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Results for Greenland halibut and American plaice of the Spanish survey in NAFO Div. 3NO: biomass, length distribution and age distribution for the period 1997-2006

by

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Abstract

Greenland halibut (*Reinhardtius hippoglossoides*) and American plaice (*Hippoglossoides platessoides*) indices from the bottom trawl survey that Spain carries out in spring since 1995 in div. 3NO of the NAFO Regulatory Area are presented. Biomass, length distribution and age distribution are presented since 1997, year in that the survey extended the depth strata. In 2001, the R/V *Vizconde de Eza* replaced the C/V *Playa de Menduña* in the execution of the survey. We present the transformed to the R/V *Vizconde de Eza* series for the period 1997-2000, and the original obtained data for the period 2002-2006. In 2001, there are data from the two vessels. Greenland halibut biomass and abundance estimates present a decreasing trend since 1999. It seems not to be recuperation of the stock. In last years it can be seen a presence of juveniles, mainly in 2004, but the greatest lengths have failed. For American plaice we can see an increasing trend along the whole period, reaching a maximum in 2006. For this species, a good recruitment occurred in 2004.

Material and Methods

Since 1995, Spain carries out a spring-summer survey in the NAFO Regulatory Area of Div. 3NO on board the C/V *Playa de Menduña* with a net trawl type *Pedreira*. In 2001, this vessel was replaced by the R/V *Vizconde de Eza*, using a trawl net type *Campelen*. To know more details about the technical specifications of the surveys, see Walsh *et al.*, 2001 and González Troncoso *et al.*, 2004.

The catch of each haul was sorted and weighted into species and a sample of each species was taken in order to measure the length distribution. For Greenland halibut and American plaice each individual of the sample was measured to the total length to the nearest lower cm. We present the indices for the period 1997-2006. In 1995 and 1996 only the less deeper strata were surveyed, so these years are not representative for these species, thus they are not included in the analysis.

In Table 1, we present the number of valid tows, the depth strata covered and the dates of the survey series (1997-2006).

For each species, all the indices are presented transformed until 2000 and no-transformed in the period 2002-2006. In the year 2001, there are data transformed from the former vessel with original data from the new vessel. To know more about the transformation, see González-Troncoso *et al.*, 2005 and González-Troncoso *et al.*, 2006. We present

per haul the mean catch, the stratified mean catch per tow and the biomass with their variance per year; the length distribution in number per haul stratified mean catches per length, sex and year; and by age the mean catches per tow age numbers with their mean length and mean weight. The age numbers were calculated starting from the stratified mean catches per haul length distribution applying the Age Length Key (ALK) for age-length keys. Weight at age was calculated by applying the length/weight relationship for each year to the mean length. For Greenland halibut, Spanish ALK was applied, but for American plaice we have no ALK yet, so we have used the Canadian ALK for this species (K. Dwyer and J. Morgan, com. pers.)

Results

Greenland halibut

Introduction

The Greenland halibut stock in Subarea and Div. 3KLMNO is considered to be part of a biological stock complex, which includes Subareas 0 and 1. Abundance and biomass indices were available from research vessel surveys by Canada in Div. 2J+3KLMNO (1978-2005), EU in Div. 3M (1988-2005) and EU-Spain in Div. 3NO (1995-2005). Commercial catch-at-age data were available from 1975-2005.

The exploitable biomass (age 5+) was reduced to low levels in 1995-97 due to very high catches and high fishing mortality. It increased during 1998-2000 due to greatly reduced catches, much lower fishing mortality and improved recruitment. However, increasingly higher catches and fishing mortality since then accompanied by scarce recruitment has caused a subsequent decline. The 2006 biomass estimate is the lowest in the series.

So, the exploitable biomass has been declining in recent years and is presently estimated to be at its lowest observed level. Recent recruitment has been below average, and fishing mortality has increased substantially in recent years, and is currently estimated as the highest in the time series (NAFO, 2006). Our results confirm these results presented by the Scientific Council last year.

Mean catches and Biomass

Table 2 shows the swept area, the tow number, the mean catches and their variance per haul and year to Greenland halibut. In Table 3 and Figure 1 we present the stratified mean catches per tow by stratum with the total variance per year. Table 4 and Figure 2 present the biomass per swept area per stratum and their total variance per year, as the biomass corresponding with the ages 5+ and 10+. In Table 5 we present the length-weight relationship parameters a and b .

The biomass of the Greenland halibut has decreased since the year 1999. At this moment, the biomass is much below the level of 1997. The lowest biomass value is in 2002. The stock seems not to recover. In 2006, we can see a reduce in the 10+ biomass of this species.

Length Distribution

Table 6 presents the stratified mean catches per haul length distribution for the Greenland halibut, by sex and year, with the number of samples in which there were length measures, the total number of individuals measured in these samples, the sampled catch and the range of lengths met, as the total catch of this species and the total hauls made in the survey. In Figures 3 and 4 we can follow the evolution along the years. We can follow a mode since 1997 until 2001, but since then no high new values appears. The highest recruitments were in 1997, 2001 and 2004. In 2006 the small individuals (around 12 cm) are the mode of the length distribution range.

