	320	169	100	10.5-23 cm
		APR.	1	103	44	60	10-20 cm
		MAY	2	129	91	116	8-27.5 cm
		JUL.	4	319	162	106	8.5-30 cm
		SEP.	1	60	44	60	8-28.5 cm
		DEC.	3	302	204	104	10.5-26 cm
WITCH FLOUNDER	3L	MAR.	5	660	299	178	27-56 cm
		APR.	13	1700	746	208	20-58 cm
		MAY	4	285	135	171	27-57 cm
	3N	MAY	2	123	58	110	27-55 cm
		JUL.	1	53	27	52	34-50 cm
		NOV.	3	496	196	52	30-48 cm
	3O	APR.	1	41	16	41	30-48 cm
		OCT.	3	495	202	99	17-52 cm
		NOV.	12	1737	715	-	-

TABLE VI - A: COD, DIV. 3M, 1999: length composition of the trawl catches.

LENGTH GROUP	JUL. =YEAR 1999	LENGTH GROUP
45	37.0	45
48		48
51	111.1	51
54	111.1	54
57	185.2	57
60	296.3	60
63	185.2	63
66	74.1	66
TOTAL	1000	

No. SAMPLES	1
SAMPLING WEIGHT (Kg)	58
No.F.MEASURED	27
MEAN LENGTH (cm)	59.2
MEAN WEIGHT (g)	2083
DEPTH RANGE (m)	255/712

TABLE VI-B: COD , DIV.3M, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at the age of trawl catches

	JUN. = YEAR 1999			
AGE	AGE COMP.	MEAN LENGTH	MEAN WEIGHT	AGE
4	74.1	49.0	1.161	4
5	259.3	55.4	1.679	5
6	592.6	61.9	2.354	6
7	74.1	61.0	2.249	7
TOTAL	1000			

TABLE VII : COD, DIV. 3N, 1999: length composition of the trawl catches.

LENGTH GROUP	MAY	JUL.	SEP.	OCT.	NOV.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
21	28.6					28.6			0.5	21
24	76.2	44.8	16.3			76.2	17.6		15.2	24
27	66.7	59.7	23.5	54.2		66.7	25.1	13.5	23.6	27
30	9.5	29.9	8.2	53.7	3.6	9.5	9.1	16.1	10.5	30
33	9.5	29.9	13.8	45.9	60.4	9.5	14.5	56.8	22.7	33
36	66.7	74.6	29.7	68.6	61.9	66.7	31.7	63.6	38.5	36
39	47.6	164.2	66.0	53.1	46.6	47.6	70.4	48.3	65.7	39
42	38.1	104.5	47.3	45.9	42.0	38.1	49.9	43.0	48.3	42
45	38.1	89.6	54.8	215.2	52.5	38.1	56.4	93.2	63.3	45
48	57.1	74.6	95.4	184.8	37.0	57.1	94.5	73.9	89.8	48
51	123.8	74.6	135.5	89.8	76.2	123.8	132.8	79.6	122.2	51
54	181.0	89.6	163.5	37.1	139.4	181.0	160.1	113.8	151.4	54
57	95.2	104.5	129.5	28.9	175.7	95.2	128.4	139.0	129.9	57
60	19.0	14.9	110.5	43.3	156.5	19.0	106.2	128.2	109.0	60
63	19.0	14.9	49.4	14.4	80.7	19.0	47.8	64.2	50.5	63
66	19.0		33.9	28.9	32.1	19.0	32.3	31.3	31.9	66
69	28.6	29.9	13.0	14.4	10.4	28.6	13.7	11.4	13.5	69
72	19.0		5.6	14.4	4.1	19.0	5.4	6.7	5.9	72
75	9.5					9.5			0.2	75
78	47.6				6.3	47.6		4.7	1.8	78
81					2.1			1.6	0.3	81
84			4.1	7.2	8.2		3.9	8.0	4.6	84
87										87
90					2.1			1.6	0.3	90
93										93
96										96
99										99
102										102
105					2.0			1.5	0.3	105
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	2	1	3	2	4	2	4	6	12	
SAMPLING WEIGHT (Kg)	168	74	511	175	480	168	585	655	1408	
No.F.MEASURED	105	67	309	132	206	105	376	338	819	
MEAN LENGTH (cm)	49.0	45.1	52.1	46.9	53.8	49.0	51.8	52.1	51.8	
MEAN WEIGHT (g)	1301	924	1357	1031	1518	1301	1337	1396	1348	
DEPTH RANGE (m)	190/700	82/610	109/473	268/1100	55/1080	190/700	82/610	55/1100	55/1100	

TABLE VIII : COD, DIV. 3O, 1999: length composition of the trawl catches.

LENGTH GROUP	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG	OCT.	NOV.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
21				4.1					0.5		2.3		0.4	1.0	21
24			4.2	11.3		14.4					8.0	4.4		3.5	24
27			17.3	8.0		14.4			6.8		11.5	4.4	5.2	5.5	27
30			23.8	10.0				31.5	30.4		15.3		30.7	9.2	30
33			7.2	9.5		14.4		70.9	102.4		8.2	4.4	95.2	12.4	33
36		5.7	14.5	22.8				47.2	88.5	5.0	18.5		79.0	17.2	36
39	8.5	13.0	20.5	43.4		14.4	5.9	47.2	19.5	12.5	32.3	8.5	25.9	21.8	39
42		14.2	54.8	79.3	4.9		9.2	63.0	34.7	12.4	66.4	6.3	41.2	37.4	42
45	17.1	47.0	49.3	103.7	45.5	14.4	12.4	47.2	39.6	43.3	79.1	13.0	41.4	56.8	45
48	42.7	80.4	56.6	124.2	85.4	87.9	30.5	70.9	25.2	75.8	94.9	48.2	35.8	78.9	48
51	128.2	100.3	108.0	104.4	106.5	131.0	14.9	70.9	51.3	103.7	105.9	50.7	55.8	97.9	51
54	128.2	88.4	128.7	112.1	120.3	139.0	207.1	94.5	70.2	93.3	119.3	186.1	75.8	106.5	54
57	230.8	266.3	151.6	126.0	191.8	150.1	90.6	110.2	135.9	262.0	139.1	109.0	130.0	191.8	57
60	196.6	213.7	117.9	79.8	180.3	159.8	171.1	141.7	173.6	211.6	99.3	167.6	166.2	158.5	60
63	119.7	112.8	102.8	57.7	120.1	142.2	186.6	23.6	90.8	113.6	78.6	172.9	75.3	98.0	63
66	94.0	35.7	49.3	28.7	77.9	73.5	98.0	70.9	57.7	42.8	39.1	90.4	60.8	45.0	66
69	17.1	17.0	55.2	20.3	35.7		128.5	31.5	25.5	17.0	35.3	88.9	26.9	28.7	69
72	8.5		13.8	22.1	10.5	22.4	24.0	39.4	17.2	1.0	18.2	23.5	22.3	11.2	72
75	8.5	5.7	14.4	10.9	21.1		12.1	7.9	6.7	6.0	12.7	8.4	7.0	9.0	75
78			3.4	13.7		8.0	3.0	15.7	13.7		8.9	4.5	14.2	5.2	78
81			3.2	4.0				15.7	5.6		3.5		7.9	2.2	81
84			1.7	0.2			3.0		2.4		0.8	2.1	1.8	0.6	84
87				3.5		14.4	3.0		0.4		1.9	6.5	0.3	1.1	87
90			1.7	0.2					1.2		0.8		0.9	0.4	90
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	2	6	8	2	2	3	1	17	3	16	5	18	42	
SAMPLING WEIGHT (Kg)	211	492	877	1923	301	208	790	253	1969	703	3101	998	2222	7024	
No.F.MEASURED	117	278	502	1101	141	82	314	127	940	395	1744	396	1067	3602	
MEAN LENGTH (cm)	58.7	57.2	55.7	53.1	58.5	57.3	61.5	53.8	53.4	57.4	54.4	60.2	53.4	55.9	
MEAN WEIGHT (g)	1821	1690	1661	1458	1821	1769	2115	1570	1545	1706	1555	2008	1551	1642	
DEPTH RANGE (m)	331/501	131/420	242/1154	147/565	272/614	128/580	68/402	76/584	73/935	131/501	147/1154	68/580	73/935	68/1154	

TABLE IX : REDFISH (*S. mentella*), DIV. 3L, 1999: length composition of the trawl catches.

LENGTH GROUP	FEB.	MAR.	APR.	MAY	SEP.	1st Q.	2nd Q.	3rd Q.	TOTAL	LENGTH GROUP
20			0.1				0.1		0.03	20
21		1.4	1.9			1.1	1.2		1.1	21
22		0.1	1.5			0.1	0.9		0.5	22
23	4.2	4.1	5.9			4.1	3.5		3.8	23
24	18.0	11.7	23.2			13.3	13.8		13.5	24
25	40.3	52.2	102.8	18.9	76.9	49.3	69.1	76.9	58.5	25
26	79.3	99.5	165.9	75.5		94.6	129.5		110.7	26
27	153.0	163.4	211.7	132.1		160.9	179.7		169.5	27
28	125.0	199.5	191.7	188.7	76.9	181.4	190.5	76.9	185.5	28
29	148.6	174.2	110.3	150.9	153.8	168.0	126.6	153.8	148.9	29
30	64.9	74.6	59.4	94.3	76.9	72.3	73.4	76.9	72.8	30
31	58.7	54.2	32.9	75.5	76.9	55.3	50.0	76.9	52.9	31
32	89.6	50.9	24.5	56.6	76.9	60.3	37.4	76.9	49.7	32
33	49.4	39.8	34.0	113.2	153.8	42.2	65.8	153.8	53.1	33
34	89.5	25.1	16.3	56.6	76.9	40.7	32.5	76.9	36.9	34
35	70.1	17.9	8.1	18.9		30.6	12.4		22.2	35
36	4.2	9.6	2.3		76.9	8.3	1.4	76.9	5.1	36
37	2.5	4.3	2.2	18.9		3.9	8.9		6.2	37
38	1.2	3.0	1.5			2.6	0.9		1.8	38
39		5.8	0.2			4.4	0.1		2.4	39
40		2.1	1.6			1.6	0.9		1.3	40
41		2.0	1.4		76.9	1.5	0.9	76.9	1.2	41
42	1.2	2.8				2.4			1.3	42
43		0.6	0.2		76.9	0.5	0.1	76.9	0.3	43
44		0.9				0.7			0.4	44
45										45
46			0.6				0.3		0.2	46
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	4	14	9	1	1	18	10	1	29	
SAMPLING WEIGHT (Kg)	212	632	391	23	7	844	414	7	1265	
No.F.MEASURED	428	1693	1155	53	13	2121	1208	13	3342	
MEAN LENGTH (cm)	30.1	29.4	28.4	30.2	33.1	29.6	29.1	33.1	29.3	
MEAN WEIGHT (g)	409	378	337	405	558	386	365	558	376	
DEPTH RANGE (m)	667/986	705/1250	715/1150	711/1184	903/909	667/1250	711/1184	903/909	667/1250	

TABLE X-A : REDFISH (*S. mentella*), DIV. 3M, 1999: length composition of the trawl catches.

LENGTH GROUP	FEB.	MAR.	APR.	MAY	JUL.	1st Q.	2nd Q.	3rd Q.	TOTAL	LENGTH GROUP
22	10.2					2.3			0.6	22
23										23
24	20.4	11.1	7.6	17.5		13.3	8.5		4.1	24
25	71.4	38.7	46.1	35.1	60.0	46.3	45.0	60.0	55.3	25
26	132.7	103.4	132.0	52.6	20.0	110.1	124.5	20.0	51.6	26
27	214.3	166.0	223.7	157.9	60.0	177.1	217.5	60.0	102.8	27
28	214.3	140.1	242.2	193.0	120.0	157.2	237.5	120.0	139.2	28
29	132.7	133.7	94.0	210.5	140.0	133.4	105.1	140.0	135.4	29
30	40.8	96.1	63.1	105.3	80.0	83.4	67.1	80.0	79.8	30
31	40.8	85.7	54.2	70.2	100.0	75.4	55.7	100.0	90.1	31
32	61.2	50.0	41.7	70.2	140.0	52.6	44.4	140.0	109.9	32
33	30.6	60.9	63.1	17.5	80.0	54.0	58.8	80.0	71.6	33
34	20.4	58.8	15.2	35.1	20.0	50.0	17.1	20.0	27.3	34
35	10.2	13.1	1.8	17.5	80.0	12.4	3.3	80.0	56.5	35
36		10.4	7.6		40.0	8.0	6.9	40.0	29.1	36
37		6.9			40.0	5.3		40.0	27.9	37
38		4.1	7.6			3.1	6.9		1.4	38
39		4.9			20.0	3.8		20.0	14.2	39
40		2.0		17.5		1.6	1.7		0.5	40
41		8.4				6.4			1.6	41
42										42
43		1.5				1.2			0.3	43
44										44
45		4.2				3.2			0.8	45
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	4	2	5	7	5	7	7	19	
SAMPLING WEIGHT (Kg)	38	205	57	24	23	243	81	23	347	
No.F.MEASURED	98	447	158	57	50	545	215	50	810	
MEAN LENGTH (cm)	28.6	30.0	28.9	29.6	31.4	29.6	29.0	31.4	30.7	
MEAN WEIGHT (g)	332	387	344	369	441	374	347	441	416	
DEPTH RANGE (m)	855/979	764/1098	865/1028	845/992	255/712	764/1098	845/1028	255/712	255/1098	

TABLE X - B: REDFISH (*S. mentella*) , DIV.3M, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at age of the trawl catches.

AGE	FEB. AGE COMP.	FEB. MEAN LENGTH	FEB. MEAN WEIGHT	MAR. AGE COMP.	MAR. MEAN LENGTH	MAR. MEAN WEIGHT	APR. AGE COMP.	APR. MEAN LENGTH	APR. MEAN WEIGHT	MAY AGE COMP.	MAY MEAN LENGTH	MAY MEAN WEIGHT	JUL. AGE COMP.	JUL. MEAN LENGTH	JUL. MEAN WEIGHT	AGE
5	1.1	22.5	0.160													5
6	8.6	23.3	0.179	1.9	24.6	0.209	1.7	24.8	0.213	2.2	24.7	0.211	1.1	25.5	0.232	6
7	53.0	26.9	0.273	37.3	27.2	0.283	46.6	27.3	0.286	40.3	27.3	0.285	25.4	27.4	0.289	7
8	201.3	27.9	0.303	153.1	28.0	0.308	199.5	27.9	0.304	178.5	28.4	0.320	90.6	28.6	0.326	8
9	440.7	27.5	0.290	338.4	27.7	0.299	422.9	27.6	0.294	341.1	28.0	0.307	239.1	28.1	0.312	9
10	138.9	29.6	0.361	184.1	30.2	0.383	145.2	29.7	0.366	208.0	29.9	0.371	160.5	30.4	0.390	10
11	17.7	32.0	0.454	18.9	32.1	0.461	20.1	32.2	0.461	24.6	31.8	0.445	45.0	32.1	0.456	11
12	16.4	33.2	0.508	35.1	33.0	0.498	22.6	32.7	0.487	25.1	33.0	0.500	51.2	34.2	0.557	12
13	56.1	32.5	0.477	93.0	32.8	0.491	62.3	32.7	0.485	74.0	32.3	0.471	129.9	33.2	0.510	13
14	8.1	33.1	0.503	7.8	33.4	0.514	5.0	32.9	0.494	8.5	33.2	0.506	18.7	33.6	0.527	14
15	15.7	33.1	0.503	25.3	33.6	0.526	18.0	33.1	0.502	18.2	33.0	0.498	37.2	33.3	0.511	15
16	13.0	32.9	0.493	19.6	33.7	0.530	10.8	32.6	0.482	22.1	33.3	0.513	38.9	33.6	0.529	16
17	7.7	33.7	0.533	10.6	34.4	0.565	5.8	32.5	0.476	6.0	32.4	0.469	25.2	34.2	0.554	17
18	15.2	32.2	0.468	40.5	35.0	0.616	28.7	34.1	0.561	33.6	34.2	0.578	44.0	34.0	0.550	18
19+	6.6	34.0	0.544	34.4	38.1	0.775	10.8	34.5	0.569	17.9	37.0	0.713	93.1	36.6	0.684	19+
TOTAL	1000			1000			1000			1000			1000			

AGE	1st Q. AGE COMP.	1st Q. MEAN LENGTH	1st Q. MEAN WEIGHT	2nd Q. AGE COMP.	2nd Q. MEAN LENGTH	2nd Q. MEAN WEIGHT	3rd Q. AGE COMP.	3rd Q. MEAN LENGTH	3rd Q. MEAN WEIGHT	YEAR 1999 AGE COMP.	YEAR 1999 MEAN LENGTH	YEAR 1999 MEAN WEIGHT	AGE
5	0.2	22.5	0.160							0.1	22.5	0.160	5
6	3.4	23.9	0.192	1.7	24.8	0.212	1.1	25.5	0.232	1.7	24.6	0.210	6
7	40.9	27.1	0.280	46.0	27.3	0.286	25.4	27.4	0.289	31.1	27.3	0.286	7
8	164.2	28.0	0.307	197.5	28.0	0.306	90.6	28.6	0.326	118.1	28.3	0.316	8
9	361.9	27.7	0.296	415.1	27.6	0.295	239.1	28.1	0.312	284.9	27.9	0.305	9
10	173.7	30.1	0.379	151.2	29.7	0.367	160.5	30.4	0.390	163.1	30.2	0.385	10
11	18.6	32.1	0.459	20.5	32.1	0.459	45.0	32.1	0.456	36.3	32.1	0.457	11
12	30.8	33.0	0.500	22.9	32.8	0.488	51.2	34.2	0.557	43.7	33.9	0.544	12
13	84.5	32.8	0.489	63.4	32.6	0.483	129.9	33.2	0.510	112.8	33.1	0.505	13
14	7.9	33.3	0.512	5.4	33.0	0.496	18.7	33.6	0.527	14.9	33.5	0.524	14
15	23.1	33.5	0.522	18.0	33.1	0.501	37.2	33.3	0.511	32.0	33.3	0.512	15
16	18.0	33.5	0.524	11.9	32.7	0.487	38.9	33.6	0.529	31.4	33.6	0.527	16
17	9.9	34.3	0.559	5.8	32.5	0.476	25.2	34.2	0.554	19.7	34.1	0.553	17
18	34.7	34.7	0.602	29.1	34.1	0.563	44.0	34.0	0.550	40.4	34.2	0.562	18
19+	28.0	37.9	0.763	11.4	34.8	0.590	93.1	36.6	0.684	69.8	36.8	0.691	19+
TOTAL	1000			1000			1000			1000			

TABLE XI : REDFISH (*S. mentella*), DIV. 3N, 1999: length composition of the trawl catches.