Age numbers

We present the abundance at age per stratified mean catch by haul, by sex and by year in Table 7 and the total by year in Figure 5. Individuals between 0 and 20 years were caught in the period 1997-2006, and in last years (most since 2002) younger individuals were caught. Perhaps it can be due to the change of gear and/or vessel. We can

follow three conspicuous cohorts in our series, the 1994-1996 cohorts (ages 1, 2 and 3 in 1997). Cohorts from following years seem to be weaker than those ones, but more constant. And 2002-2003 cohorts appear to be quite strong, as we can see in recent years, specially 2003 one. This year the presence of all the ages classes is very weak, although there is a presence of individuals of age 1.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 8 and 9, and shown in Figures 6 and 7. It seems that the greatest ages were increasing their mean length and weight until 2003, and falling in the youngest individuals. The mean length seems to be more stable than mean weight, at least for the youngest and the oldest individuals.

American plaice

Introduction

There was no directed fishing of American plaice in 1994 and there has been a moratorium from 1995. Even under moratorium, catches have increased substantially in recent years. Biomass and SSB are very low compared to historic levels. SSB declined to the lowest estimated level in 1994 and 1995. It has increased since then but still remains very low. There has been no good recruitment to the exploitable biomass since the mid-1980s (NAFO, 2006).

Mean catches and Biomass

American plaice haul mean catches by stratum are presented in Table 10, included swept area, number of hauls and SD. Stratified mean catches per tow by stratum and year and their SD are presented in Table 11.

The entire time series (1997-2006) of biomass and their SD estimates of American plaice are presented in Table 12. Estimated parameters a and b values of length-weight distribution are presented in Table 13.

The American plaice indices show a general increasing trend along the years, agree with the results from the Canadian surveys. We can see a decreasing in 2001 and 2002, and an increasing since then, reaching the maximum historical value in 2006 (Fig. 8 and 9).

Length Distribution

Table 14 and Figures 10 and 11 show the stratified mean catches per haul length distribution by sex and year, besides the sampled size and its catch, for the period 1997-2006. The data have been grouped two by two, so we present the data every two cm. In 2004 there is a great presence of juveniles (8 cm), and in 2005 the mode appears around 14 cm, following in 2006 with a mode of around 18 cm.

Age numbers

We present the abundance at age per stratified mean catch by haul in the Table 15 and Figure 12, by sex and year. The ALK is the Canadian one. This year there were no data enough to make a ALK, so we use for the year 2006 the sum of the ALKs for the period 1997-2005, separated by sexes. We can follow a cohort without problems since the year 2000, starting in individuals of 2 years old (1998 cohort), reaching 8 year old in 2006; a second cohort, weaker, can be followed since 1999, starting in 2 years old, too (1997 cohort). And more recently, a new cohort from the year 2002 (one year old in 2003), can be followed until 2006, reaching 4 years old.

Mean length and mean weight

Mean length and weight at age by sex over time are presented in Tables 16 and 17, and shown in Figures 13 and 14. The mean length is more or less stable in all ages, at least since the year 2002. The same occurs with the mean

weight, although with more variations. The major variations appears in the oldest ages studied: 13, 14 and 15+ years old individuals. From 1997 to 1999 a general decreasing in the two means is observed.

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TABLE 1.- Spanish spring bottom trawl surveys on NAFO Div. 3NO: 1997-2006

Year	Vessel	Valid tows	Depth strata covered (m)	Dates
1997	<i>C/V Playa de Mendiña</i>	128	42-1263	April 26-May 18
1998	<i>C/V Playa de Mendiña</i>	124	42-1390	May 06-May 26
1999	<i>C/V Playa de Mendiña</i>	114	41-1381	May 07-May 26
2000	<i>C/V Playa de Mendiña</i>	118	42-1401	May 07-May 28
2001 ^(*)	<i>R/V Vizconde de Eza</i>	83	36-1156	May 03-May 24
	<i>C/V Playa de Mendiña</i>	121	40-1500	May 05-May 23
2002	<i>R/V Vizconde de Eza</i>	125	38-1540	April 29-May 19
2003	<i>R/V Vizconde de Eza</i>	118	38-1666	May 11-June 02
2004	<i>R/V Vizconde de Eza</i>	120	43-1539	June 06-June 24
2005	<i>R/V Vizconde de Eza</i>	119	47-1485	June 10-June 29
2006	<i>R/V Vizconde de Eza</i>	120	45-1480	June 7-June 27

(*) We took, for the calculation of the series, 83 hauls from the *R/V Vizconde de Eza* and 40 hauls from the *C/V Playa de Mendiña* (123 hauls in total)