LENGTH GROUP	APR.	MAY	JUL.	AUG	SEP.	OCT.	NOV.	DEC.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
17			3.6							0.2		0.1	17
18													18
19			3.6		8.4					6.2		4.3	19
20					24.6	0.8	0.5			17.5	0.5	12.2	20
21		17.9	3.6		40.4	2.4	0.5		1.5	28.9	1.5	20.5	21
22			7.1		74.9	9.4	2.9			53.6	6.0	38.7	22
23			21.4		59.9	8.1	7.7			43.7	6.2	31.8	23
24		53.6	25.0	0.5	43.6	18.3	9.1		4.6	32.4	12.4	25.9	24
25	42.4	35.7	17.9		25.4	27.9	39.5	9.1	41.8	19.0	25.9	21.8	25
26	50.8	17.9	62.2	12.2	41.7	39.7	42.4	22.4	48.0	35.7	36.3	36.4	26
27	152.5	107.1	58.6	47.6	59.4	97.7	124.6	100.4	148.7	56.6	103.5	73.0	27
28	228.8	89.3	114.0	76.6	76.2	129.8	165.3	243.8	217.0	78.3	162.3	106.6	28
29	228.8	142.9	84.7	108.3	79.6	149.3	145.4	188.3	221.5	86.7	157.3	111.3	29
30	101.7	125.0	136.2	111.6	78.4	116.4	141.6	239.7	103.7	89.3	149.0	105.6	30
31	93.2	89.3	77.2	101.2	76.2	93.5	60.3	113.9	92.9	82.2	91.8	85.2	31
32	16.9	107.1	77.2	153.2	94.2	75.4	63.1	27.3	24.6	107.3	62.2	91.8	32
33	50.8	107.1	81.1	158.8	62.7	63.1	61.5	36.4	55.6	86.5	56.8	77.3	33
34	16.9	35.7	84.0	110.4	45.3	47.0	46.5	13.9	18.5	62.8	39.5	54.7	34
35	16.9	35.7	84.3	37.5	22.8	31.1	39.2		18.5	29.5	25.6	28.0	35
36			32.9	15.6	26.7	23.5	12.8			24.4	16.1	21.1	36
37			14.3	18.7	23.9	17.6	11.8			22.2	12.5	18.6	37
38				17.1	10.2	24.4	10.9	4.8		11.3	17.4	12.4	38
39		17.9		8.3	9.5	13.5	6.2		1.5	8.7	9.0	8.5	39
40			11.1	6.5	6.0	4.3	6.7			6.4	3.8	5.4	40
41				10.5	4.6	2.8	0.9			5.8	1.8	4.5	41
42				4.6	3.6	1.0	0.9			3.6	0.7	2.7	42
43		17.9			0.3	3.2			1.5	0.2	1.9	0.7	43
44				0.5	1.3					1.1		0.7	44
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	1	2	7	12	8	3	2	2	21	13	36	
SAMPLING WEIGHT (Kg)	43	25	62	437	613	548	297	86	68	1112	931	2111	
No.F.MEASURED	118	56	137	854	1590	1409	766	220	174	2581	2395	5150	
MEAN LENGTH (cm)	29.4	30.5	30.8	32.2	29.2	30.7	30.3	29.8	29.5	30.0	30.4	30.1	
MEAN WEIGHT (g)	373	431	439	497	392	437	416	386	378	420	421	418	
DEPTH RANGE (m)	56/1324	190/1090	42/920	62/874	100/1564	268/1136	82/930	490/1100	56/1324	42/1564	82/1136	42/1564	

TABLE XII : REDFISH (*S. mentella*), DIV. 3O, 1999: length composition of the trawl catches.

LENGTH GROUP	MAR.	APR.	MAY	JUN.	JUL.	AUG	SEP.	OCT.	NOV.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL
10									0.3					0.2	0.1
11									0.5					0.4	0.2
12									0.5					0.4	0.2
13									0.9					0.7	0.4
14									0.8					0.6	0.3
15									14.2					11.2	5.6
16					1.7				15.9				0.7	12.6	6.5
17		4.4		3.0	2.8		0.8		24.1			2.4	1.5	19.1	10.3
18		16.7	0.1	7.3	5.6	7.8	1.4	4.4	49.3			7.9	4.5	39.8	22.4
19	27.0	26.4	1.7	16.2	19.9	20.5	14.0	5.6	45.5	1.0	27.0	14.4	17.9	37.0	27.0
20	81.1	90.2	4.0	82.4	78.1	43.0	47.3	22.9	85.6	1.8	81.1	56.7	59.4	71.6	65.3
21	234.2	149.5	25.5	132.4	163.7	80.8	121.4	56.2	165.5	88.5	234.2	99.5	130.7	144.2	134.0
22	297.3	169.5	28.3	202.0	211.5	136.5	152.6	104.4	196.4	125.1	297.3	128.0	174.2	178.1	170.9
23	243.2	153.1	48.3	177.8	202.7	137.1	197.8	112.4	151.1	172.3	243.2	122.5	186.9	145.6	158.2
24	81.1	137.7	56.9	122.9	134.0	97.9	120.5	121.3	79.0	196.4	81.1	104.0	121.4	91.1	103.7
25	27.0	66.5	65.7	73.0	71.2	63.1	97.3	102.2	52.4	116.1	27.0	68.1	78.9	63.4	69.3
26		44.5	78.4	48.0	35.0	63.5	64.2	103.4	24.3	115.7		57.8	51.6	41.3	46.9
27	9.0	21.5	109.8	21.2	17.1	63.8	40.5	103.7	23.4	100.1	9.0	53.4	35.5	39.9	39.9
28		21.3	108.3	13.8	14.0	65.9	33.8	78.7	25.0	56.4		50.6	32.2	35.2	35.9
29		10.0	102.7	13.0	9.6	55.3	29.2	62.7	15.3	9.8		44.4	26.4	22.9	26.9
30		7.5	61.5	13.6	8.5	67.0	21.2	38.2	10.2	3.5		28.9	25.6	14.5	20.3
31		7.3	53.6	18.1	7.5	45.5	18.5	26.5	7.6	3.5		27.3	19.6	10.6	16.0
32		8.4	51.2	8.9	6.0	33.8	17.1	29.5	5.6	7.0		24.1	16.0	9.6	13.8
33		2.7	43.0	10.7	4.5	12.8	8.9	15.2	2.9			19.7	7.9	4.8	7.9
34		3.8	28.2	9.1	1.8	3.9	6.0	5.6	1.4	0.9		14.2	3.8	2.0	4.3
35		6.5	19.1	3.8	1.7	1.3	1.4	2.0	0.7			10.3	1.5	0.9	2.4
36		3.1	16.4	3.0	0.2	0.3	1.1	2.0	0.5	1.6		7.9	0.5	0.8	1.6
37		8.1	21.8	0.8	0.9	0.2	3.0	0.6	0.5			10.9	1.5	0.5	2.2
38		8.9	17.0	4.2	0.7		1.1	1.2	0.3			10.4	0.7	0.4	1.9
39		9.5	20.1	6.0			0.7	0.6	0.3			12.3	0.2	0.3	1.9
40		7.0	16.5	7.5	0.6		0.2	0.5	0.2			10.6	0.3	0.2	1.6
41		4.2	9.5	1.6	0.5		0.2					5.3	0.3		0.8
42		7.5	7.1									5.1			0.7
43		2.8	3.9		0.3							2.4	0.1		0.4
44		1.4	0.8									0.8			0.1
45			0.4									0.2			0.02
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
No. SAMPLES	1	5	9	5	13	23	22	10	23	6	1	19	58	39	117
SAMPLING WEIGHT (Kg)	18	204	669	148	576	801	813	609	1189	148	18	1021	2190	1946	5175
No.F.MEASURED	111	828	1720	675	2964	2853	3419	2283	5943	590	111	3223	9236	8816	21386
MEAN LENGTH (cm)	22.6	24.4	29.5	24.2	23.5	25.6	24.6	26.0	22.7	24.9	22.6	26.2	24.3	23.4	24.1
MEAN WEIGHT (g)	168	236	400	223	195	259	228	269	181	228	168	292	221	197	218
DEPTH RANGE (m)	131/420	242/562	147/565	235/614	128/756	68/570	66/1083	76/640	73/935	171/512	131/420	147/614	66/1083	73/935	66/1083

TABLE XIII : REDFISH (*S. marinus*), DIV.3N, 1999: length composition of the trawl catches.

LENGTH GROUP	SEP.	OCT.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
21	25.6	4.6	25.6	4.6	10.9	21
22	25.6		25.6		7.6	22
23	25.6	9.2	25.6	9.2	14.1	23
24	51.3	17.9	51.3	17.9	27.8	24
25	25.6	26.6	25.6	26.6	26.3	25
26	25.6	76.2	25.6	76.2	61.2	26
27	128.2	101.8	128.2	101.8	109.7	27
28	230.8	167.9	230.8	167.9	186.6	28
29	179.5	133.1	179.5	133.1	146.9	29
30	76.9	104.9	76.9	104.9	96.6	30
31	51.3	79.8	51.3	79.8	71.4	31
32	76.9	122.3	76.9	122.3	108.8	32
33	51.3	76.3	51.3	76.3	68.8	33
34		31.7		31.7	22.3	34
35	25.6	26.1	25.6	26.1	26.0	35
36		12.8		12.8	9.0	36
37		4.6		4.6	3.2	37
38		4.1		4.1	2.9	38
TOTAL	1000	1000	1000	1000	1000	
No. SAMPLES	1	3	1	3	4	
SAMPLING WEIGHT (Kg)	14	91	14	91	105	
No.F.MEASURED	39	224	39	224	263	
MEAN LENGTH (cm)	28.8	30.0	28.8	30.0	29.7	
MEAN WEIGHT (g)	357	406	357	406	391	
DEPTH RANGE (m)	386/780	268/600	386/780	268/600	268/780	

TABLE XIV : REDFISH (*S. marinus*), DIV. 3O, 1999: length composition of the trawl catches.

LENGTH GROUP	APR.	MAY	JUN.	JUL.	SEP.	OCT.	NOV.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
13							0.2			0.2	0.1	13
14							0.5			0.4	0.2	14
15				0.2			15.8		0.2	14.7	8.4	15
16							11.5			10.7	6.1	16
17	12.7		1.5	2.0			24.9	4.6	1.7	23.2	14.8	17
18	0.3		1.5	3.0			47.9	0.3	2.6	44.6	25.9	18
19	19.1		4.3	16.9		5.5	48.6	7.2	14.7	45.6	30.2	19
20	67.8	1.4	8.6	68.7	33.6	14.5	96.5	25.4	64.2	90.8	68.3	20
21	110.7	13.0	34.2	138.5	73.8	20.0	178.4	49.6	130.2	167.4	128.5	21
22	154.8	42.0	77.1	200.3	167.8	28.5	181.2	85.5	196.1	170.6	150.1	22
23	95.0	51.8	86.1	175.2	94.0	62.6	146.8	71.1	164.8	141.0	124.6	23
24	77.0	50.4	135.0	133.1	127.5	53.1	84.1	70.0	132.4	81.9	85.9	24
25	62.3	69.6	64.7	84.6	114.1	57.1	51.2	66.4	88.4	51.6	61.2	25
26	57.9	89.4	119.6	46.6	80.5	81.2	26.0	82.2	51.0	29.9	47.8	26
27	40.8	123.4	65.2	29.0	47.0	103.9	20.0	87.6	31.3	25.9	44.2	27
28	79.7	115.7	79.0	21.4	53.7	126.6	21.2	98.7	25.5	28.5	48.0	28
29	42.2	81.1	90.6	22.6	73.8	124.8	14.3	68.7	29.2	21.9	36.3	29
30	56.6	77.7	67.8	17.8	33.6	84.1	10.5	69.1	19.8	15.6	31.4	30
31	20.7	66.2	43.9	18.1	67.1	76.1	6.1	47.6	24.4	11.0	23.3	31
32	36.1	70.1	72.2	10.9	33.6	71.5	5.4	58.5	13.8	10.0	24.3	32
33	18.3	53.4	31.9	3.9		36.2	4.4	38.6	3.4	6.6	15.2	33
34	18.0	25.5	1.5	2.6		10.3	2.3	19.9	2.3	2.8	7.6	34
35	2.6	13.2	12.0	2.3		10.8	1.3	9.4	2.0	2.0	4.1	35
36	9.2	14.1		0.9		14.0	0.2	10.6	0.8	1.2	3.8	36
37	2.6	9.3	2.2	0.4		3.4	0.5	6.1	0.3	0.7	2.2	37
38	6.7	5.7		0.4		1.8		5.3	0.3	0.1	1.6	38
39	3.5	10.7	1.5	0.7		6.9	0.4	7.0	0.6	0.8	2.6	39
40	2.5	4.1				6.9		3.1		0.5	1.1	40
41	1.9	4.3						2.9			0.8	41
42	0.9	2.9						1.8			0.5	42
43	0.3	2.7						1.5			0.4	43
44		1.1						0.6			0.2	44
45		1.1						0.6			0.2	45
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	4	8	4	13	1	4	19	16	14	23	53	
SAMPLING WEIGHT (Kg)	171	468	81	437	37	37	190	720	474	227	1421	
No.F.MEASURED	508	1234	302	2119	149	577	3537	2044	2268	4114	8426	
MEAN LENGTH (cm)	25.7	29.0	27.1	24.0	25.7	28.5	22.7	27.6	24.2	23.1	24.5	
MEAN WEIGHT (g)	269	375	306	211	258	353	180	330	217	192	235	
DEPTH RANGE (m)	349/562	147/539	347/547	128/549	315/316	260/507	110/372	147/562	128/549	110/507	110/562	

TABLE XV : AMERICAN PLAICE, DIV.3L, 1999: length composition of the trawl catches.

LENGTH GROUP	FEB.	MAR.	APR.	MAY	DEC.	1st Q.	2nd Q.	4st Q.	TOTAL	LENGTH GROUP
24			0.7				0.6		0.4	24
26		0.4	9.1	8.6		0.2	9.0		5.1	26
28	6.5	3.6	13.2	0.9	8.8	4.7	12.1	8.8	9.1	28
30	51.4	9.6	44.9	36.3	17.5	25.9	44.1	17.5	35.4	30
32	124.6	16.1	110.5	69.9	78.9	58.4	106.9	78.9	86.9	32
34	176.4	57.3	135.7	124.2	26.3	103.7	134.7	26.3	115.4	34
36	223.6	57.5	172.6	113.0	131.6	122.3	167.3	131.6	148.0	36
38	178.4	104.0	149.8	117.2	157.9	133.0	146.9	157.9	142.5	38
40	146.5	101.6	101.1	144.9	280.7	119.1	105.0	280.7	122.8	40
42	19.4	120.6	70.9	126.0	175.4	81.1	75.8	175.4	84.9	42
44	28.6	127.4	65.1	91.4	70.2	88.9	67.5	70.2	75.6	44
46	28.6	129.3	51.8	94.9	26.3	90.0	55.6	26.3	66.3	46
48	16.1	121.3	35.6	35.4	17.5	80.2	35.6	17.5	50.9	48
50		92.3	21.9	27.9	8.8	56.3	22.4	8.8	34.0	50
52		43.9	13.4	8.7		26.8	13.0		17.2	52
54		12.1	3.6	0.9		7.4	3.4		4.6	54
56		2.5	0.2			1.5	0.2		0.7	56
58		0.6				0.4			0.1	58
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	2	10	19	3	1	12	22	1	35	
SAMPLING WEIGHT (Kg)	108	971	1452	153	86	1079	1605	86	2770	
No.F.MEASURED	207	1181	2243	195	114	1388	2438	114	3940	
MEAN LENGTH (cm)	37.6	44.1	39.0	40.4	40.1	41.6	39.1	40.1	40.1	
MEAN WEIGHT (g)	529	873	609	672	643	739	615	643	663	
DEPTH RANGE (m)	667/1155	705/1193	715/1220	711/1220	850/1240	667/1193	711/1220	850/1240	667/1240	

TABLE XVI : AMERICAN PLAICE, DIV.3N, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	SEP.	OCT.	NOV.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
18										4.6					0.3	0.04	18
20																	20
22																	22
24		3.1	1.2	0.5	12.8					1.9		1.0	1.0		0.1	0.6	24
26	10.0		4.2	4.9	19.7	10.2		1.1	4.3	18.5		6.0	5.6	2.8	3.2	4.6	26
28	20.3	6.2	12.9	9.7	32.3	32.8	1.1	2.6	8.6	23.2	3.9	15.0	10.7	8.6	7.3	10.8	28
30	68.7	6.2	40.7	40.0	48.2	38.9	29.2	16.6	47.9	33.7	11.7	47.3	40.4	23.5	30.7	36.4	30
32	81.9	40.2	89.8	58.4	105.6	114.8	30.8	43.2	46.7	54.5	22.3	78.4	60.5	55.7	36.1	60.3	32
34	160.8	94.8	113.8	80.0	160.4	102.5	59.2	49.9	103.8	51.3	140.2	131.1	83.6	62.4	117.3	95.5	34
36	160.3	143.6	154.1	175.8	149.1	125.0	99.5	82.3	133.9	60.6	70.9	155.1	174.6	94.3	101.3	138.3	36
38	133.8	210.3	181.9	213.1	128.3	114.8	131.7	149.8	159.2	104.5	105.3	165.7	209.3	139.3	131.7	168.7	38
40	186.7	191.7	161.9	135.5	157.7	139.3	111.6	188.0	179.1	115.5	106.5	177.4	136.5	164.1	142.6	154.9	40
42	60.0	131.2	124.6	124.8	101.9	170.1	290.8	167.2	108.0	145.9	247.9	97.7	123.8	190.1	173.5	141.3	42
44	60.6	101.8	60.1	84.1	33.5	96.3	132.3	123.3	73.1	133.4	144.3	67.0	81.8	119.3	108.7	91.5	44
46	30.8	42.8	33.9	40.7	25.2	28.7	70.8	84.1	64.8	67.8	83.9	34.0	40.0	70.2	73.6	51.1	46
48	12.5	11.7	9.1	12.3	12.4	20.5	14.6	49.3	24.7	38.5	28.9	11.0	12.3	37.1	27.4	20.5	48
50	7.5	6.2	2.5	7.7	4.5		21.5	26.1	31.2	47.0	28.9	5.3	7.6	19.9	31.0	13.6	50
52	2.8	3.1	4.3	1.9	4.0	6.1		7.8	7.8	25.4	5.3	3.4	2.0	6.0	7.6	4.2	52
54	2.6	3.1	2.9	5.7	4.0			7.5	3.0	25.7		2.8	5.6	4.6	2.9	4.2	54
56	0.4	3.1	0.6	1.7	0.5		2.9	1.1	3.7	21.3		0.9	1.7	1.2	3.0	1.6	56
58		0.7	0.7	1.7						6.4		0.4	1.7		0.4	0.7	58
60	0.4		0.7	1.2			4.0			9.1		0.5	1.2	0.7	0.5	0.8	60
62										3.7					0.2	0.03	62
64										3.7					0.2	0.03	64
66										1.9					0.1	0.02	66
68																	68
70										1.9					0.1	0.02	70
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	6	4	9	16	4	2	3	6	5	4	2	19	20	11	11	61	
SAMPLING WEIGHT (Kg)	371	286	654	1179	200	77	247	553	530	345	175	1311	1379	877	1050	4617	
No.F.MEASURED	606	428	1050	1901	367	124	334	729	788	397	218	2084	2268	1187	1403	6942	
MEAN LENGTH (cm)	38.2	40.2	38.9	39.5	37.7	38.9	41.4	41.7	40.1	42.4	41.5	38.8	39.4	41.1	40.9	39.9	
MEAN WEIGHT (g)	566	648	594	624	548	600	714	732	657	812	718	590	621	702	694	644	
DEPTH RANGE (m)	706/1860	770/1740	628/1300	56/1439	190/1312	57/1090	55/607	62/1580	61/1041	55/1040	56/1100	628/1860	56/1439	55/1580	55/1100	55/1860	

TABLE XVII : AMERICAN PLAICE, DIV.3O, 1999: length composition of the trawl catches.