TABLE 2.- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Mendiña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997				1998				1999				2000			
	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0480	4	0.06	0.053	0.0465	4	1.37	1.274	0.0360	3	0.61	0.569	0.0356	3	0.19	0.178
354	0.0233	2	0.70	0.095	0.0356	3	2.36	1.246	0.0218	2	0.86	0.781	0.0356	3	0.11	0.057
355	0.0233	2	4.07	0.230	0.0221	2	0.29	0.066	0.0229	2	0.22	0.295	0.0233	2	0.22	0.274
356	0.0225	2	4.11	1.871	0.0221	2	4.27	4.759	0.0229	2	0.23	0.174	0.0225	2	0.49	0.043
357	0.0443	4	1.08	1.341	0.0240	2	8.40	6.433	0.0236	2	1.69	0.276	0.0124	1	0.11	-
358	0.0563	5	1.38	1.168	0.0236	3	2.35	1.843	0.0349	3	4.10	3.155	0.0341	3	0.48	0.529
359	0.0690	6	0.66	0.623	0.0698	6	0.22	0.185	0.0364	3	2.15	3.725	0.0469	4	1.35	2.014
360	0.3754	32	0.04	0.183	0.2561	25	0.04	0.158	0.2325	19	0.31	0.918	0.2396	20	0.13	0.352
374	0.0353	3	0.00	0.000	0.0353	3	0.05	0.080	0.0244	2	0.00	0.000	0.0240	2	0.00	0.000
375	0.0116	1	0.00	-	0.0345	3	0.00	0.000	0.0236	2	0.00	0.000	0.0244	2	0.00	0.000
376	0.1583	14	0.00	0.000	0.0930	10	0.00	0.000	0.1219	10	0.00	0.000	0.1200	10	0.00	0.000
377	0.0116	1	0.00	-	0.0229	2	0.03	0.039	0.0240	2	0.48	0.683	0.0229	2	0.16	0.221
378	0.0210	2	0.78	0.985	0.0120	2	0.66	0.873	0.0229	2	1.03	0.330	0.0233	2	1.09	1.214
379	0.0206	2	2.23	1.031	0.0356	3	1.88	0.826	0.0236	2	0.96	0.013	0.0225	2	1.23	0.880
380	0.0210	2	2.64	1.210	0.0113	2	2.48	2.022	0.0236	2	3.94	1.326	0.0236	2	2.42	1.447
381	0.0221	2	0.21	0.009	0.0229	2	0.70	0.144	0.0229	2	2.82	0.985	0.0236	2	1.36	0.352
382	0.0461	4	0.00	0.000	0.0229	3	0.04	0.064	0.0484	4	0.00	0.001	0.0499	4	0.12	0.147
721	0.0221	2	2.98	1.053	0.0203	2	11.82	9.833	0.0244	2	0.62	0.249	0.0236	2	0.48	0.681
722	0.0214	2	1.53	2.163	0.0101	2	24.84	1.628	0.0229	2	13.36	7.909	0.0218	2	19.49	9.977
723	0.0210	2	5.16	2.543	0.0233	2	5.32	1.956	0.0229	2	11.07	10.916	0.0248	2	2.85	1.094
724	0.0225	2	1.92	0.624	0.0206	2	8.40	1.044	0.0225	2	4.55	1.181	0.0233	2	5.83	2.179
725	0.0206	2	7.85	4.225	0.0086	1	2.07	-	0.0229	2	4.97	5.763	0.0210	2	10.03	8.796
726	n.s.	n.s.	n.s.	n.s.	0.0094	2	27.96	33.187	0.0225	2	29.04	26.314	0.0221	2	12.95	3.348
727	0.0094	1	5.16	-	0.0233	2	7.80	6.754	0.0236	2	10.48	8.316	0.0210	2	2.65	1.181
728	0.0214	2	36.24	23.055	0.0206	2	57.21	56.042	0.0233	2	62.32	12.655	0.0210	2	29.91	0.098
752	0.0218	2	36.90	9.964	0.0229	2	54.22	23.669	0.0233	2	56.93	8.677	0.0206	2	23.33	1.989
753	0.0214	2	32.43	8.270	0.0218	2	33.32	8.507	0.0229	2	64.23	4.417	0.0218	2	49.77	21.700
754	0.0330	3	18.70	4.941	0.0210	2	17.32	4.706	0.0206	2	17.12	11.204	0.0195	2	46.69	14.381
755	n.s.	n.s.	n.s.	n.s.	0.0206	2	19.07	0.177	0.0311	3	15.94	8.279	0.0431	4	35.73	20.076
756	0.0109	1	68.36	-	0.0225	2	220.13	34.559	0.0225	2	125.28	46.721	0.0203	2	60.60	40.187
757	0.0304	3	34.70	10.823	0.0206	2	95.25	21.628	0.0233	2	106.53	27.496	0.0214	2	37.41	10.108
758	0.0214	2	39.36	23.502	0.0105	2	52.55	9.813	0.0214	2	52.72	11.736	0.0210	2	56.67	11.487
759	n.s.	n.s.	n.s.	n.s.	0.0214	2	48.19	35.497	0.0218	2	44.72	44.096	0.0210	2	29.43	8.579
760	0.0105	1	10.44	-	0.0214	2	32.89	28.743	0.0225	2	44.98	46.019	0.0210	2	30.56	2.862
761	0.0315	3	61.90	36.985	0.0206	2	46.01	16.364	0.0210	2	37.88	1.004	0.0221	2	36.09	26.813
762	0.0308	3	45.89	27.172	0.0094	2	38.22	15.038	0.0210	2	63.34	37.289	0.0203	2	36.37	1.726
763	n.s.	n.s.	n.s.	n.s.	0.0218	2	35.02	27.312	0.0311	3	21.44	8.946	0.0416	4	25.64	21.799
764	0.0206	2	20.63	2.422	0.0218	2	21.31	10.686	0.0225	2	28.81	12.412	0.0218	2	16.96	6.498
765	0.0206	2	35.43	14.289	0.0098	2	22.82	3.131	0.0221	2	31.43	0.328	0.0203	2	37.13	30.587
766	0.0308	3	62.87	9.784	0.0191	2	20.82	3.479	0.0218	2	31.31	20.000	0.0214	2	16.76	2.475
767	n.s.	n.s.	n.s.	n.s.	0.0109	2	10.21	50.629	0.0214	2	25.90	9.786	0.0210	2	21.21	6.393

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 2 (cont.).- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	2001				2002				2003			
	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0341	3	0.03	0.038	0.0476	4	0.21	0.278	0.0334	3	0.01	0.013
354	0.0338	3	3.22	1.927	0.0356	3	0.85	0.839	0.0338	3	0.04	0.029
355	0.0240	2	17.25	15.486	0.0236	2	0.43	0.467	0.0229	2	2.46	2.492
356	0.0240	2	0.07	0.042	0.0233	2	1.40	1.131	0.0225	2	2.95	3.695
357	0.0244	2	2.69	2.135	0.0240	2	1.15	1.626	0.0229	2	6.72	5.070
358	0.0345	3	8.46	12.298	0.0345	3	3.20	0.819	0.0338	3	3.45	5.973
359	0.0803	7	1.97	2.329	0.0686	6	0.28	0.219	0.0791	7	0.30	0.438
360	0.2423	20	0.17	0.484	0.2865	25	0.00	0.007	0.2254	20	0.02	0.056
374	0.0240	2	0.00	0.000	0.0345	3	0.00	0.000	0.0225	2	0.00	0.000
375	0.0338	3	0.00	0.000	0.0353	3	0.00	0.000	0.0330	3	0.00	0.002
376	0.1155	10	0.00	0.000	0.1140	10	0.00	0.000	0.1125	10	0.00	0.003
377	0.0229	2	0.42	0.537	0.0229	2	0.00	0.001	0.0225	2	1.55	1.884
378	0.0236	2	5.69	8.040	0.0233	2	1.85	0.636	0.0225	2	2.97	3.008
379	0.0229	2	4.61	4.236	0.0229	2	5.85	4.313	0.0229	2	7.67	5.275
380	0.0206	2	4.06	0.066	0.0225	2	5.05	3.041	0.0229	2	4.345	0.205
381	0.0236	2	0.90	1.271	0.0229	2	0.5275	0.145	0.0229	2	1.06	1.188
382	0.0469	4	0.05	0.080	0.0341	3	0.401	0.683	0.0454	4	0.045	0.061
721	0.0248	2	0.40	0.431	0.0233	2	0.08	0.062	0.0225	2	0.12	0.051
722	0.0233	2	1.09	0.863	0.0236	2	2.63	2.906	0.0221	2	1.66	0.410
723	0.0240	2	1.33	0.240	0.0233	2	1.24	1.075	0.0229	2	4.02	5.416
724	0.0353	3	3.45	2.786	0.0225	2	4.75	1.202	0.0225	2	7.07	4.971
725	0.0116	1	2.67	0.522	0.0225	2	7.35	6.718	0.0229	2	10.55	0.778
726	0.0116	1	3.65	1.200	0.0214	2	3.25	3.323	0.0225	2	0.00	0.000
727	0.0225	2	3.79	0.243	0.0233	2	2.01	1.400	0.0218	2	18.48	11.066
728	0.0229	2	8.62	1.654	0.0229	2	7.93	10.986	0.0225	2	39.95	17.748
752	0.0210	2	26.37	8.723	0.0116	1	0.34	-	0.0229	2	39.80	39.032
753	0.0214	2	22.66	4.883	0.0229	2	2.45	3.465	0.0229	2	16.64	12.721
754	0.0195	2	41.09	41.477	0.0341	3	20.33	4.996	0.0218	2	19.12	6.484
755	0.0416	4	27.16	16.279	0.0338	3	0.46	0.655	0.0221	2	1.88	2.652
756	0.0113	1	30.10	16.124	0.0229	2	10.55	14.920	0.0221	2	23.11	27.994
757	0.0233	2	42.23	4.326	0.0225	2	9.95	2.192	0.0221	2	2.49	2.348
758	0.0218	2	42.11	8.828	0.0225	2	17.15	1.485	0.0221	2	0.00	0.000
759	0.0221	2	76.11	21.890	0.0225	2	2.15	3.041	0.0113	1	21.61	-
760	0.0229	2	9.42	10.861	0.0229	2	4.75	4.172	0.0218	2	19.38	13.188
761	0.0225	2	8.10	7.778	0.0225	2	16.65	16.900	0.0225	2	13.26	3.387
762	0.0116	1	22.50	21.072	0.0225	2	2.11	1.563	0.0225	2	34.91	19.622
763	0.0330	3	31.61	22.554	0.0225	2	0.74	1.047	0.0311	3	1.75	3.037
764	0.0240	2	53.64	1.888	0.0236	2	6.95	5.869	0.0221	2	28.37	15.882
765	0.0113	1	35.87	13.111	0.0236	2	45.90	39.739	0.0113	1	31.80	-
766	0.0203	2	16.42	9.557	0.0233	2	9.53	1.025	0.0225	2	8.91	1.966
767	0.0218	2	5.72	2.593	0.0225	2	0.85	1.202	0.0229	2	15.96	21.270