LENGTH GROUP	MAR.	APR.	MAY	AUG	SEP.	OCT.	NOV.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
10							0.3					0.2	0.1	10
12							0.2					0.1	0.05	12
14							0.4					0.2	0.1	14
16							0.5					0.2	0.1	16
18							1.3					0.7	0.4	18
20				0.9			4.1				0.6	2.3	1.4	20
22							3.5					1.9	1.1	22
24	7.2						1.8		7.2			1.0	1.3	24
26	57.3			4.5			13.2	3.8	57.3		2.9	8.8	11.3	26
28	85.2	18.2	13.1	17.0	4.6		54.2	27.2	85.2	13.9	12.5	41.2	35.5	28
30	147.6	18.2		73.5	16.9	15.5	135.7	128.8	147.6	2.8	53.0	129.6	102.1	30
32	193.9	36.4	84.1	139.1	68.2	31.1	153.7	215.5	193.9	76.9	113.5	177.2	154.7	32
34	57.3	54.5	82.4	110.8	184.7	77.7	92.9	187.3	57.3	78.2	137.5	133.2	124.6	34
36	93.6	54.5	155.1	78.7	139.1	150.3	72.0	116.2	93.6	139.9	100.6	93.1	97.5	36
38	139.1	109.1	68.4	134.7	125.2	243.5	81.5	22.8	139.1	74.5	131.2	60.4	90.4	38
40	107.1	181.8	92.9	122.2	132.2	181.3	71.0	80.4	107.1	106.3	125.8	77.9	96.7	40
42	90.2	181.8	183.2	81.0	151.8	119.2	84.6	76.1	90.2	183.0	106.6	81.9	94.8	42
44	7.2	90.9	102.5	103.5	74.8	82.9	81.7	101.1	7.2	100.8	93.1	90.1	83.4	44
46	7.2	72.7	127.1	50.4	39.7	41.5	52.9	11.5	7.2	118.9	46.6	34.8	39.5	46
48	7.2	18.2	29.8	29.3	19.2	31.1	20.7	10.5	7.2	28.0	25.6	16.5	18.9	48
50		72.7	18.4	25.2	16.8	10.4	35.0	5.2		26.6	22.2	21.6	19.9	50
52		36.4	28.0	8.4	16.4	5.2	15.6	9.1		29.3	11.3	12.6	11.7	52
54		18.2		5.3	2.2	10.4	6.5	4.3		2.8	4.2	5.6	4.5	54
56		18.2		5.0	7.2		6.1			2.8	5.8	3.3	3.7	56
58			14.9	7.4			6.7			12.6	4.7	3.6	4.0	58
60		18.2		3.1	1.2		3.4			2.8	2.4	1.8	1.9	60
62							0.2					0.1	0.1	62
64							0.1					0.1	0.04	64
66							0.2					0.1	0.05	66
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	2	1	2	9	7	1	19	6	2	3	16	26	47	
SAMPLING WEIGHT (Kg)	123	47	92	667	515	127	2194	396	123	139	1182	2717	4161	
No.F.MEASURED	254	55	122	1031	766	193	3370	634	254	177	1797	4197	6425	
MEAN LENGTH (cm)	35.3	42.9	41.5	39.4	39.8	40.4	38.2	36.9	35.3	41.7	39.6	37.7	38.2	
MEAN WEIGHT (g)	453	821	733	640	644	662	603	518	453	746	641	568	587	
DEPTH RANGE (m)	131/420	242/562	147/565	68/462	68/595	76/584	73/935	171/512	131/420	147/565	68/595	73/935	68/935	

TABLE XVIII : YELLOWTAIL FLOUNDER, DIV. 3N, 1999: length composition of the trawl catches.

LENGTH GROUP	JUL.	AUG	SEP.	OCT.	NOV.	DEC.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
16					5.7			2.3	1.5	16
18					5.7			2.3	1.5	18
20					5.7			2.3	1.5	20
22					11.4			4.6	3.0	22
24	16.7				35.0		3.9	14.0	10.6	24
26	66.7		65.6		110.8	12.7	28.9	48.8	42.2	26
28	66.7	7.9	98.4	8.8	179.1	52.2	39.9	92.5	74.9	28
30	216.7	39.4	123.0	35.1	240.3	334.8	98.1	225.2	182.6	30
32	116.7	70.9	221.3	184.2	146.7	268.0	111.8	199.4	170.0	32
34	166.7	94.5	180.3	307.0	85.1	202.2	128.7	180.5	163.1	34
36	83.3	354.3	90.2	263.2	60.9	65.1	237.4	110.9	153.3	36
38	133.3	173.2	114.8	105.3	22.5	31.2	152.1	45.5	81.2	38
40	83.3	149.6	49.2	52.6	31.6	20.5	113.8	32.7	59.9	40
42	33.3	63.0	32.8	17.5	17.2	13.4	49.9	15.9	27.3	42
44		47.2	16.4	8.8	20.9		29.9	10.4	17.0	44
46			8.2	17.5	5.4		1.6	6.4	4.8	46
48	16.7				11.1		3.9	4.4	4.3	48
50					1.3			0.5	0.4	50
52					1.3			0.5	0.4	52
54					1.3			0.5	0.4	54
56										56
58					0.7			0.3	0.2	58
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	1	1	1	2	2	3	5	8	
SAMPLING WEIGHT (Kg)	28	72	58	47	151	73	158	271	429	
No.F.MEASURED	60	127	122	114	338	205	309	657	966	
MEAN LENGTH (cm)	34.5	37.9	34.4	36.1	32.1	33.2	36.4	33.5	34.4	
MEAN WEIGHT (g)	786	1038	769	879	636	656	925	702	776	
DEPTH RANGE (m)	57/67	62/63	62/64	61/67	55/100	56/79	57/67	55/100	55/100	

TABLE XIX : YELLOWTAIL FLOUNDER, DIV. 3O, 1999: length composition of the trawl catches.

LENGTH GROUP	AUG	SEP.	3rd Q.	TOTAL	LENGTH GROUP
24	1.8	0.9	1.7	1.7	24
26	3.4		3.0	3.0	26
28	30.3	13.8	28.4	28.4	28
30	44.8	20.3	41.8	41.8	30
32	74.3	68.6	73.6	73.6	32
34	83.6	155.0	92.2	92.2	34
36	131.2	159.2	134.5	134.5	36
38	134.8	155.6	137.3	137.3	38
40	150.6	156.8	151.3	151.3	40
42	142.8	162.4	145.1	145.1	42
44	107.0	69.1	102.5	102.5	44
46	56.5	23.7	52.5	52.5	46
48	26.4	13.4	24.9	24.9	48
50	8.4	1.1	7.5	7.5	50
52	4.3		3.8	3.8	52
TOTAL	1000	1000	1000	1000	
No. SAMPLES	1	1	2	2	
SAMPLING WEIGHT (Kg)	509	333	842	842	
No.F.MEASURED	811	572	1383	1383	
MEAN LENGTH (cm)	39.6	39.1	39.6	39.6	
MEAN WEIGHT (g)	1249	1165	1239	1239	
DEPTH RANGE (m)	68/97	68/152	68/152	68/152	

TABLE XX-A: GREENLAND HALIBUT, DIV.3L, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	SEP.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
22					1.0		0.1				0.1	0.1		0.1	22
24					1.0		0.1				0.1	0.1		0.1	24
26							0.3					0.2		0.04	26
28		1.1	0.4	1.3	1.5		1.7			0.5	1.4	1.2		1.0	28
30		5.2	4.8	6.3	0.6		4.0	0.8		4.4	5.4	3.1		4.4	30
32		35.2	19.5	33.2	21.6	4.6	5.0	2.6		22.0	31.4	4.5		21.4	32
34	26.1	94.5	70.5	97.7	79.5	16.0	17.4	2.2	2.9	72.7	94.9	14.8	2.9	67.5	34
36	61.9	120.7	115.8	145.2	124.5	25.5	31.3	20.0	16.2	111.1	142.0	28.9	16.2	103.6	36
38	106.2	152.7	148.0	143.7	154.4	67.2	68.3	47.7	15.9	144.7	145.3	64.9	15.9	126.8	38
40	122.8	119.0	142.7	139.3	108.8	104.6	99.9	91.1	99.6	133.3	134.6	99.0	99.6	126.2	40
42	140.5	101.6	127.4	115.9	122.2	90.2	104.1	112.6	171.3	121.1	116.9	103.9	171.3	116.6	42
44	124.9	82.6	106.6	88.1	98.5	109.9	97.8	90.3	176.4	101.5	89.7	97.9	176.4	97.5	44
46	110.5	64.6	80.4	71.2	49.4	87.5	108.5	98.7	153.1	79.1	67.9	104.6	153.1	81.4	46
48	102.7	49.5	50.2	43.4	39.5	78.3	81.8	104.9	174.2	56.0	42.8	85.1	174.2	58.8	48
50	84.0	43.3	36.8	28.1	35.9	50.4	72.9	88.2	85.0	44.2	29.3	72.9	85.0	45.5	50
52	51.4	41.4	20.3	21.1	28.5	56.0	70.7	72.1	58.8	30.2	22.3	69.3	58.8	35.9	52
54	54.6	19.5	23.6	16.5	33.1	65.8	77.9	54.8	15.9	25.9	19.0	72.8	15.9	33.2	54
56	8.6	28.5	13.0	13.7	24.7	49.1	60.4	54.0	2.9	17.2	15.4	58.1	2.9	24.9	56
58	2.9	15.8	11.6	9.3	17.7	37.7	25.4	36.9	3.3	11.8	10.6	28.6	3.3	14.8	58
60		7.7	7.8	6.9	12.3	27.6	24.7	20.5	6.3	6.9	7.7	24.4	6.3	10.8	60
62	1.4	7.6	5.3	3.6	6.6	26.4	14.8	21.4	9.2	5.5	4.1	17.2	9.2	7.5	62
64	1.5	3.7	2.4	1.7	5.1	24.6	7.2	12.7	6.1	2.7	2.3	10.0	6.1	4.1	64
66		2.0	1.9	2.2	9.2	20.8	5.8	12.1		1.7	3.2	8.5		3.6	66
68		2.9	1.0	2.5	6.0	11.3	2.8	8.5	3.1	1.4	3.0	4.7	3.1	2.7	68
70			1.2	1.6	0.9	3.1	1.6	10.4		0.7	1.5	3.2		1.5	70
72			0.8	1.0	3.8	4.9	1.7	3.3		0.5	1.4	2.3		1.2	72
74			2.0	1.4	1.9	9.2	3.3	10.3		1.2	1.5	5.1		2.1	74
76			3.1	1.4	3.2	7.4	1.1	5.6		1.8	1.7	2.5		1.9	76
78		0.8	0.9	0.8	5.7	4.1	2.1	6.2		0.8	1.5	3.0		1.5	78
80			1.1	1.2	0.9	7.4	2.6	1.7		0.6	1.2	3.0		1.3	80
82			0.2	1.1	1.0	4.9	0.3	6.4		0.1	1.1	1.8		0.8	82
84			0.5	0.5		0.6	2.1	3.9		0.3	0.4	2.3		0.8	84
86			0.05			3.1	0.8			0.03		1.0		0.2	86
88			0.05		1.0	1.9	1.2			0.03	0.1	1.1		0.3	88
90							0.2					0.1		0.03	90
92															92
94				0.1				0.5			0.1	0.1		0.05	94
96			0.05							0.03				0.01	96
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	10	11	28	24	8	7	28	10	3	49	32	45	3	129	
SAMPLING WEIGHT (Kg)	861	1080	3036	2785	865	904	5052	1364	271	4977	3650	7320	271	16218	
No.F.MEASURED	1016	1265	3410	3629	1008	707	4563	1041	321	5691	4637	6311	321	16960	
MEAN LENGTH (cm)	45.1	43.1	43.3	42.4	44.2	50.3	48.4	50.3	46.7	43.5	42.7	48.9	46.7	44.4	
MEAN WEIGHT (g)	792	719	729	687	822	1266	1062	1236	875	733	708	1113	875	805	
DEPTH RANGE (m)	808/1260	667/1155	719/1312	842/1141	711/1220	780/1200	703/1183	744/1300	850/1250	667/1312	711/1220	703/1300	850/1250	667/1312	

TABLE XX-B: GREENLAND HALIBUT, DIV.3L, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at age of the trawl catches.

AGE	JAN. AGE COMP.	JAN. MEAN LENGTH	JAN. MEAN WEIGHT	FEB. AGE COMP.	FEB. MEAN LENGTH	FEB. MEAN WEIGHT	MAR. AGE COMP.	MAR. MEAN LENGTH	MAR. MEAN WEIGHT	APR. AGE COMP.	APR. MEAN LENGTH	APR. MEAN WEIGHT	MAY AGE COMP.	MAY MEAN LENGTH	MAY MEAN WEIGHT	AGE
2													1.0	23.0	0.078	2
3				0.5	31.0	0.213	0.6	29.8	0.187	3.1	33.5	0.281	2.4	30.7	0.225	3
4	46.4	36.8	0.382	133.1	35.7	0.346	106.3	36.0	0.355	101.4	35.4	0.337	81.9	35.6	0.342	4
5	203.5	39.9	0.504	310.2	38.5	0.450	302.6	39.0	0.468	324.3	38.3	0.442	291.9	38.6	0.451	5
6	274.2	43.3	0.660	218.6	42.5	0.622	263.9	42.6	0.628	253.9	41.4	0.571	241.2	41.5	0.576	6
7	220.6	47.2	0.891	138.6	46.7	0.865	148.9	46.1	0.825	146.4	45.3	0.774	136.7	45.4	0.782	7
8	184.0	49.9	1.069	106.6	50.1	1.089	101.4	49.3	1.030	87.1	49.3	1.031	99.4	50.2	1.102	8
9	55.7	52.8	1.279	46.2	54.2	1.410	34.0	53.7	1.368	41.7	53.6	1.369	64.3	54.7	1.462	9
10	10.4	55.9	1.545	23.2	58.7	1.824	17.8	59.2	1.878	18.2	56.3	1.606	29.8	57.5	1.725	10
11	3.9	58.0	1.756	12.0	60.3	1.993	8.6	60.6	2.038	10.6	59.8	1.999	22.0	61.2	2.144	11
12	0.9	63.1	2.304	6.6	64.5	2.501	4.6	66.1	2.755	4.8	69.4	3.261	11.4	69.5	3.278	12
13	0.3	64.4	2.456	3.1	65.3	2.643	5.5	70.4	3.437	3.6	73.7	3.971	7.6	72.9	3.802	13
14				1.0	71.7	3.578	2.4	76.2	4.326	2.9	77.1	4.560	7.4	77.3	4.630	14
15				0.4	76.3	4.397	2.0	77.7	4.667	1.8	78.2	4.790	3.0	76.7	4.455	15
16							1.0	80.5	5.223	0.1	95.0	9.027				16
17							0.4	84.6	6.228							17
TOTAL	1000			1000			1000			1000			1000			

AGE	JUL. AGE COMP.	JUL. MEAN LENGTH	JUL. MEAN WEIGHT	AUG. AGE COMP.	AUG. MEAN LENGTH	AUG. MEAN WEIGHT	SEP. AGE COMP.	SEP. MEAN LENGTH	SEP. MEAN WEIGHT	DEC. AGE COMP.	DEC. MEAN LENGTH	DEC. MEAN WEIGHT	AGE
2				0.1	23.0	0.078							2
3				0.1	25.8	0.116							3
4	37.1	37.2	0.401	47.0	36.4	0.377	23.7	37.9	0.427	14.0	38.3	0.437	4
5	124.7	40.5	0.530	130.4	40.4	0.529	105.2	41.2	0.560	132.9	42.1	0.599	5
6	240.5	43.8	0.685	257.1	43.8	0.690	249.8	44.0	0.700	309.1	44.7	0.733	6
7	177.7	47.7	0.926	193.8	48.2	0.956	204.0	48.4	0.968	278.1	47.6	0.907	7
8	171.9	52.5	1.272	200.3	52.4	1.258	194.1	52.2	1.247	190.3	49.2	1.021	8
9	84.0	57.5	1.714	81.5	56.2	1.586	84.6	56.5	1.617	54.9	52.6	1.291	9
10	58.6	61.1	2.118	45.8	59.1	1.886	50.6	60.4	2.043	8.3	57.7	1.764	10
11	30.2	66.6	2.796	11.4	65.7	2.671	24.1	67.3	2.902	6.2	63.3	2.350	11
12	44.4	67.9	3.065	20.8	64.4	2.591	40.9	68.6	3.184	5.6	64.9	2.539	12
13	19.2	75.9	4.433	6.8	76.7	4.579	14.8	76.8	4.525	0.6	69.0	3.097	13
14	5.1	80.7	5.337	2.7	82.8	5.795	4.2	80.0	5.162				14
15	4.9	82.0	5.535	1.6	83.0	5.801	3.9	83.5	5.940				15
16	1.5	84.5	6.152	0.7	85.7	6.452	0.2	81.0	5.295				16
17													17
TOTAL	1000			1000			1000			1000			