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 2 (cont.).- Swept area, number of hauls and Greenland halibut mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	2004				2005				2006			
	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD	Swept area	Tow number	G. halibut Mean catch	G. halibut SD
353	0.0338	3	1.44	2.395	0.0353	3	1.92	2.694	0.0371	3	1.44	1.561
354	0.0345	3	1.51	2.160	0.0353	3	3.13	4.202	0.0364	3	0.77	0.981
355	0.0229	2	4.02	5.119	0.0225	2	1.36	0.849	0.0248	2	3.39	0.858
356	0.0221	2	3.35	3.873	0.0233	2	0.92	0.973	0.0240	2	4.85	3.910
357	0.0229	2	1.50	0.521	0.0233	2	1.20	0.817	0.0244	2	0.27	0.299
358	0.0330	3	0.94	0.438	0.0349	3	1.91	3.063	0.0349	3	0.05	0.056
359	0.0791	7	1.18	2.137	0.0814	7	0.35	0.364	0.0975	8	0.00	0.000
360	0.2310	20	0.11	0.459	0.2325	20	0.29	1.075	0.2340	19	0.14	0.376
374	0.0233	2	0.00	0.005	0.0229	2	0.00	0.000	0.0236	2	0.00	0.000
375	0.0338	3	0.00	0.000	0.0349	3	0.00	0.000	0.0364	3	0.00	0.000
376	0.1166	10	0.00	0.000	0.1174	10	0.00	0.004	0.1219	10	0.00	0.006
377	0.0218	2	0.07	0.011	0.0233	2	1.34	1.898	0.0236	2	0.40	0.526
378	0.0225	2	0.38	0.530	0.0225	2	0.02	0.005	0.0240	2	0.56	0.668
379	0.0124	1	2.60	-	0.0236	2	3.72	3.370	0.0236	2	0.61	0.418
380	0.0221	2	10.3	0.424	0.0229	2	34.1	23.617	0.0229	2	21.445	6.159
381	0.0225	2	5.488	6.701	0.0233	2	6.248	3.948	0.0229	2	19.358	5.009
382	0.0461	4	0.0575	0.068	0.0458	4	0.49	0.571	0.0469	4	3.712	3.749
721	0.0221	2	1.92	0.693	0.0229	2	0.99	0.131	0.0236	2	0.51	0.714
722	0.0218	2	24.04	23.144	0.0233	2	23.29	12.887	0.0240	2	1.75	2.468
723	0.0229	2	3.85	3.755	0.0233	2	2.68	2.271	0.0236	2	6.89	3.149
724	0.0214	2	12.45	3.182	0.0225	2	11.98	10.925	0.0233	2	22.49	13.740
725	0.0225	2	19.57	19.537	0.0236	2	17.37	18.374	0.0233	2	11.81	2.819
726	0.0225	2	14.71	1.287	0.0113	1	12.24	-	0.0225	2	2.36	1.146
727	0.0233	2	20.47	10.281	0.0229	2	19.28	7.582	0.0225	2	8.80	2.121
728	0.0180	2	5.70	4.950	0.0109	1	0.84	-	0.0225	2	4.36	0.836
752	0.0214	2	4.64	5.424	0.0236	2	5.66	2.482	0.0225	2	6.10	0.898
753	0.0218	2	4.37	0.820	0.0225	2	9.00	1.107	0.0225	2	4.06	4.380
754	0.0214	2	3.21	0.007	0.0225	2	4.60	6.498	0.0225	2	0.65	0.919
755	0.0319	3	2.64	4.567	0.0450	4	5.61	4.039	0.0338	3	4.12	5.260
756	0.0218	2	14.99	4.609	0.0233	2	7.11	0.308	0.0229	2	6.54	6.739
757	0.0218	2	4.55	6.435	0.0225	2	6.81	3.422	0.0225	2	5.58	1.520
758	0.0214	2	9.73	3.714	0.0225	2	11.25	1.775	0.0225	2	13.44	14.665
759	0.0214	2	4.43	3.203	0.0229	2	9.03	12.763	0.0225	2	0.46	0.651
760	0.0221	2	14.63	7.958	0.0229	2	4.77	2.843	0.0225	2	8.97	6.672
761	0.0221	2	2.92	1.996	0.0221	2	6.61	5.172	0.0233	2	5.18	3.603
762	0.0233	2	8.44	4.349	0.0225	2	13.23	3.500	0.0233	2	16.55	21.529
763	0.0326	3	20.78	9.792	0.0334	3	5.06	6.575	0.0225	2	7.07	2.920
764	0.0229	2	33.78	29.165	0.0233	2	4.07	5.756	0.0233	2	13.46	2.380
765	0.0225	2	20.98	8.464	0.0229	2	18.44	0.926	0.0236	2	13.00	14.333
766	0.0225	2	8.46	11.958	0.0229	2	9.33	13.198	0.0229	2	3.69	2.534
767	0.0218	2	1.26	1.782	0.0113	1	0.00	-	0.0233	2	0.80	1.131