AGE	1st Q. AGE COMP.	1st Q. MEAN LENGTH	1st Q. MEAN WEIGHT	2nd Q. AGE COMP.	2nd Q. MEAN LENGTH	2nd Q. MEAN WEIGHT	3rd Q. AGE COMP.	3rd Q. MEAN LENGTH	3rd Q. MEAN WEIGHT	4th Q. AGE COMP.	4th Q. MEAN LENGTH	4th Q. MEAN WEIGHT	YEAR 1999 AGE COMP.	YEAR 1999 MEAN LENGTH	YEAR 1999 MEAN WEIGHT	AGE
2				0.1	23.0	0.078	0.1	23.0	0.078				0.1	23.0	0.078	2
3	0.5	30.2	0.195	3.0	33.2	0.274	0.1	25.8	0.116				1.3	32.5	0.258	3
4	107.5	35.9	0.353	98.4	35.4	0.337	42.1	36.6	0.384	14.0	38.3	0.437	89.6	35.8	0.350	4
5	293.6	38.9	0.465	319.3	38.4	0.443	125.7	40.5	0.534	132.9	42.1	0.599	265.6	38.9	0.463	5
6	251.4	42.7	0.631	252.0	41.4	0.571	254.1	43.9	0.691	309.1	44.7	0.733	252.8	42.5	0.624	6
7	154.0	46.5	0.847	144.9	45.3	0.776	193.6	48.2	0.955	278.1	47.6	0.907	160.5	46.6	0.853	7
8	112.4	49.7	1.054	89.0	49.5	1.043	196.1	52.3	1.258	190.3	49.2	1.021	122.6	50.5	1.119	8
9	40.2	53.7	1.368	45.2	53.8	1.390	82.3	56.4	1.606	54.9	52.6	1.291	50.9	54.7	1.454	9
10	18.6	58.8	1.837	20.0	56.6	1.633	48.0	59.6	1.944	8.3	57.7	1.764	25.1	58.5	1.823	10
11	9.1	60.4	2.006	12.3	60.2	2.039	15.5	66.3	2.756	6.2	63.3	2.350	11.5	62.0	2.231	11
12	4.8	65.4	2.640	5.9	69.4	3.266	26.7	66.1	2.826	5.6	64.9	2.539	9.7	66.6	2.877	12
13	4.2	69.2	3.252	4.3	73.4	3.924	9.4	76.5	4.532	0.6	69.0	3.097	5.3	73.1	3.918	13
14	1.7	75.4	4.195	3.6	77.1	4.582	3.2	81.9	5.582				2.7	77.8	4.725	14
15	1.3	77.6	4.643	2.0	77.8	4.712	2.3	82.9	5.776				1.7	79.2	4.988	15
16	0.6	80.5	5.223	0.0	95.0	9.027	0.7	85.2	6.334				0.4	82.7	5.754	16
17	0.2	84.6	6.228										0.1	84.6	6.228	17
TOTAL	1000			1000			1000			1000			1000			
Nº FISH AGED	697			757			486			520			2460			

TABLE XXI-A: GREENLAND HALIBUT, DIV.3M, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	1st Q.	2nd Q.	3rd Q.	TOTAL	LENGTH GROUP
24						4.6				2.3	0.4	24
26						9.2				4.7	0.8	26
28					1.1				0.3		0.1	28
30			1.9					0.8			0.4	30
32	1.4	4.7	17.1	0.7	47.3	21.8	6.8	8.6	11.2	14.4	10.3	32
34	9.4	29.7	40.0	25.5	29.7	50.4	29.5	27.1	26.4	40.1	29.2	34
36	53.3	56.1	112.4	111.4	198.6	77.6	53.9	77.9	131.0	66.0	90.2	36
38	76.8	148.4	156.9	169.3	94.7	125.5	78.2	128.2	152.6	102.3	130.3	38
40	147.3	161.2	151.7	139.2	84.5	170.5	164.1	152.8	127.0	167.4	148.3	40
42	161.9	150.9	161.4	108.7	96.4	93.6	143.3	158.8	106.0	118.1	137.4	42
44	129.3	138.6	115.9	107.1	160.2	87.4	117.9	126.4	119.0	102.4	120.2	44
46	106.3	52.7	29.4	99.6	46.7	57.6	125.2	61.0	87.7	90.9	73.4	46
48	90.2	79.6	69.5	48.4	49.6	27.1	118.8	79.0	48.7	72.2	69.6	48
50	47.3	67.5	37.5	23.9	27.2	45.1	36.2	48.7	24.7	40.7	40.8	50
52	31.5	28.3	31.8	10.0	27.2	50.0	38.4	30.7	13.9	44.3	28.5	52
54	58.8	45.3	32.1	44.1	6.3	36.6	40.9	44.4	35.6	38.7	41.0	54
56	39.8	15.7	12.4	37.0	17.6	35.2	27.8	22.3	32.6	31.6	26.7	56
58	19.6	13.4	10.6	26.8	15.2	29.1	4.0	14.3	24.2	16.7	17.4	58
60	6.4	3.1	9.7	20.8	11.3	17.2	0.8	6.8	18.7	9.2	10.5	60
62	1.5	1.6		12.8	1.1	4.5	2.9	0.9	10.2	3.7	3.9	62
64	4.7	3.1	3.0	6.3	4.0		3.1	3.6	5.8	1.5	3.8	64
66	3.2		0.6		2.8	6.4	1.9	1.3	0.6	4.2	1.6	66
68	6.4		0.3		6.8	9.5	0.6	2.2	1.5	5.2	2.6	68
70	1.5		0.3		9.6		0.6	0.6	2.2	0.3	1.0	70
72			0.3		11.3		0.6	0.1	2.5	0.3	0.8	72
74	1.7			7.7	12.4	6.4	1.3	0.6	8.7	3.8	3.3	74
76	1.7		1.0		11.3	6.8	0.6	1.0	2.5	3.8	1.9	76
78				0.7	10.2	4.5	0.6		2.8	2.6	1.2	78
80			3.3		13.5	7.7		1.3	3.0	3.9	2.2	80
82					1.1	3.2			0.3	1.6	0.3	82
84			0.7		1.1	7.7	0.6	0.3	0.3	4.2	1.0	84
86					1.1				0.3		0.1	86
88						4.5	0.6			2.6	0.5	88
90												90
92							0.6			0.3	0.1	92
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	6	4	8	5	3	4	5	18	8	9	35	
SAMPLING WEIGHT (Kg)	538	385	752	345	345	438	547	1675	690	985	3350	
No.F.MEASURED	312	444	885	391	161	429	585	1641	552	1014	3207	
MEAN LENGTH (cm)	46.1	44.4	43.5	44.9	45.4	46.0	45.2	44.6	45.0	45.6	44.9	
MEAN WEIGHT (g)	875	757	726	822	972	995	815	783	856	906	824	
DEPTH RANGE (m)	852/1136	855/1081	705/1250	865/1108	846/1186	266/1243	710/1099	705/1250	846/1186	266/1243	266/1250	

TABLE XXI-B: GREENLAND HALIBUT, DIV.3M, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at age of the trawl catches.

AGE	JAN. AGE COMP.	JAN. MEAN LENGTH	JAN. MEAN WEIGHT	FEB. AGE COMP.	FEB. MEAN LENGTH	FEB. MEAN WEIGHT	MAR. AGE COMP.	MAR. MEAN LENGTH	MAR. MEAN WEIGHT	APR. AGE COMP.	APR. MEAN LENGTH	APR. MEAN WEIGHT	AGE
3							0.3	31.0	0.213	0.3	35.0	0.320	3
4	31.0	37.1	0.391	55.0	36.8	0.381	124.4	35.7	0.346	46.4	36.8	0.380	4
5	194.5	40.4	0.525	247.1	39.9	0.501	333.3	38.8	0.460	268.7	39.3	0.476	5
6	287.4	43.2	0.657	299.5	42.8	0.636	246.8	42.0	0.601	259.2	41.8	0.588	6
7	193.9	46.7	0.858	182.7	46.6	0.854	133.1	46.1	0.826	166.7	45.8	0.798	7
8	170.0	50.2	1.097	143.6	50.0	1.076	98.4	49.6	1.050	110.6	50.1	1.093	8
9	65.5	54.2	1.405	45.2	53.8	1.371	30.9	53.3	1.330	77.0	55.7	1.550	9
10	28.5	58.4	1.790	17.2	58.0	1.749	16.9	58.5	1.800	35.3	58.0	1.756	10
11	12.4	59.8	1.963	6.8	58.8	1.828	6.7	59.5	1.907	22.3	59.2	1.890	11
12	8.4	67.2	2.873	1.9	62.3	2.211	2.5	64.0	2.456	6.2	65.9	2.751	12
13	5.5	68.3	3.065	1.1	62.2	2.205	3.3	71.2	3.644	3.0	73.0	3.787	13
14	2.7	71.9	3.582				0.5	75.8	4.247	1.6	75.5	4.196	14
15	0.2	69.0	3.097				1.9	81.1	5.351	2.9	75.1	4.113	15
16							1.0	81.2	5.356				16
17							0.2	85.0	6.222				17
TOTAL	1000			1000			1000			1000			

AGE	MAY AGE COMP.	MAY MEAN LENGTH	MAY MEAN WEIGHT	JUL. AGE COMP.	JUL. MEAN LENGTH	JUL. MEAN WEIGHT	AUG. AGE COMP.	AUG. MEAN LENGTH	AUG. MEAN WEIGHT	AGE
3	0.6	35.0	0.320	6.1	25.5	0.111				3
4	92.5	35.7	0.347	101.2	36.0	0.363	59.2	37.1	0.396	4
5	253.2	38.2	0.437	224.6	39.1	0.475	195.4	40.3	0.522	5
6	234.6	41.6	0.584	267.8	42.7	0.631	341.5	43.6	0.677	6
7	156.2	45.2	0.764	137.4	46.6	0.870	196.3	47.2	0.891	7
8	98.5	48.9	1.005	117.0	52.1	1.252	149.4	50.5	1.118	8
9	49.4	53.7	1.392	52.7	56.4	1.596	31.8	55.4	1.499	9
10	22.0	56.6	1.639	32.4	59.9	1.990	13.2	57.6	1.743	10
11	18.5	63.5	2.462	11.1	69.1	3.164	2.8	67.1	2.863	11
12	20.5	74.7	4.138	21.4	69.9	3.448	6.9	63.7	2.513	12
13	19.0	75.2	4.184	13.5	80.0	5.163	1.8	75.3	4.297	13
14	23.8	77.1	4.544	7.6	83.8	5.986	1.4	87.2	6.924	14
15	11.3	77.1	4.510	4.9	82.5	5.652	0.2	85.0	6.302	15
16				2.4	86.1	6.547	0.2	89.0	7.257	16
17										17
TOTAL	1000			1000			1000			

AGE	1st Q. AGE COMP.	1st Q. MEAN LENGTH	1st Q. MEAN WEIGHT	2nd Q. AGE COMP.	2nd Q. MEAN LENGTH	2nd Q. MEAN WEIGHT	3rd Q. AGE COMP.	3rd Q. MEAN LENGTH	3rd Q. MEAN WEIGHT	YEAR 1999 AGE COMP.	YEAR 1999 MEAN LENGTH	YEAR 1999 MEAN WEIGHT	AGE
3	0.1	31.0	0.213	0.4	35.0	0.320				0.7	27.3	0.150	3
4	75.0	36.1	0.359	56.8	36.4	0.368	3.1	25.5	0.111	71.0	36.2	0.364	4
5	264.5	39.4	0.486	265.2	39.1	0.468	80.5	36.4	0.375	255.2	39.4	0.482	5
6	274.2	42.7	0.630	253.7	41.7	0.587	210.2	39.7	0.496	273.8	42.5	0.625	6
7	166.4	46.5	0.846	164.3	45.6	0.791	304.0	43.2	0.657	165.8	46.3	0.838	7
8	134.1	50.0	1.077	107.9	49.8	1.075	166.4	47.0	0.882	126.8	50.2	1.095	8
9	46.1	53.9	1.376	70.8	55.3	1.526	132.9	51.2	1.178	52.2	54.7	1.457	9
10	20.8	58.3	1.784	32.3	57.8	1.738	42.4	56.0	1.560	24.3	58.3	1.790	10
11	8.6	59.5	1.917	21.4	60.1	2.001	23.0	59.3	1.920	11.8	60.7	2.081	11
12	4.3	65.8	2.697	9.4	70.2	3.432	7.0	68.7	3.106	7.4	68.2	3.126	12
13	3.4	68.9	3.217	6.6	74.4	4.043	14.3	68.4	3.226	5.0	73.7	4.003	13
14	1.1	72.6	3.700	6.6	76.8	4.478	7.7	79.4	5.065	3.2	77.8	4.737	14
15	0.8	80.1	5.161	4.7	76.1	4.324	4.5	84.3	6.130	2.2	78.3	4.775	15
16	0.4	81.2	5.356				2.6	82.5	5.674	0.5	83.8	5.979	16
17	0.1	85.0	6.222				1.3	86.3	6.603	0.04	85.0	6.222	17
TOTAL	1000			1000			1000			1000			
Nº FISH AGED	697			757			486			1940			

TABLE XXII-A: GREENLAND HALIBUT, DIV.3N, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	SEP.	OCT.	NOV.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
22						1.0								0.5		0.1	22
24						1.0								0.5		0.1	24
26						2.9								1.5		0.2	26
28			2.6	1.6		3.8						1.1	1.5	1.9		1.3	28
30	4.4		5.1	9.5	4.8	9.2	4.1	4.9	11.1		7.1	3.6	9.2	7.0	7.4	6.4	30
32	22.1	7.1	18.1	31.9	14.5	8.5	8.3	9.8	15.2		37.0	16.8	30.7	9.0	23.8	21.7	32
34	38.8	14.2	56.9	68.4	28.3	35.6	9.7	78.2	42.7	1.8	47.0	40.7	65.5	47.8	38.7	51.0	34
36	84.9	87.2	108.2	134.0	38.0	110.9	94.1	96.8	98.1	6.6	99.8	95.5	127.2	103.7	85.0	107.9	36
38	126.4	121.4	133.5	135.2	181.1	122.0	113.8	99.6	109.1	41.8	124.1	128.3	138.5	112.9	106.3	128.9	38
40	104.1	103.0	147.5	130.9	166.6	109.9	182.9	157.6	106.7	120.8	111.4	122.5	133.4	136.3	111.2	127.5	40
42	91.8	135.4	107.8	140.0	139.8	119.8	136.6	111.6	96.8	150.1	133.1	109.0	140.0	119.0	123.1	123.1	42
44	108.2	89.3	91.9	98.1	125.3	115.1	153.0	84.6	129.1	126.3	79.8	96.7	100.0	108.8	104.0	99.9	44
46	98.8	103.2	74.0	56.6	55.8	51.5	104.0	86.3	94.2	148.8	121.5	89.2	56.5	70.6	116.2	76.3	46
48	84.4	80.6	52.8	64.1	50.9	65.2	45.7	72.4	69.9	159.5	105.9	69.9	63.2	65.4	101.6	69.0	48
50	13.5	97.3	50.3	39.6	46.9	36.6	46.1	50.0	93.4	79.2	68.3	49.2	40.1	42.6	78.6	47.0	50
52	34.6	37.6	37.1	22.4	32.3	28.2	25.1	55.4	60.3	67.5	17.7	36.4	23.1	37.6	40.0	31.7	52
54	26.6	30.7	32.0	23.3	41.3	31.6	22.6	39.5	33.6	31.0	8.5	29.9	24.6	33.3	20.6	27.6	54
56	38.9	30.6	32.9	18.1	27.5	17.6	26.9	19.5	22.9	41.1	12.4	34.3	18.8	19.5	20.4	25.7	56
58	26.8	13.6	21.1	10.1	18.6	12.6	9.1	13.0	5.5	15.6	6.8	21.2	10.7	12.3	7.7	15.2	58
60	34.0	6.1	8.0	10.7	23.4	23.4	1.6	5.8	4.2	5.5	1.4	16.2	11.6	14.3	3.0	13.3	60
62	12.4	6.6	3.1	0.6		15.2	5.2	4.3	1.3	1.4	6.9	7.0	0.6	10.0	4.1	4.7	62
64	13.5	4.0	4.9	2.1	4.8	11.8	0.5	2.7	1.3	2.9	2.4	7.5	2.3	7.1	2.1	5.1	64
66	17.8	3.6	3.9	1.0		14.1	3.2	0.5	3.6		1.5	8.4	0.9	7.8	2.0	5.0	66
68	5.7	1.7	3.2	0.3		7.1	0.5	0.7	1.2		3.7	3.7	0.3	3.9	2.3	2.3	68
70	2.4	8.5	1.4	0.6		6.3		1.5				3.4	0.5	3.8		2.1	70
72	3.3	6.3	0.9			7.6	3.4	2.3			3.7	3.0		5.1	1.9	2.0	72
74	4.2	3.7	1.5			15.0						2.9		7.7		2.2	74
76		2.7		0.5		8.6						0.6	0.5	4.4		1.0	76
78		4.1		0.2		2.0	3.4	2.3				1.0	0.1	2.3		0.7	78
80	2.7		1.5									1.5				0.7	80
82		0.7										0.2				0.1	82
84		1.0				2.0		0.8				0.2		1.3		0.3	84
86																	86
88						2.0								1.0		0.1	88
90																	90
92						2.0								1.0		0.1	92
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	13	11	13	18	2	5	5	11	6	3	5	37	20	21	14	92	
SAMPLING WEIGHT (Kg)	1266	1295	1378	1740	90	465	473	988	562	465	421	3939	1830	1926	1448	9143	
No.F.MEASURED	1307	1278	1556	2234	109	448	540	1175	701	519	534	4141	2343	2163	1754	10401	
MEAN LENGTH (cm)	46.2	46.2	44.2	42.8	44.5	46.3	44.3	44.3	44.6	47.0	43.7	45.3	42.9	45.3	44.5	44.3	
MEAN WEIGHT (g)	935	911	781	684	775	998	763	778	780	900	733	863	690	889	775	794	
DEPTH RANGE (m)	706/1860	770/1740	628/1600	56/1439	360/1312	82/1240	55/1190	62/1580	70/1136	55/1100	502/1100	628/1860	56/1439	55/1580	55/1136	55/1860	

TABLE XXII-B: GREENLAND HALIBUT, DIV.3N, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at age of the trawl catches.

AGE	JAN. AGE COMP.	JAN. MEAN LENGTH	JAN. MEAN WEIGHT	FEB. AGE COMP.	FEB. MEAN LENGTH	FEB. MEAN WEIGHT	MAR. AGE COMP.	MAR. MEAN LENGTH	MAR. MEAN WEIGHT	APR. AGE COMP.	APR. MEAN LENGTH	APR. MEAN WEIGHT	MAY AGE COMP.	MAY MEAN LENGTH	MAY MEAN WEIGHT	AGE
2																2
3	0.6	31.0	0.213				2.9	29.2	0.175	2.6	32.3	0.251	0.8	35.0	0.320	3
4	78.9	36.0	0.355	53.1	36.9	0.385	95.1	36.0	0.357	93.2	35.3	0.335	35.8	35.4	0.341	4
5	233.1	39.1	0.473	219.0	39.5	0.489	282.2	39.0	0.468	298.7	38.7	0.455	271.8	39.5	0.487	5
6	224.5	43.0	0.650	243.9	43.2	0.656	237.6	42.7	0.631	260.9	41.5	0.579	278.1	41.9	0.592	6
7	153.3	46.6	0.853	197.1	47.3	0.899	152.9	46.7	0.865	152.3	45.7	0.795	160.1	45.7	0.793	7
8	128.6	49.9	1.074	160.6	50.1	1.080	120.4	50.3	1.102	103.6	49.6	1.051	120.2	50.2	1.094	8
9	60.4	55.5	1.534	55.2	53.6	1.355	52.8	54.5	1.430	53.1	53.6	1.372	75.0	54.5	1.440	9
10	49.9	60.4	2.010	24.9	59.3	1.907	27.7	58.9	1.853	22.0	55.8	1.559	36.5	57.2	1.681	10
11	27.4	62.3	2.239	12.3	61.4	2.160	13.2	60.3	2.010	10.7	58.0	1.774	18.8	56.9	1.660	11
12	18.9	64.9	2.551	9.6	68.1	3.027	6.6	65.0	2.564	1.6	63.5	2.413	2.4	63.0	2.302	12
13	18.7	67.7	2.964	16.1	72.5	3.754	6.1	68.5	3.094	0.2	69.5	3.244	0.5	65.0	2.536	13
14	4.2	75.4	4.215	5.9	75.2	4.143	2.0	74.9	4.159	0.7	72.5	3.667				14
15	1.4	75.9	4.332	2.0	76.1	4.337	0.5	77.9	4.730	0.3	77.5	4.580				15
16				0.2	79.0	4.871										16
17				0.2	79.0	4.871										17
TOTAL	1000			1000			1000			1000			1000			

AGE	JUL. AGE COMP.	JUL. MEAN LENGTH	JUL. MEAN WEIGHT	AUG. AGE COMP.	AUG. MEAN LENGTH	AUG. MEAN WEIGHT	SEP. AGE COMP.	SEP. MEAN LENGTH	SEP. MEAN WEIGHT	OUT. AGE COMP.	OUT. MEAN LENGTH	OUT. MEAN WEIGHT	NOV. AGE COMP.	NOV. MEAN LENGTH	NOV. MEAN WEIGHT	DEC. AGE COMP.	DEC. MEAN LENGTH	DEC. MEAN WEIGHT	AGE
2	1.0	23.0	0.078																2
3	1.6	25.8	0.116							2.7	32.0	0.239				3.9	32.3	0.245	3
4	107.2	35.8	0.356	88.8	37.4	0.404	120.5	36.4	0.371	85.9	36.3	0.369	13.4	39.2	0.472	95.4	36.3	0.368	4
5	221.7	39.6	0.491	205.0	40.4	0.525	219.8	39.2	0.480	239.8	39.3	0.483	141.9	41.6	0.578	268.1	39.0	0.472	5
6	275.4	43.1	0.650	377.2	43.2	0.656	292.2	43.1	0.654	235.5	43.5	0.675	272.8	44.5	0.725	249.6	43.3	0.667	6
7	142.2	46.6	0.858	163.7	46.0	0.824	165.0	47.0	0.889	206.1	47.5	0.917	273.3	48.0	0.938	194.3	46.8	0.866	7
8	96.6	51.7	1.214	107.9	50.5	1.127	131.4	51.4	1.181	151.6	50.3	1.099	213.4	50.4	1.116	125.9	48.9	0.997	8
9	41.1	57.7	1.739	30.2	55.1	1.474	41.1	55.3	1.495	49.3	52.8	1.284	63.9	52.8	1.286	32.7	52.3	1.262	9
10	36.1	62.6	2.304	11.8	57.9	1.750	15.9	57.9	1.765	14.2	55.3	1.497	9.7	57.1	1.679	8.9	57.4	1.702	10
11	20.8	67.8	2.980	3.4	64.4	2.472	3.2	65.3	2.632	10.4	59.9	1.961	9.3	57.4	1.675	11.6	61.1	2.105	11
12	35.7	69.3	3.239	4.6	63.1	2.344	7.1	65.8	2.776	3.1	65.6	2.631	2.2	64.3	2.453	8.4	68.8	3.109	12
13	12.2	74.2	4.044	0.6	64.2	2.434	2.8	75.3	4.256	1.4	67.3	2.856				1.2	68.2	2.981	13
14	7.1	82.8	5.920				0.7	79.5	5.076										14
15	0.6	85.0	6.302	3.4	73.0	3.739	0.3	79.0	4.871										15
16	0.7	89.0	7.257	3.4	79.0	4.871													16
17																			17
TOTAL	1000			1000			1000			1000			1000			1000			

AGE	1st Q. AGE COMP.	1st Q. MEAN LENGTH	1st Q. MEAN WEIGHT	2nd Q. AGE COMP.	2nd Q. MEAN LENGTH	2nd Q. MEAN WEIGHT	3rd Q. AGE COMP.	3rd Q. MEAN LENGTH	3rd Q. MEAN WEIGHT	4th Q. AGE COMP.	4th Q. MEAN LENGTH	4th Q. MEAN WEIGHT	YEAR 1999 AGE COMP.	YEAR 1999 MEAN LENGTH	YEAR 1999 MEAN WEIGHT	AGE
2							0.5	23.0	0.078				0.1	23.0	0.078	2
3	1.4	29.5	0.180	2.5	32.4	0.252	0.8	25.8	0.116	2.9	32.2	0.243	1.9	31.0	0.220	3
4	79.7	36.2	0.361	89.1	35.3	0.335	109.7	36.2	0.367	79.6	36.4	0.371	86.8	35.9	0.352	4
5	250.9	39.1	0.474	296.8	38.7	0.457	218.9	39.5	0.491	239.1	39.3	0.485	264.0	39.0	0.469	5
6	234.7	42.9	0.643	262.1	41.6	0.580	294.2	43.1	0.653	248.2	43.5	0.680	253.2	42.4	0.622	6
7	163.5	46.9	0.871	152.9	45.7	0.795	153.1	46.7	0.866	210.4	47.3	0.897	161.4	46.5	0.845	7
8	132.7	50.1	1.087	104.8	49.7	1.054	110.6	51.4	1.189	148.1	49.7	1.060	120.4	50.1	1.085	8
9	55.9	54.6	1.450	54.6	53.7	1.379	39.7	56.5	1.623	43.2	52.6	1.276	52.6	54.3	1.427	9
10	34.4	59.7	1.938	23.0	56.0	1.572	25.7	61.2	2.151	10.9	56.4	1.606	27.4	58.6	1.834	10
11	17.7	61.5	2.152	11.3	57.8	1.760	12.3	67.5	2.930	10.8	60.2	2.001	14.1	60.9	2.103	11
12	11.4	65.6	2.649	1.7	63.4	2.401	21.5	68.7	3.160	5.6	67.9	2.978	8.4	66.4	2.797	12
13	12.7	69.3	3.229	0.2	68.7	3.123	7.4	74.3	4.056	1.1	67.8	2.925	6.5	69.9	3.334	13
14	3.6	75.2	4.174	0.7	72.5	3.667	3.9	82.6	5.864				2.3	76.3	4.451	14
15	1.2	76.3	4.407	0.3	77.5	4.580	0.8	77.9	4.779				0.7	76.7	4.483	15
16	0.05	79.0	4.871				0.8	83.5	5.934				0.1	82.6	5.740	16
17	0.05	79.0	4.871										0.02	79.0	4.871	17
TOTAL	1000			1000			1000			1000			1000			
Nº FISH AGED	697			757			486			520			1763			

TABLE XXIII-A: GREENLAND HALIBUT, DIV.3O, 1999: length composition of the trawl catches.

LENGTH GROUP	APR.	JUL.	AUG	SEP.	OCT.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
26				0.7			0.4		0.3	26
28		15.2		1.1	2.1		2.4	2.1	2.3	28
30		30.4	1.0	19.9	1.3		14.5	1.3	12.1	30
32	16.8	11.6	7.9	17.9	3.0	16.8	13.6	3.0	12.1	32
34	8.4	57.6	20.6	53.5	36.8	8.4	42.5	36.8	40.5	34
36	42.0	92.4	100.4	125.9	107.8	42.0	112.9	107.8	109.7	36
38	33.6	94.1	97.3	99.5	83.4	33.6	98.1	83.4	93.7	38
40	126.1	145.8	117.2	124.4	127.2	126.1	124.5	127.2	124.9	40
42	100.8	106.6	124.9	99.2	133.9	100.8	109.1	133.9	112.5	42
44	25.2	118.2	106.3	123.6	124.6	25.2	116.9	124.6	115.0	44
46	151.3	109.7	113.6	96.0	109.5	151.3	103.8	109.5	106.3	46
48	84.0	70.0	80.4	55.9	110.5	84.0	66.2	110.5	73.4	48
50	58.8	59.3	76.3	41.9	69.3	58.8	56.1	69.3	58.1	50
52	100.8	38.8	73.4	50.4	56.1	100.8	57.0	56.1	58.4	52
54	117.6	27.2	44.5	52.8	12.3	117.6	46.8	12.3	44.0	54
56	58.8	15.6	19.9	22.0	13.7	58.8	20.5	13.7	20.8	56
58	16.8		8.2	6.5	4.3	16.8	6.3	4.3	6.4	58
60	16.8		3.1	3.0	1.3	16.8	2.7	1.3	2.9	60
62	16.8		4.5	2.0		16.8	2.7		2.7	62
64	16.8	7.6	0.2	0.7	1.7	16.8	1.4	1.7	1.9	64
66	8.4		0.3	1.0	1.3	8.4	0.7	1.3	1.0	66
68				0.3			0.2		0.1	68
70				0.6			0.3		0.3	70
72				0.9			0.5		0.4	72
74										74
76										76
78										78
80				0.1			0.04		0.03	80
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	2	15	14	5	1	31	5	37	
SAMPLING WEIGHT (Kg)	118	14	1477	1258	495	118	2749	495	3362	
No.F.MEASURED	119	194	1729	1584	635	119	3507	635	4261	
MEAN LENGTH (cm)	48.5	43.3	45.1	43.8	44.4	48.5	44.2	44.4	44.4	
MEAN WEIGHT (g)	1035	708	801	739	751	1035	757	751	765	
DEPTH RANGE (m)	304/1154	128/756	68/570	68/1083	76/640	304/1154	68/1083	76/640	68/1154	

TABLE XXIII-B: GREENLAND HALIBUT, DIV.3O, 1999: age composition (‰), mean length (cm) and mean weight (Kg) at age of the trawl catches.

AGE	APR. AGE COMP.	APR. MEAN LENGTH	APR. MEAN WEIGHT	JUL. AGE COMP.	JUL. MEAN LENGTH	JUL. MEAN WEIGHT	AUG. AGE COMP.	AUG. MEAN LENGTH	AUG. MEAN WEIGHT	AGE
3										3
4	32.7	35.9	0.353	141.0	34.7	0.323	87.5	37.1	0.392	4
5	149.2	40.2	0.520	214.3	39.5	0.491	177.8	40.0	0.509	5
6	192.9	43.5	0.673	323.3	43.5	0.672	307.2	43.4	0.671	6
7	167.0	48.0	0.944	164.7	47.1	0.890	203.5	47.6	0.921	7
8	212.8	51.9	1.217	115.4	50.4	1.107	159.8	51.2	1.163	8
9	136.6	54.5	1.447	28.6	54.5	1.435	41.9	54.3	1.401	9
10	61.7	57.1	1.676	7.4	56.3	1.609	16.3	56.3	1.592	10
11	39.4	60.7	2.060	1.4	65.0	2.536	2.0	63.1	2.303	11
12	5.6	62.1	2.174	3.4	61.3	2.135	3.6	59.1	1.879	12
13	2.1	61.8	2.148	0.7	65.0	2.536	0.4	63.0	2.284	13
14										14
15										15
16										16
TOTAL	1000			1000			1000			

AGE	SEP. AGE COMP.	SEP. MEAN LENGTH	SEP. MEAN WEIGHT	OUT. AGE COMP.	OUT. MEAN LENGTH	OUT. MEAN WEIGHT	AGE
3	0.2	27.0	0.134	0.2	33.0	0.263	3
4	146.7	35.7	0.350	77.2	36.8	0.383	4
5	207.1	39.4	0.486	230.3	39.8	0.500	5
6	294.2	43.3	0.662	266.8	43.6	0.682	6
7	167.4	47.0	0.883	222.9	47.1	0.889	7
8	127.9	51.5	1.194	147.7	49.4	1.032	8
9	36.1	55.0	1.466	39.4	51.6	1.185	9
10	13.1	56.4	1.603	8.0	54.9	1.461	10
11	1.5	63.9	2.406	5.8	59.7	1.938	11
12	3.9	59.8	1.981	1.1	64.8	2.528	12
13	0.2	64.3	2.457	0.4	67.0	2.807	13
14	0.6	71.0	3.408				14
15	0.9	73.0	3.739				15
16	0.1	81.0	5.295				16
TOTAL	1000			1000			

AGE	2nd Q. AGE COMP.	2nd Q. MEAN LENGTH	2nd Q. MEAN WEIGHT	3rd Q. AGE COMP.	3rd Q. MEAN LENGTH	3rd Q. MEAN WEIGHT	4th Q. AGE COMP.	4th Q. MEAN LENGTH	4th Q. MEAN WEIGHT	YEAR 1999 AGE COMP.	YEAR 1999 MEAN LENGTH	YEAR 1999 MEAN WEIGHT	AGE
3				0.1	27.0	0.134	0.2	33.0	0.263	0.1	28.4	0.165	3
4	32.7	35.9	0.353	125.3	35.9	0.357	77.2	36.8	0.383	115.0	36.0	0.359	4
5	149.2	40.2	0.520	197.7	39.6	0.494	230.3	39.8	0.500	200.9	39.6	0.495	5
6	192.9	43.5	0.673	302.3	43.4	0.666	266.8	43.6	0.682	293.3	43.4	0.669	6
7	167.0	48.0	0.944	179.7	47.2	0.899	222.9	47.1	0.889	185.7	47.2	0.899	7
8	212.8	51.9	1.217	137.6	51.3	1.172	147.7	49.4	1.032	141.6	51.0	1.153	8
9	136.6	54.5	1.447	37.2	54.7	1.437	39.4	51.6	1.185	40.9	54.2	1.402	9
10	61.7	57.1	1.676	13.5	56.4	1.599	8.0	54.9	1.461	14.3	56.3	1.598	10
11	39.4	60.7	2.060	1.7	63.7	2.376	5.8	59.7	1.938	3.6	61.6	2.151	11
12	5.6	62.1	2.174	3.7	59.8	1.963	1.1	64.8	2.528	3.4	60.1	2.003	12
13	2.1	61.8	2.148	0.3	64.0	2.408	0.4	67.0	2.807	0.4	64.1	2.426	13
14				0.3	71.0	3.408				0.3	71.0	3.408	14
15				0.5	73.0	3.739				0.4	73.0	3.739	15
16				0.0	81.0	5.295				0.03	81.0	5.295	16
TOTAL	1000			1000			1000			1000			
Nº FISH AGED	757			486			520			1763			

TABLE XXIV : ROUGHHEAD GRENADIER, DIV.3L, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	SEP.	1st Q.	2nd Q.	3rd Q.	TOTAL	LENGTH GROUP
6				0.9						0.5		0.3	6
7			11.6	9.8	3.0		1.5	3.5	6.8	7.1	1.5	5.6	7
8			28.5	54.6	16.0	17.5	18.7	33.6	16.6	39.5	20.5	29.4	8
9			91.2	136.3	53.8	82.2	84.9	75.3	53.3	103.9	83.1	86.9	9
10	3.8	6.8	110.9	123.3	61.5	117.8	118.6	121.5	67.2	99.0	118.8	96.5	10
11	60.2	109.3	165.9	149.5	165.7	161.1	169.3	193.7	135.7	155.9	171.0	154.9	11
12	115.3	154.5	175.5	202.3	242.6	213.0	257.6	267.2	161.5	218.1	250.7	213.0	12
13	207.4	210.8	133.5	141.9	176.4	159.9	183.5	143.6	165.2	155.4	173.9	162.3	13
14	211.1	184.5	90.5	69.6	119.7	73.6	88.7	67.7	133.2	89.3	83.2	98.0	14
15	182.4	154.3	51.6	38.4	45.6	40.6	31.6	36.6	98.1	41.2	33.9	52.7	15
16	70.5	100.9	29.1	18.4	22.6	15.1	14.4	14.2	54.9	20.0	14.5	26.8	16
17	69.4	29.1	17.5	15.7	16.9	17.7	6.3	4.4	27.8	16.1	8.1	16.9	17
18	55.2	27.3	15.9	12.8	16.6	8.7	3.2	4.4	24.4	14.3	4.3	14.2	18
19	16.3	6.7	10.0	7.5	12.3	8.5	2.8	6.0	10.0	9.4	4.3	8.3	19
20	3.2	4.8	7.9	3.8	3.8	5.9	3.8	4.7	6.4	3.8	4.3	4.5	20
21	2.2	1.4	8.6	3.1	9.3	13.0	6.3	4.4	5.7	5.5	7.3	6.0	21
22	2.9	5.3	11.3	2.5	7.3	5.3	3.1	3.4	8.5	4.4	3.5	5.1	22
23			6.0	1.8	6.6	12.2	2.0	4.5	3.5	3.7	4.2	3.8	23
24			7.7	1.3	3.3	4.1	1.3	2.4	4.5	2.1	1.9	2.6	24
25		1.4	7.5	1.3	2.5	5.3	0.4	0.7	4.8	1.8	1.3	2.4	25
26		2.8	3.8	1.1	4.6	11.2	1.2	1.0	3.0	2.5	3.0	2.7	26
27			3.8	0.8	6.2	6.4	0.2	2.4	2.2	2.9	1.7	2.4	27
28			2.3	0.9	1.5	3.9		2.1	1.3	1.1	1.0	1.1	28
29			3.7	0.5	2.4	7.6	0.1	0.4	2.1	1.3	1.5	1.5	29
30			2.1	1.0		3.4	0.2		1.2	0.6	0.8	0.8	30
31			1.1	0.6		1.9		1.0	0.6	0.3	0.5	0.4	31
32			0.6			1.9	0.3		0.3		0.5	0.2	32
33			0.3	0.3				1.0	0.2	0.2	0.1	0.2	33
34													34
35			1.6			2.3			0.9		0.4	0.3	35
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	7	4	15	21	8	7	28	10	26	29	45	100	
SAMPLING WEIGHT (Kg)	307	182	974	1265	580	352	1823	508	1463	1845	2683	5991	
No.F.MEASURED	605	383	1971	3058	1079	688	4534	1192	2959	4137	6414	13510	
MEAN LENGTH (cm)	14.8	14.3	13.3	12.3	13.4	13.6	12.5	12.6	13.8	12.8	12.7	13.0	
MEAN WEIGHT (g)	329	306	297	217	280	324	216	227	304	242	237	255	
DEPTH RANGE (m)	808/1260	667/1155	705/1250	715/1220	711/1220	780/1200	703/1183	744/1300	667/1260	711/1220	703/1300	667/1300	