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 3.- Stratified mean catches (Kg) by stratum and year and SD by year of Greenland halibut (1997-2006). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menguña* data (by FPC). 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
353	15.61	368.31	164.80	50.27	7.17	57.16	2.06	387.99	516.48	386.10
354	171.84	581.54	211.23	27.55	792.94	209.92	10.33	371.38	769.98	188.27
355	301.21	21.29	16.18	16.14	1276.50	31.86	181.89	297.48	100.64	251.12
356	193.06	200.47	10.97	23.25	3.29	65.80	138.51	157.52	43.33	227.86
357	176.36	1377.73	277.07	17.81	441.16	188.60	1101.26	246.25	197.05	45.02
358	310.53	529.11	921.77	108.61	1903.50	720.00	776.85	212.40	430.50	10.58
359	279.62	94.44	905.35	568.81	827.57	116.83	125.94	495.40	145.85	0.00
360	120.66	100.23	852.78	358.57	461.98	5.79	49.54	314.48	795.80	379.37
374	0.00	9.93	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.00
375	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00
376	0.00	0.00	0.00	0.00	0.00	0.00	1.73	0.00	1.60	2.40
377	0.00	2.78	48.27	15.59	42.00	0.10	154.80	7.40	134.20	39.80
378	108.38	92.26	143.03	151.61	790.22	257.15	413.25	52.13	2.71	77.49
379	236.64	199.42	101.35	130.87	488.13	620.10	813.02	275.60	394.00	64.50
380	253.84	237.93	377.84	232.32	389.43	484.80	417.12	988.80	3273.60	2058.72
381	30.54	100.25	406.36	196.29	129.93	75.96	152.64	790.27	899.71	2787.55
382	0.00	12.74	0.16	42.51	16.16	137.54	15.44	19.72	168.07	1273.22
721	193.53	768.09	40.40	31.32	25.68	5.23	7.54	124.80	64.51	32.83
722	128.46	2086.59	1122.44	1637.46	91.56	220.50	139.44	2018.94	1956.15	146.58
723	799.62	824.44	1715.78	441.21	206.15	192.20	623.18	596.29	414.78	1068.42
724	237.69	1041.12	564.01	722.86	427.80	589.00	876.06	1543.80	1484.90	2788.45
725	824.43	217.35	521.45	1052.65	280.46	771.75	1107.75	2054.33	1823.59	1239.74
726	n.s.	2013.07	2090.94	932.35	262.92	234.00	0.00	1059.12	880.92	169.56
727	495.47	749.00	1006.54	253.97	364.03	192.96	1773.60	1965.12	1850.98	844.80
728	2826.86	4462.31	4861.26	2333.24	672.64	618.66	3116.10	444.60	65.52	340.00
752	4833.71	7102.82	7457.90	3056.49	3454.13	44.41	5213.80	607.19	740.81	798.45
753	4475.84	4597.53	8863.93	6868.76	3126.94	338.10	2295.63	603.06	1242.35	560.69
754	3365.21	3117.02	3081.94	8403.69	7396.15	3660.00	3440.70	576.90	827.10	117.00
755	n.s.	7342.42	6136.26	13757.44	10457.90	177.23	721.88	1015.12	2160.81	1585.43
756	6904.11	22233.50	12653.16	6121.02	3040.24	1065.55	2333.61	1514.09	718.36	660.04
757	3539.38	9715.91	10866.31	3815.73	4307.61	1014.90	253.98	464.10	694.62	568.65
758	3896.21	5202.82	5218.91	5610.39	4168.97	1697.85	0.00	962.87	1113.26	1330.56
759	n.s.	6119.66	5679.93	3737.70	9666.37	273.05	2744.47	561.98	1146.18	58.42
760	1608.22	5065.54	6926.79	4706.01	1450.68	731.50	2983.75	2252.64	734.58	1381.07
761	10584.19	7867.63	6477.12	6170.76	1385.10	2847.15	2266.61	499.58	1129.80	885.01
762	9728.04	8102.93	13428.13	7711.31	4769.98	446.26	7399.86	1788.22	2803.70	3509.24
763	n.s.	9139.92	5595.80	6691.10	8250.35	193.14	457.62	5422.71	1319.79	1846.44
764	2063.07	2131.30	2880.87	1695.94	5363.50	695.00	2837.00	3377.75	407.00	1345.70
765	4392.98	2829.86	3897.46	4604.20	4447.98	5691.60	3943.20	2600.90	2285.94	1611.38
766	9053.27	2998.23	4508.03	2413.42	2364.63	1371.60	1283.04	1217.59	1343.88	531.07
767	n.s.	1613.33	4092.64	3351.32	904.20	134.30	2521.68	199.08	0.00	126.40
TOTAL	72148.61	121270.85	124125.15	98060.56	84455.93	26177.55	51917.35	38088.31	35083.03	31337.91
(\bar{Y})	7.73	11.73	12.00	9.48	8.17	2.64	5.10	3.68	3.39	3.03
S.D.	0.62	0.89	1.00	0.75	0.84	0.45	0.61	0.40	0.36	0.42