TABLE XXV : ROUGHHEAD GRENADIER, DIV.3M, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	AUG	1st Q.	2nd Q.	3rd Q.	TOTAL	LENGTH GROUP
7				17.1					11.4		3.2	7
8			4.6	42.4	15.8	53.7	2.4	1.4	33.4	34.7	19.7	8
9			46.6	88.3	59.0	61.8	119.3	13.8	78.4	83.1	51.4	9
10	5.4	10.0	69.1	141.0	53.3	82.8	36.9	25.1	111.4	65.8	60.9	10
11	14.0	10.0	123.5	130.9	75.6	141.7	92.1	45.8	112.3	123.4	86.2	11
12	68.9	230.0	226.9	177.2	128.1	221.1	216.1	142.3	160.7	219.3	168.9	12
13	168.6	230.0	166.1	213.3	213.8	162.7	219.0	178.0	213.5	183.6	189.6	13
14	183.6	280.0	113.0	105.0	83.5	114.6	139.6	178.5	97.7	123.8	140.4	14
15	153.2	80.0	72.3	53.5	96.5	77.5	51.8	117.2	68.0	68.0	89.5	15
16	152.5	50.0	41.7	5.3	37.4	21.0	23.8	102.8	16.1	22.0	55.7	16
17	108.4	20.0	27.8	8.8	22.3	22.7	38.1	69.9	13.3	28.4	42.3	17
18	51.8	70.0	17.7	8.8	15.1	6.7	11.9	44.7	10.9	8.6	25.1	18
19	33.8		2.3		22.3		2.4	18.9	7.5	0.9	10.7	19
20	7.2	10.0	5.6		7.9	6.7	14.3	7.2	2.7	9.5	6.6	20
21	16.2	10.0	16.6	7.3	15.1	3.4	29.8	15.3	10.0	13.1	13.2	21
22	24.7		5.6	1.1	23.0		2.4	15.0	8.5	0.9	9.2	22
23	4.4		3.4		23.0	3.4		3.4	7.8	2.1	4.3	23
24	1.3		9.0		23.0			3.4	7.8		3.7	24
25	5.7		11.2		23.0	3.4		6.4	7.8	2.1	5.6	25
26												26
27			7.9		31.0	3.4		2.3	10.5	2.1	4.6	27
28			14.6		15.1	6.7		4.3	5.1	4.2	4.5	28
29			2.3		15.8	3.4		0.7	5.3	2.1	2.4	29
30			5.6			3.4		1.7		2.1	1.3	30
31												31
32			3.4					1.0			0.4	32
33												33
34												34
35			3.4					1.0			0.4	35
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	6	1	4	3	2	3	3	11	5	6	22	
SAMPLING WEIGHT (Kg)	324	41	254	92	113	108	159	619	205	267	1091	
No.F.MEASURED	557	100	441	257	132	123	387	1098	389	510	1997	
MEAN LENGTH (cm)	15.8	14.4	14.3	12.3	15.5	13.1	13.4	15.1	13.4	13.2	14.1	
MEAN WEIGHT (g)	404	306	364	205	472	263	265	376	295	264	322	
DEPTH RANGE (m)	852/1136	950/1081	892/1141	882/1108	846/1186	266/1243	710/1099	852/1141	846/1186	266/1243	266/1243	

TABLE XXVI : ROUGHHEAD GRENADIER, DIV.3N, 1999: length composition of the trawl catches.

LENGTH GROUP	JAN.	FEB.	MAR.	APR.	MAY	JUL.	SEP.	DEC.	1st Q.	2nd Q.	3rd Q.	4st Q.	TOTAL
8					23.0	57.7	16.7			3.4	55.1		4.6
9					111.6	101.1	133.3			16.4	103.1		11.0
10	0.2	19.6	5.2	9.7	89.7	93.4	83.3	3.7	6.2	21.4	92.7	3.7	15.6
11	16.1	24.3	17.1	126.2	66.6	160.8	100.0	21.2	18.3	117.5	157.0	21.2	52.1
12	88.5	76.0	77.8	145.6	152.7	212.3	233.3	59.5	83.0	146.7	213.6	59.5	106.1
13	221.1	105.7	252.6	194.2	112.7	154.2	116.7	184.8	199.8	182.2	151.9	184.8	191.5
14	189.6	143.0	211.9	271.8	81.3	87.5	50.0	211.1	183.2	243.9	85.2	211.1	192.7
15	152.9	129.4	177.0	126.2	64.3	57.1	16.7	164.4	152.6	117.1	54.6	164.4	137.9
16	119.0	119.9	110.7	19.4	54.5	7.0		104.4	117.3	24.6	6.5	104.4	86.5
17	74.7	168.8	74.1	58.3	48.5	6.3	16.7	31.9	97.8	56.8	6.9	31.9	78.2
18	43.5	73.4	27.2	9.7	38.8	7.0	33.3	39.5	47.2	14.0	8.6	39.5	36.1
19	17.3	38.8	13.5	9.7	24.3	3.1	33.3	75.5	21.7	11.8	5.0	75.5	21.0
20	34.9	11.4	12.2	29.1	25.5	7.0	16.7	57.0	23.9	28.6	7.6	57.0	25.7
21	24.5	60.8	10.5		23.0	8.2	50.0	18.4	30.3	3.4	10.8	18.4	21.8
22	11.1	13.9	7.7		23.0	12.0	16.7	7.4	11.0	3.4	12.3	7.4	9.0
23	3.8	12.4	2.5		15.8	8.9		17.4	5.6	2.3	8.3	17.4	5.6
24	1.1				7.3	5.7	33.3		0.6	1.1	7.4		1.1
25	1.3	1.3			23.0	1.9			1.0	3.4	1.8		1.6
26	0.5	1.3				3.1		3.7	0.6		2.9	3.7	0.8
27					14.5	1.9	33.3			2.1	3.9		0.8
28						1.9	16.7				2.8		0.2
29													
30						1.9					1.8		0.1
TOTAL	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
No. SAMPLES	9	4	3	1	2	4	1	3	16	3	5	3	27
SAMPLING WEIGHT (Kg)	474	252	169	44	91	162	44	204	895	135	206	204	1440
No.F.MEASURED	807	375	320	103	129	319	60	302	1502	232	379	302	2415
MEAN LENGTH (cm)	15.5	16.2	15.0	14.2	14.6	12.8	14.5	15.9	15.6	14.3	12.9	15.9	15.1
MEAN WEIGHT (g)	383	442	348	297	379	251	400	416	389	309	260	416	362
DEPTH RANGE (m)	706/1860	772/1740	628/1600	56/1439	896/1312	421/1240	136/1079	490/1100	628/1860	56/1439	136/1240	490/1100	56/1860

TABLE XXVII : WITCH FLOUNDER, DIV. 3L, 1999: length composition of the trawl catches.

LENGTH GROUP	MAR.	APR.	MAY	1st Q.	2nd Q.	TOTAL	LENGTH GROUP
20		1.1			0.8	0.6	20
22		1.1			0.8	0.6	22
24							24
26	1.5	1.1	5.1	1.5	2.2	2.0	26
28	2.1	5.5	3.0	2.1	4.8	4.0	28
30	11.3	29.5	31.8	11.3	30.1	24.6	30
32	67.5	74.4	104.1	67.5	82.1	77.8	32
34	97.3	136.5	90.1	97.3	124.5	116.6	34
36	173.9	160.7	140.9	173.9	155.6	160.9	36
38	147.9	146.1	132.1	147.9	142.4	144.0	38
40	157.4	144.7	128.6	157.4	140.5	145.4	40
42	105.6	116.6	142.7	105.6	123.4	118.2	42
44	117.3	58.1	92.6	117.3	67.1	81.7	44
46	47.4	55.4	66.2	47.4	58.2	55.1	46
48	21.9	28.8	23.1	21.9	27.3	25.7	48
50	25.5	28.6	12.1	25.5	24.3	24.7	50
52	13.5	6.6	7.7	13.5	6.9	8.8	52
54	6.6	2.2	11.4	6.6	4.6	5.2	54
56	1.6	2.5	8.4	1.6	4.0	3.3	56
58		0.3			0.2	0.2	58
60							60
62							62
64							64
66							66
68	1.6			1.6		0.5	68
TOTAL	1000	1000	1000	1000	1000	1000	
No. SAMPLES	5	13	4	5	17	22	
SAMPLING WEIGHT (Kg)	299	746	135	299	881	1180	
No.F.MEASURED	660	1700	285	660	1985	2645	
MEAN LENGTH (cm)	40.4	39.7	40.1	40.4	39.8	40.0	
MEAN WEIGHT (g)	483	454	474	483	459	466	
DEPTH RANGE (m)	705/1193	715/1220	711/1220	705/1193	711/1220	705/1220	

TABLE XXVIII : WITCH FLOUNDER, DIV. 3N, 1999: length composition of the trawl catches.

LENGTH GROUP	MAY	JUL.	NOV.	2nd Q.	3rd Q.	4st Q.	TOTAL	LENGTH GROUP
26	16.6		2.3	16.6		2.3	3.6	26
28	10.0			10.0			1.1	28
30	43.1		33.1	43.1		33.1	30.5	30
32	79.7		125.7	79.7		125.7	106.6	32
34	95.7	37.7	144.4	95.7	37.7	144.4	127.1	34
36	129.1	75.5	187.2	129.1	75.5	187.2	168.4	36
38	145.7	226.4	198.9	145.7	226.4	198.9	196.3	38
40	162.0	207.5	156.9	162.0	207.5	156.9	163.1	40
42	116.0	132.1	95.5	116.0	132.1	95.5	101.8	42
44	43.1	132.1	26.7	43.1	132.1	26.7	40.3	44
46	33.1	75.5	4.6	33.1	75.5	4.6	15.6	46
48	46.5	75.5	15.4	46.5	75.5	15.4	25.5	48
50	39.7	37.7	4.7	39.7	37.7	4.7	12.2	50
52	16.6		2.3	16.6		2.3	3.6	52
54	23.1		2.3	23.1		2.3	4.3	54
TOTAL	1000	1000	1000	1000	1000	1000	1000	
No. SAMPLES	2	1	3	2	1	3	6	
SAMPLING WEIGHT (Kg)	58	27	196	58	27	196	281	
No.F.MEASURED	123	53	496	123	53	496	672	
MEAN LENGTH (cm)	40.1	42.2	38.2	40.1	42.2	38.2	38.8	
MEAN WEIGHT (g)	481	546	386	481	546	386	415	
DEPTH RANGE (m)	896/1312	823/1240	82/1100	896/1312	823/1240	82/1100	82/1312	

TABLE XXIX : WITCH FLOUNDER, DIV. 3O, 1999: length composition of the trawl catches.

LENGTH GROUP	APR.	OCT.	NOV.	2nd Q.	4st Q.	TOTAL	LENGTH GROUP
16		2.3			0.9	0.9	16
18			0.5		0.3	0.3	18
20							20
22							22
24		2.3			0.9	0.9	24
26			0.5		0.3	0.3	26
28			1.4		0.9	0.9	28
30	73.2	23.0	42.1	73.2	34.8	35.9	30
32	122.0	96.9	103.1	122.0	100.7	101.3	32
34	48.8	92.5	138.5	48.8	120.9	118.9	34
36	268.3	179.1	197.4	268.3	190.4	192.5	36
38	219.5	206.9	156.2	219.5	175.7	176.9	38
40	48.8	182.2	144.1	48.8	158.7	155.7	40
42	97.6	130.5	114.4	97.6	120.6	119.9	42
44	24.4	39.4	42.5	24.4	41.3	40.9	44
46	48.8	27.6	25.7	48.8	26.4	27.0	46
48	24.4	13.9	16.4	24.4	15.4	15.7	48
50			7.9		4.9	4.8	50
52		3.5	4.4		4.0	3.9	52
54			4.3		2.6	2.6	54
56	24.4		0.4	24.4	0.2	0.9	56
TOTAL	1000	1000	1000	1000	1000	1000	
No. SAMPLES	1	3	12	1	15	16	
SAMPLING WEIGHT (Kg)	16	202	715	16	917	933	
No.F.MEASURED	41	495	1737	41	2232	2273	
MEAN LENGTH (cm)	38.7	39.0	38.7	38.7	38.8	38.8	
MEAN WEIGHT (g)	418	414	409	418	411	411	
DEPTH RANGE (m)	242/562	76/584	73/935	242/562	73/935	73/935	

Fig. 1A - Breakdown of the 1999 Portuguese trawl directed effort by species.

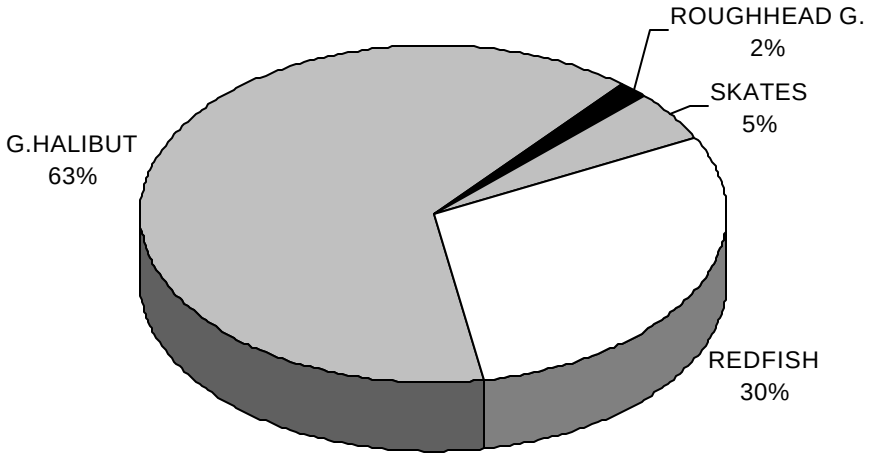
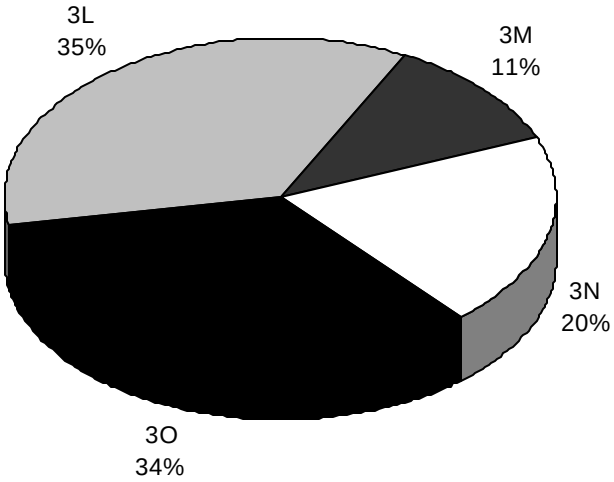
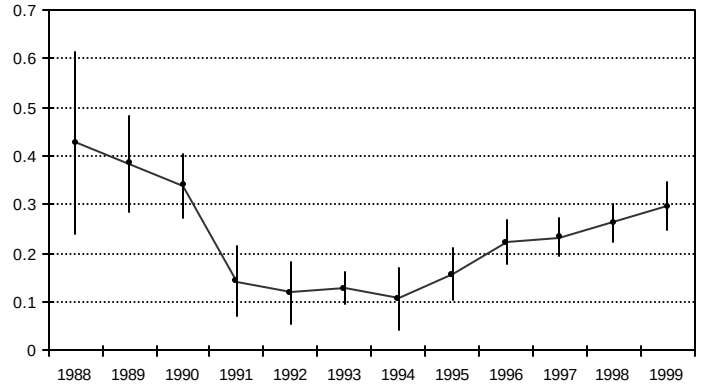
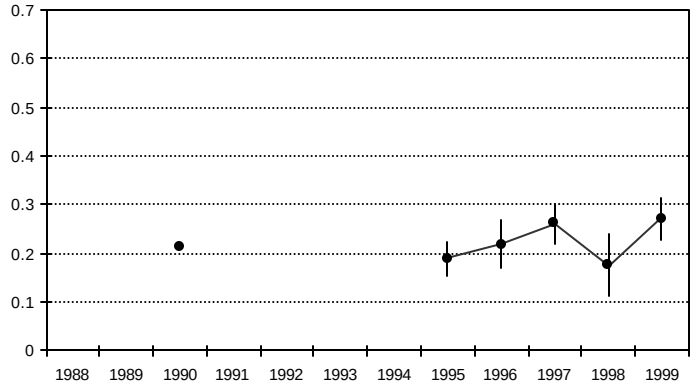


Fig. 1B - Breakdown of the 1999 Portuguese trawl directed effort by divisions.

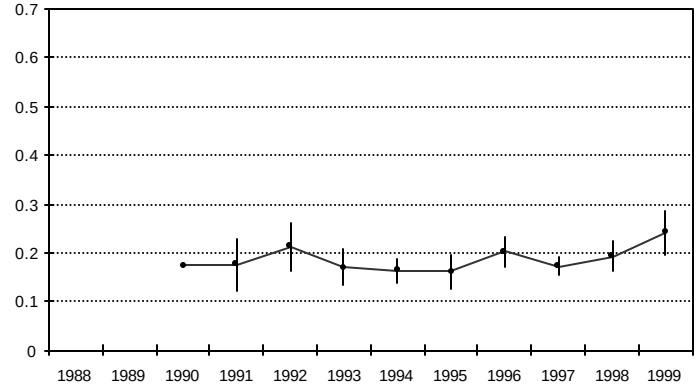




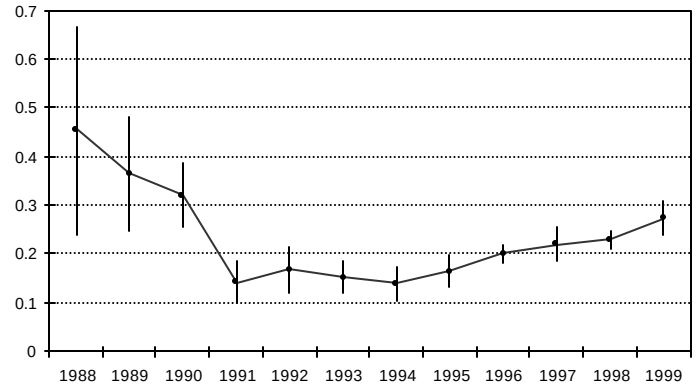
Div.3L



Div.3M



Div.3N



Div.3LMN

Fig. 2 : Greenland halibut trawl catch rates by division, 1988 - 1999.

Fig. 3 - Annual length composition of Cod in Division 3M, trawl fishery in 1999.

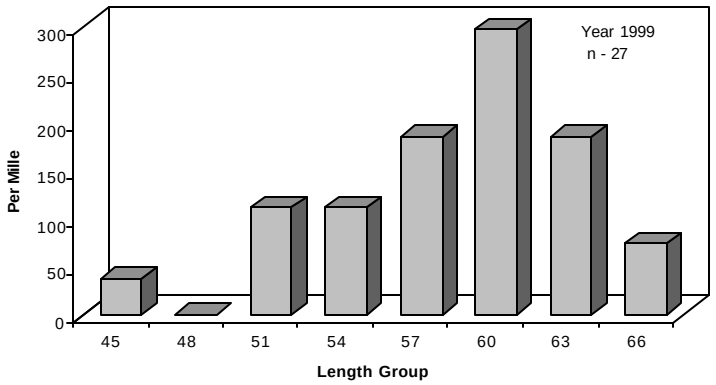


Fig. 4 - Annual age composition of Cod in Division 3M, trawl fishery in 1999.

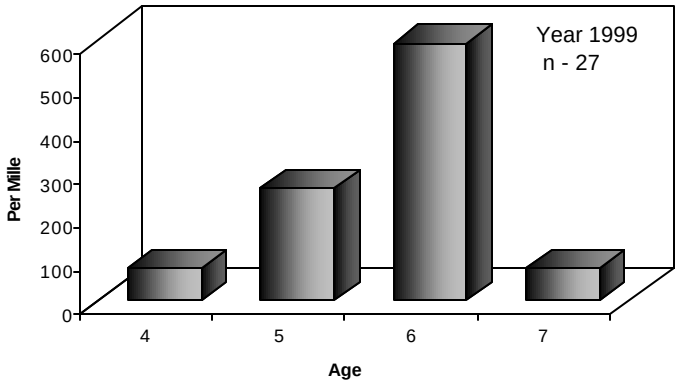


Fig. 5 - Annual length composition of Cod in Division 3N, trawl fishery in 1999.

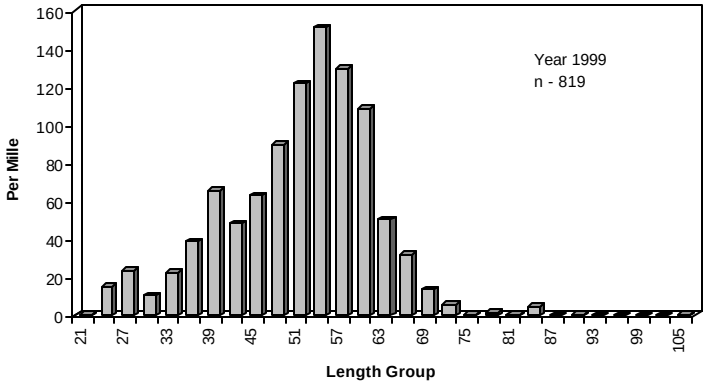


Fig. 6 - Annual length composition of Cod in Division 3O, trawl fishery in 1999.

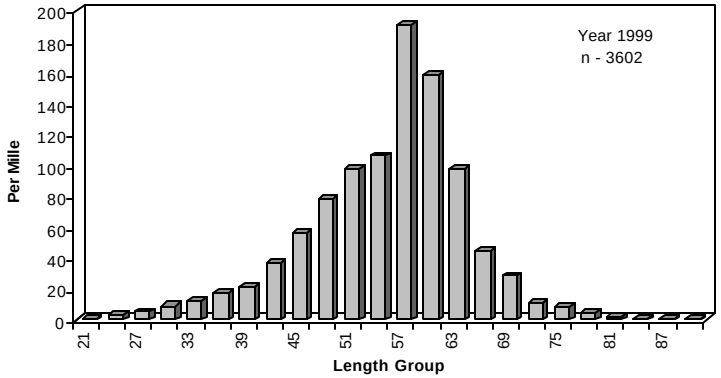


Fig. 7 - Annual length composition of Redfish (*S.mentella*) in Division 3L, trawl fishery in 1999.

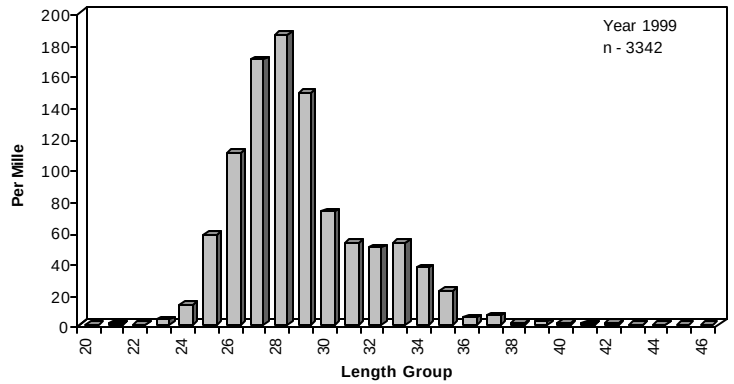


Fig. 8 - Annual length composition of Redfish (*S.mentella*) in Division 3M, trawl fishery in 1999.

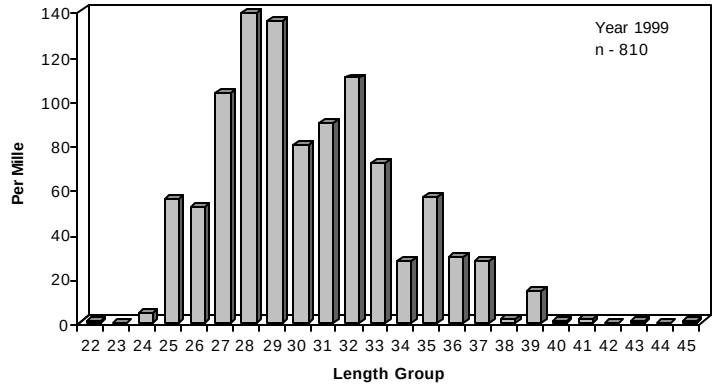


Fig. 10 - Annual length composition of Redfish (*S.mentella*) in Division 3N, trawl fishery in 1999.

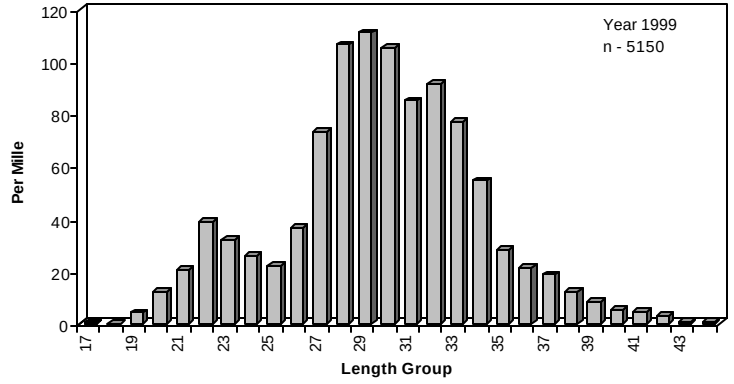


Fig. 9 - Annual age composition of Redfish (*S.mentella*) in Division 3M, trawl fishery in 1999.

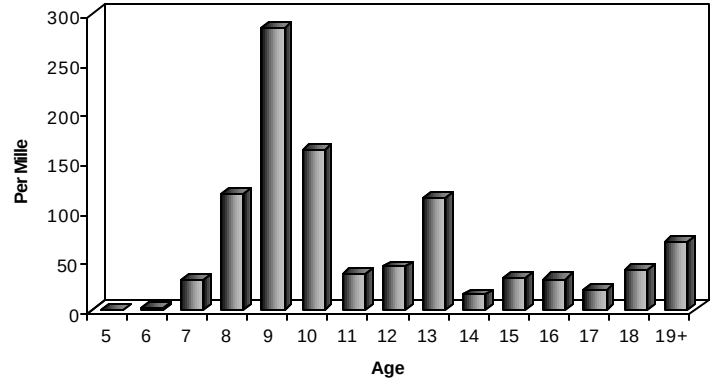


Fig. 11 - Annual length composition of Redfish (*S. mentella*) in Division 3O, trawl fishery in 1999.

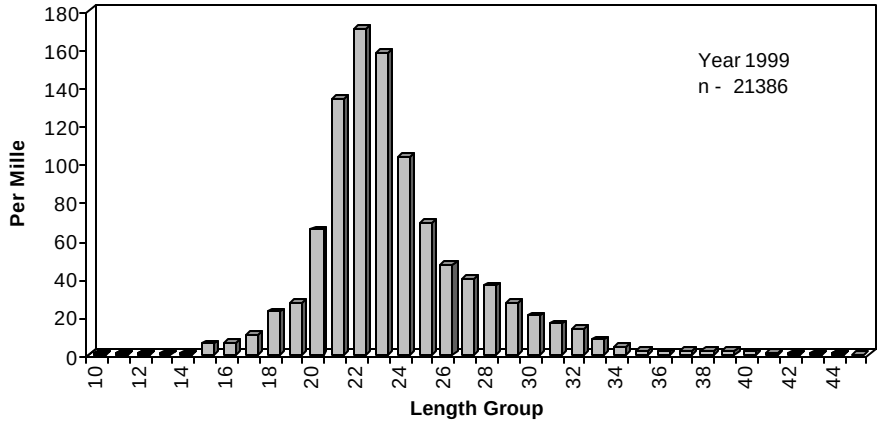


Fig. 12 - Annual length composition of Redfish (*S. marinus*) in Division 3N, trawl fishery in 1999.

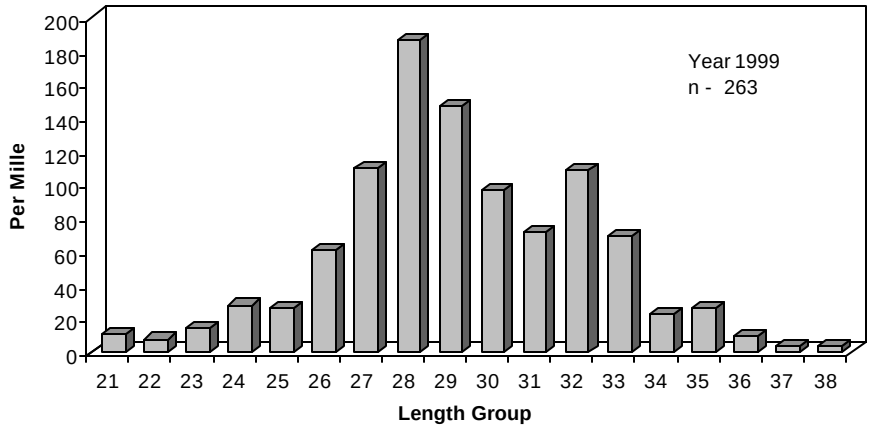


Fig. 13 - Annual length composition of Redfish (*S. marinus*) in Division 3O, trawl fishery in 1999.

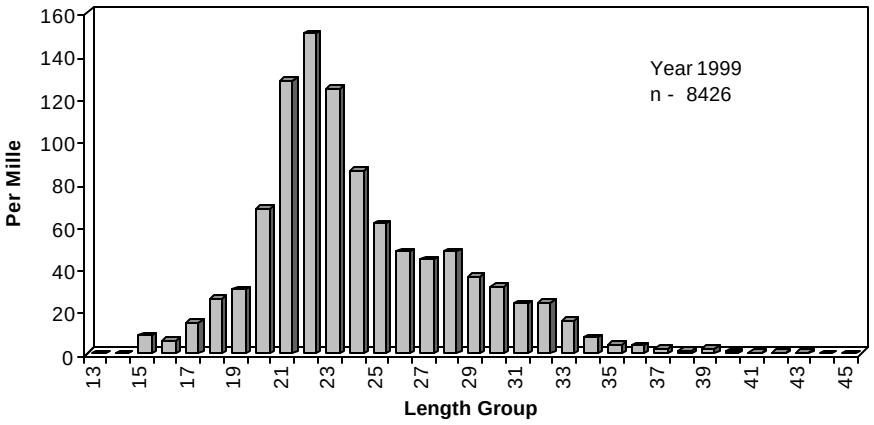


Fig. 14 - Annual length composition of American plaice in Division 3L, trawl fishery in 1999.

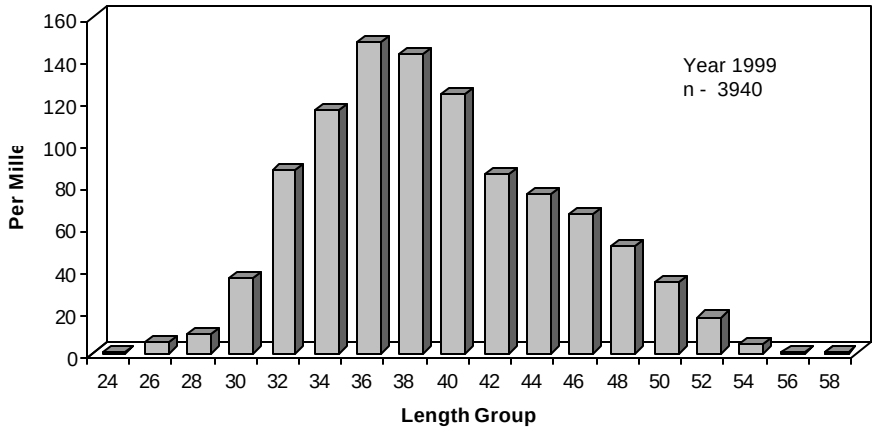


Fig. 15 - Annual length composition of American plaice in Division 3N, trawl fishery in 1999.

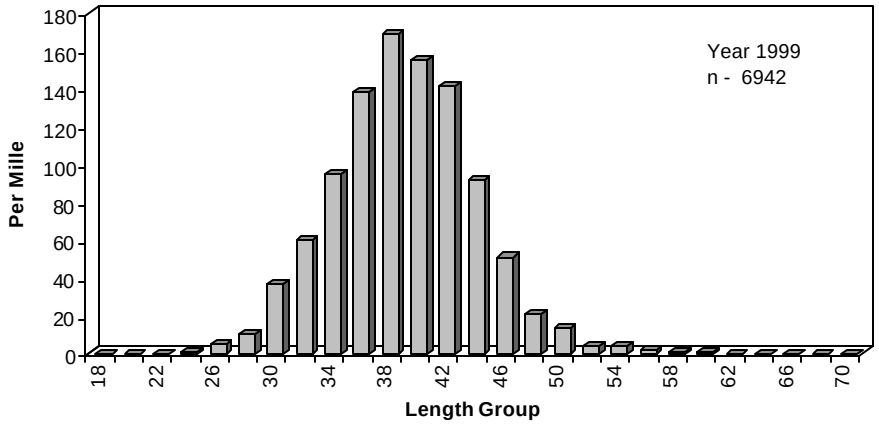


Fig. 16 - Annual length composition of American plaice in Division 3O, trawl fishery in 1999.

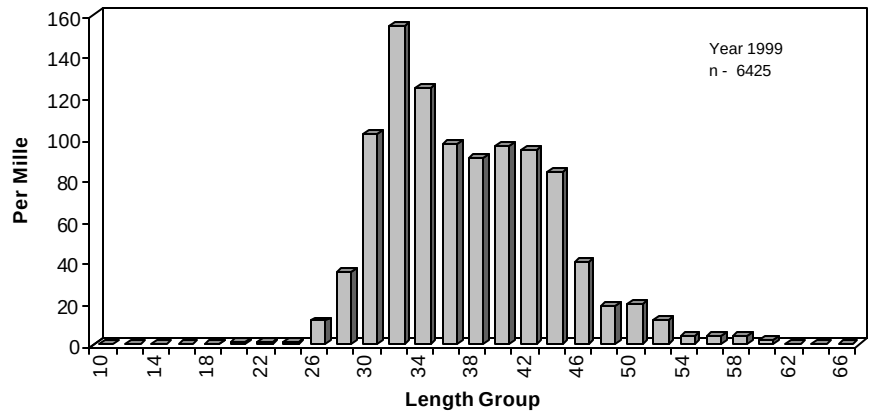


Fig. 17 - Annual length composition of Yellowtail flounder in Division 3N, trawl fishery in 1999.

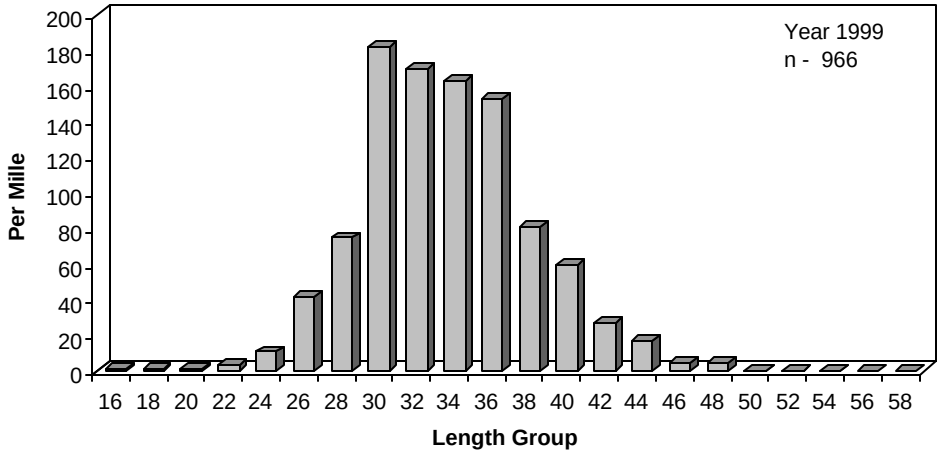


Fig. 18 - Annual length composition of Yellowtail flounder in Division 3O, trawl fishery in 1999.