TABLE 4.- Survey estimates (by the swept area method) of Greenland halibut biomass (t) and SD by stratum and year on NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduña* data. 2001-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels. The last two rows present the biomass corresponding to set of ages 5+ and 10+.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
353	1	32	14	4	1	5	0	34	44	31
354	15	49	19	2	70	18	1	32	66	16
355	26	2	1	1	106	3	16	26	9	20
356	17	18	1	2	0	6	12	14	4	19
357	16	115	23	1	36	16	96	22	17	4
358	28	46	79	10	165	63	69	19	37	1
359	24	8	75	49	72	10	11	44	13	0
360	10	9	70	30	38	1	4	27	68	31
374	0	1	0	0	0	0	0	0	0	0
375	0	0	0	0	0	0	0	0	0	0
376	0	0	0	0	0	0	0	0	0	0
377	0	0	4	1	4	0	14	1	12	3
378	10	8	13	13	67	22	37	5	0	6
379	23	17	9	12	43	54	71	22	33	5
380	24	21	32	20	38	43	36	89	286	180
381	3	9	36	17	11	7	13	70	77	244
382	0	1	0	3	1	12	1	2	15	109
721	17	76	3	3	2	0	1	11	6	3
722	12	195	98	151	8	19	13	186	168	12
723	76	71	150	36	17	17	54	52	36	90
724	21	101	50	62	36	52	78	144	132	240
725	80	25	46	100	24	69	97	183	154	107
726	n.s.	195	186	84	22	22	0	94	78	15
727	53	64	85	24	32	17	163	169	162	75
728	265	433	418	222	59	54	277	49	6	30
752	444	621	642	296	329	151	456	57	63	71
753	419	423	775	632	293	30	201	55	110	50
754	306	297	299	862	758	275	316	54	74	10
755	n.s.	712	591	1276	1005	14	65	96	192	141
756	635	1976	1125	605	266	93	211	139	62	58
757	350	942	935	357	371	90	23	43	62	51
758	365	478	488	534	383	151	0	90	99	118
759	n.s.	573	522	356	874	24	244	53	100	5
760	153	474	616	448	127	64	274	204	64	123
761	1008	763	617	558	123	253	201	45	102	76
762	949	786	1279	762	424	40	658	154	249	302
763	n.s.	840	539	643	750	17	44	499	119	164
764	200	196	256	156	447	59	256	295	35	116
765	426	270	352	455	402	482	351	231	200	136
766	883	314	415	226	233	118	114	108	117	46
767	n.s.	146	383	319	83	12	220	18	0	11
TOTAL	6859	11305	11246	9331	7721	2380	4701	3437	3071	2720
S.D.	546	860	973	707	790	410	575	373	325	379
Biomass 5+	4303	6284	6367	8785	6700	2011	3386	2318	2628	2145
Biomass 10+	406	504	660	1111	741	279	495	318	497	156

TABLE 5.- Length weight relationships in the calculation of Greenland halibut biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals)

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Males	a	0,0042 Error = 0.0663	0,0042 Error = 0.0824	0,0044 Error = 0.1112	0,0020 Error = 0.1562	0,0036 Error = 0.2538	0,0031 Error = 0.0962	0,0033 Error = 0.1081	0,0034 Error = 0.0886	0,0036 Error = 0.1075	0,0042 Error = 0.0826
	b	3,1561 Error = 0.0185	3,1622 Error = 0.0226	3,1587 Error = 0.0308	3,3625 Error = 0.0433	3,1925 Error = 0.0846	3,2496 Error = 0.0285	3,2318 Error = 0.0318	3,2123 Error = 0.0254	3,2050 Error = 0.0306	3,1556 Error = 0.0238
		R ² = 0.999 N = 893	R ² = 0.999 N = 417	R ² = 0.995 N = 267	R ² = 0.996 N = 315	R ² = 0.997 N = 15	R ² = 0.987 N = 316	R ² = 0.995 N = 509	R ² = 0.997 N = 498	R ² = 0.995 N = 387	R ² = 0.999 N = 402
Females	a	0,0033 Error = 0.0650	0,0038 Error = 0.0692	0,0033 Error = 0.0897	0,0018 Error = 0.1003	0,0034 Error = 0.2252	0,0027 Error = 0.1315	0,0034 Error = 0.0871	0,0026 Error = 0.0767	0,0050 Error = 0.1357	0,0033 Error = 0.1215
	b	3,2308 Error = 0.0170	3,2043 Error = 0.0179	3,2547 Error = 0.0237	3,4066 Error = 0.0262	3,2240 Error = 0.0656	3,2950 Error = 0.0368	3,2302 Error = 0.0241	3,2998 Error = 0.0212	3,1259 Error = 0.0374	3,2306 Error = 0.0342
		R ² = 0.999 N = 1473	R ² = 0.999 N = 681	R ² = 0.996 N = 408	R ² = 0.995 N = 642	R ² = 0.995 N = 26	R ² = 0.993 N = 456	R ² = 0.997 N = 726	R ² = 0.998 N = 600	R ² = 0.991 N = 602	R ² = 0.997 N = 539
Indet.	a	0,0032 Error = 0.0547	0,0036 Error = 0.0706	0,0040 Error = 0.1010	0,0019 Error = 0.0893	0,0038 Error = 0.1320	0,0028 Error = 0.0941	0,0027 Error = 0.0814	0,0027 Error = 0.0781	0,0040 Error = 0.0941	0,0036 Error = 0.0715
	b	3,2409 Error = 0.0145	3,2201 Error = 0.0183	3,2009 Error = 0.0269	3,3882 Error = 0.0234	3,1925 Error = 0.0394	3,2837 Error = 0.0263	3,2894 Error = 0.0226	3,2812 Error = 0.0217	3,1787 Error = 0.0260	3,2024 Error = 0.0201
		R ² = 0.999 N = 2383	R ² = 0.999 N = 1105	R ² = 0.987 N = 679	R ² = 0.998 N = 966	R ² = 0.997 N = 44	R ² = 0.996 N = 776	R ² = 0.997 N = 1243	R ² = 0.997 N = 1105	R ² = 0.996 N = 990	R ² = 0.999 N = 941