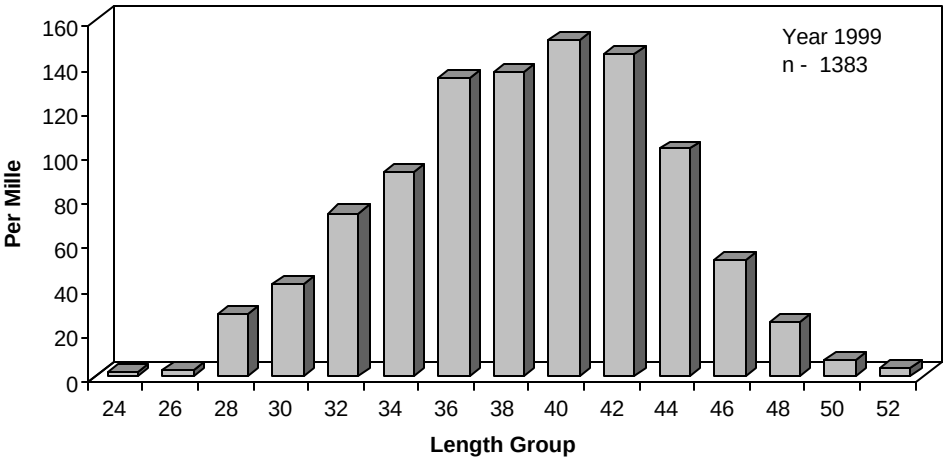


Fig. 19 - Annual length composition of Greenland halibut in Division 3L, trawl fishery in 1999.

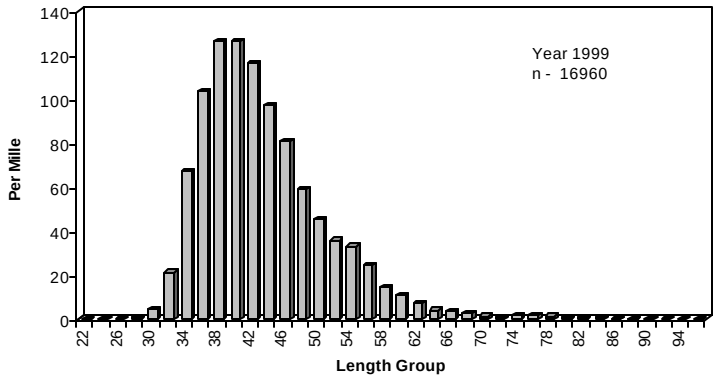


Fig. 20 - Annual age composition of Greenland halibut in Division 3L, trawl fishery in 1999.

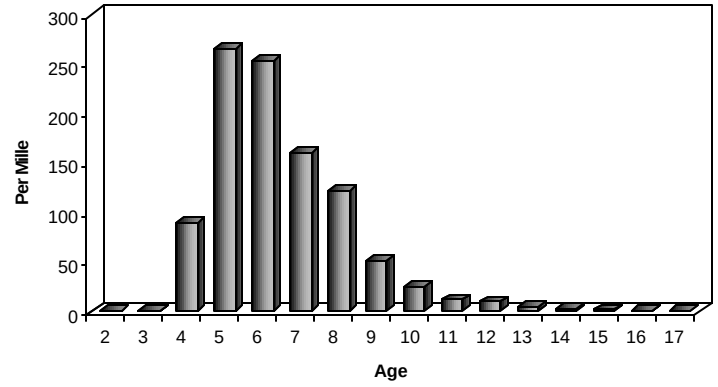


Fig. 21 - Annual length composition of Greenland halibut in Division 3M, trawl fishery in 1999.

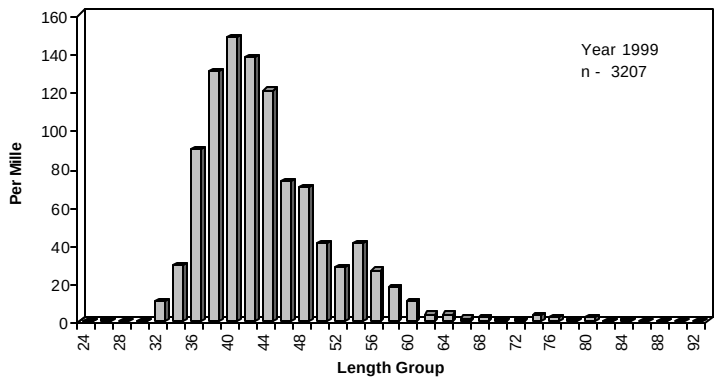


Fig. 22 - Annual age composition of Greenland halibut in Division 3M, trawl fishery in 1999.

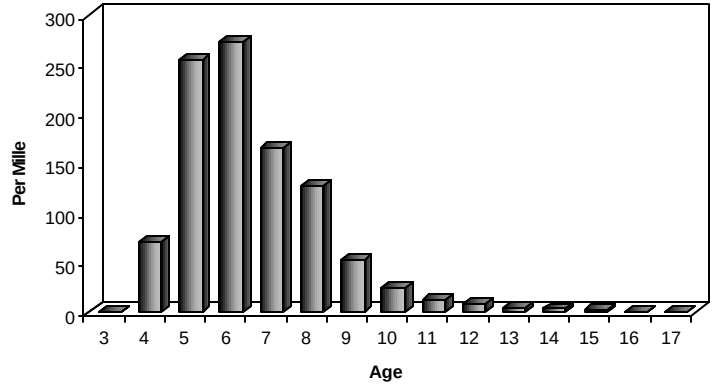


Fig. 23 - Annual length composition of Greenland halibut in Division 3N, trawl fishery in 1999.

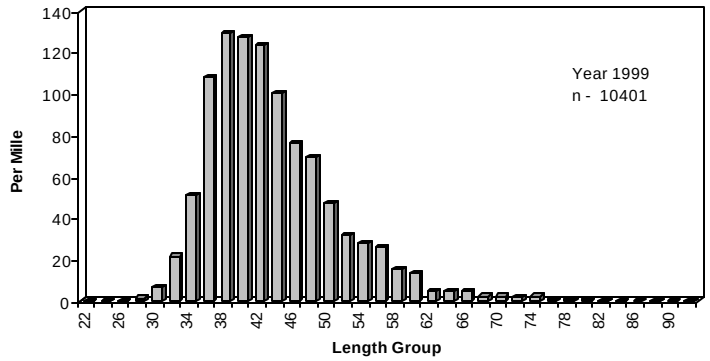


Fig. 24 - Annual age composition of Greenland halibut in Division 3N, trawl fishery in 1999.

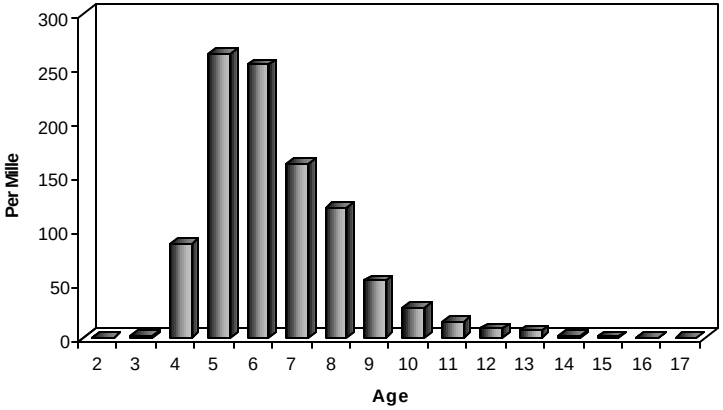


Fig. 25 - Annual length composition of Greenland halibut in Division 3O, trawl fishery in 1999.

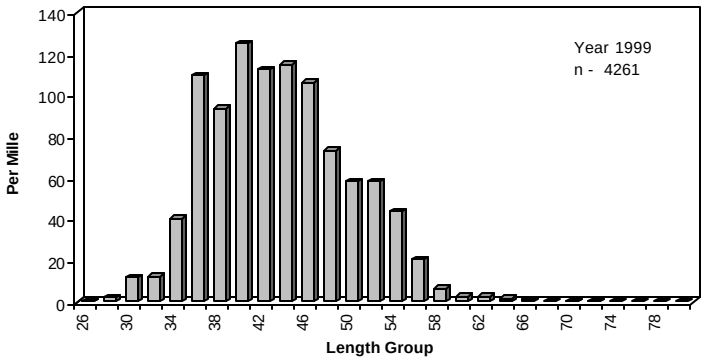


Fig. 26 - Annual age composition of Greenland halibut in Division 3O, trawl fishery in 1999.

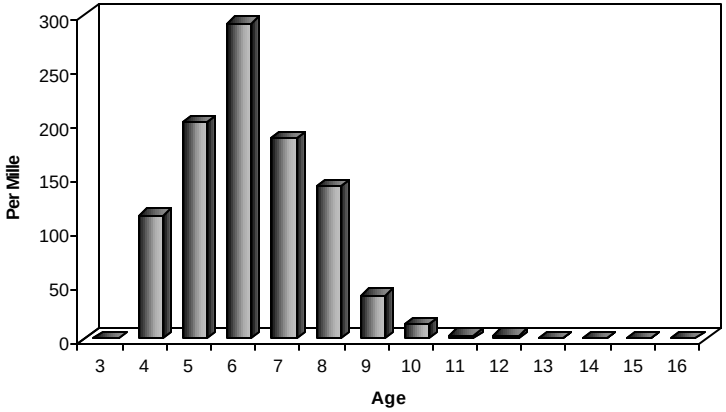


Fig. 27 - Annual length composition of Roughhead grenadier in Division 3L, trawl fishery in 1999.

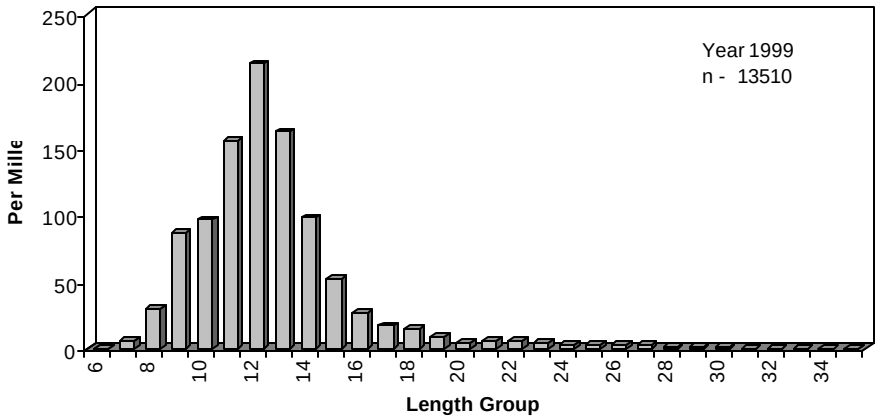


Fig. 28 - Annual length composition of Roughhead grenadier in Division 3M, trawl fishery in 1999.

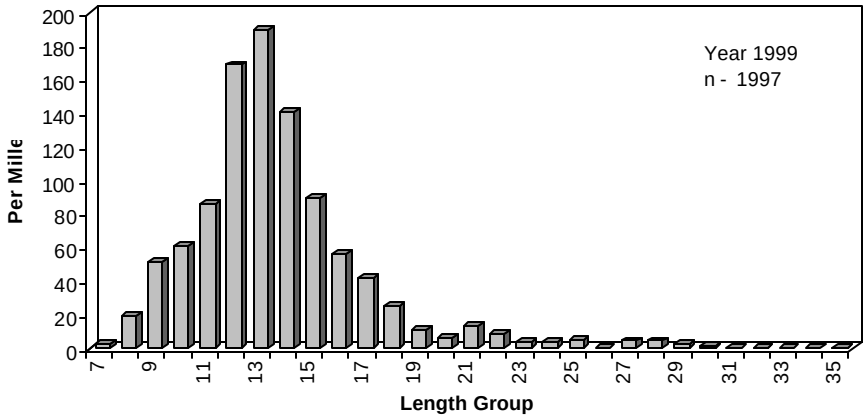


Fig. 29 - Annual length composition of Roughhead grenadier in Division 3N, trawl fishery in 1999.

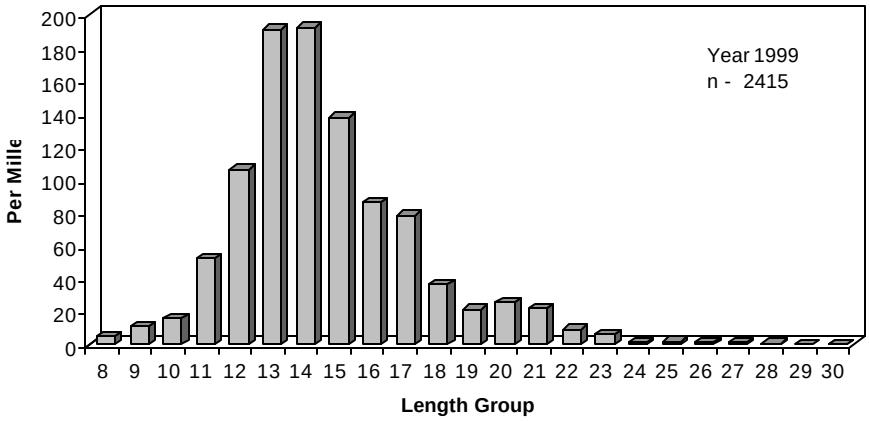


Fig. 30 - Annual length composition of Witch flounder in Division 3L, trawl fishery in 1999.

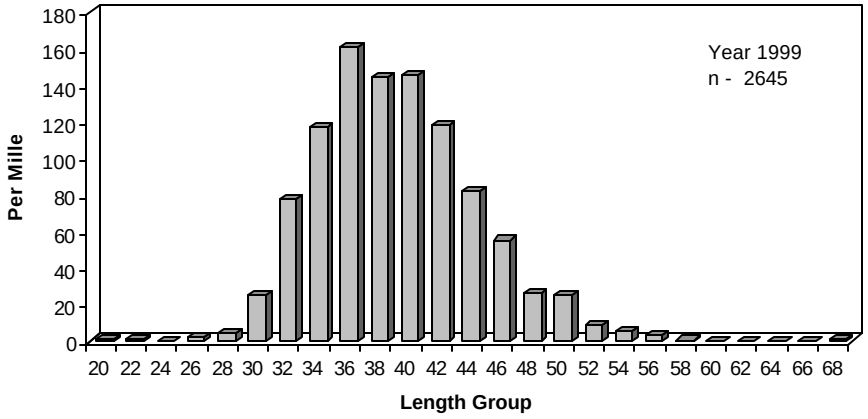


Fig. 31 - Annual length composition of Witch flounder in Division 3N, trawl fishery in 1999.

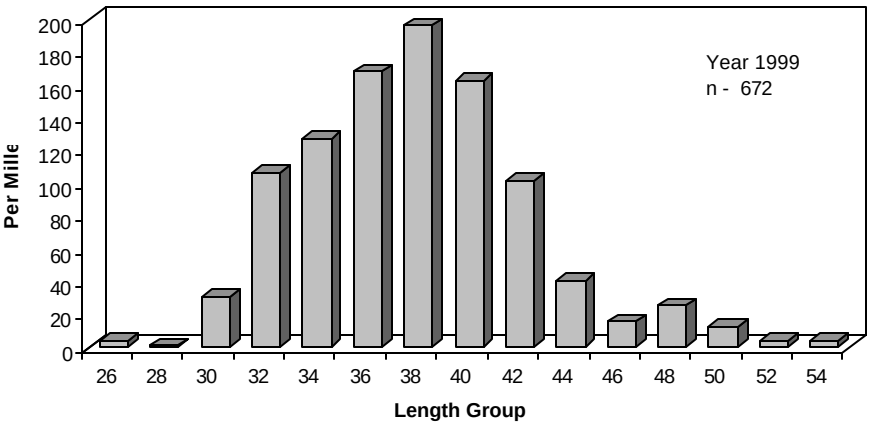
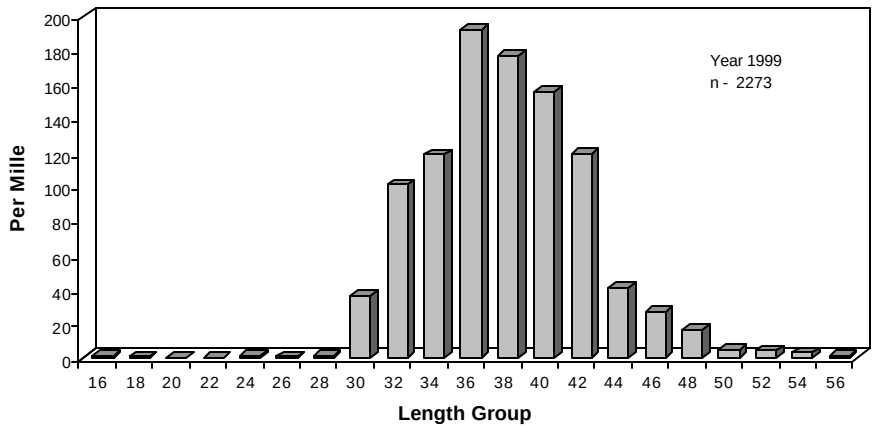


Fig. 32 - Annual length composition of Witch flounder in Division 3O, trawl fishery in 1999.



APPENDIX

COD, divisions 3N and 3O

$$\log w = -5.2106 + 3.0879 \log l$$ (Hodder, 1964)

COD, division 3M

$$w = 0.008519 * l^{3.0649}$$ (Vazquez, 1999)

REDFISH, divisions 3L, 3N and 3O

males $w = 0.01659 * l^{2.9548}$

females $w = 0.01372 * l^{3.0210}$ (Power and Atkinson, 1990)

REDFISH (*S.mentella*), division 3M

$$w = 0.016 * l^{2.94}$$ (Saborido Rey, pers.comm. 2000)

AMERICAN PLAICE, divisions 3L, 3N and 3O

$$\text{Log } w = -5.080 + 3.041 \log l$$ (Pitt, 1978)

YELLOWTAIL FLOUNDER, divisions 3N and 3O

$$\log w = -5.434 + 3.443 \log l$$ (Pitt, 1978)

GREENLAND HALIBUT, divisions 3L, 3M, 3N and 3O

$$w = 0.002184 * l^{3.3454}$$ (Bowering and Stansbury, 1984)

WITCH FLOUNDER, divisions 3L, 3N and 3O

$$w = 0.001083 * l^{3.497}$$ (Bowering and Stansbury, 1984)