TABLE 6.- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Length (cm.)	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.151	0.151	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.043	0.382	0.425	0.000	0.000	0.036	0.036	0.098	0.395	0.000	0.493	0.175	0.169	0.108	0.453
12	0.477	1.164	0.811	2.452	0.000	0.028	0.086	0.114	0.305	1.049	0.080	1.434	0.525	0.690	0.159	1.373
14	0.157	0.418	0.234	0.809	0.016	0.283	0.092	0.391	0.244	0.928	0.015	1.187	0.297	0.553	0.019	0.868
16	0.076	0.081	0.000	0.158	0.038	0.027	0.000	0.065	0.187	0.132	0.000	0.319	0.122	0.162	0.000	0.284
18	0.934	1.073	0.004	2.012	0.090	0.105	0.000	0.195	0.141	0.322	0.006	0.469	0.146	0.130	0.000	0.276
20	1.836	2.362	0.012	4.210	0.507	0.540	0.025	1.071	0.867	1.170	0.000	2.037	0.035	0.039	0.000	0.074
22	1.222	1.395	0.000	2.616	0.699	1.099	0.000	1.798	0.731	1.506	0.000	2.237	0.089	0.083	0.000	0.172
24	0.507	0.520	0.000	1.027	0.750	0.930	0.000	1.681	0.318	0.591	0.000	0.909	0.152	0.198	0.000	0.350
26	0.769	0.973	0.000	1.742	1.280	1.447	0.000	2.726	0.625	0.531	0.000	1.156	0.085	0.131	0.000	0.216
28	1.103	1.091	0.000	2.194	1.893	2.566	0.000	4.459	1.053	0.907	0.000	1.960	0.077	0.104	0.000	0.181
30	0.676	1.098	0.000	1.774	1.951	2.433	0.000	4.384	1.594	1.649	0.000	3.243	0.150	0.186	0.000	0.335
32	0.491	0.675	0.000	1.165	1.382	1.885	0.000	3.267	2.232	2.431	0.000	4.662	0.234	0.294	0.000	0.527
34	0.485	0.723	0.000	1.209	1.543	1.672	0.000	3.214	2.309	2.727	0.000	5.036	0.399	0.464	0.000	0.863
36	0.412	0.822	0.000	1.234	1.252	1.820	0.000	3.073	1.687	2.289	0.000	3.976	0.677	0.811	0.000	1.488
38	0.358	0.782	0.000	1.140	1.015	1.509	0.000	2.523	0.815	1.570	0.000	2.385	0.755	1.075	0.000	1.831
40	0.397	0.689	0.000	1.086	0.546	0.964	0.000	1.509	0.612	1.166	0.000	1.778	0.785	1.562	0.000	2.347
42	0.332	0.528	0.000	0.860	0.384	0.683	0.000	1.067	0.346	0.758	0.000	1.103	0.608	1.380	0.000	1.989
44	0.249	0.480	0.000	0.729	0.261	0.560	0.000	0.822	0.260	0.483	0.000	0.742	0.400	1.026	0.000	1.426
46	0.200	0.394	0.000	0.594	0.199	0.412	0.000	0.611	0.141	0.301	0.000	0.443	0.260	0.624	0.000	0.884
48	0.115	0.334	0.000	0.449	0.170	0.301	0.000	0.471	0.095	0.223	0.000	0.318	0.115	0.409	0.000	0.524
50	0.098	0.230	0.000	0.327	0.095	0.233	0.000	0.328	0.043	0.149	0.000	0.192	0.092	0.231	0.000	0.323
52	0.063	0.154	0.000	0.217	0.082	0.117	0.000	0.199	0.043	0.114	0.000	0.157	0.072	0.175	0.000	0.248
54	0.049	0.102	0.000	0.151	0.031	0.089	0.000	0.121	0.025	0.065	0.000	0.090	0.037	0.145	0.000	0.182
56	0.032	0.081	0.000	0.114	0.040	0.079	0.000	0.119	0.021	0.060	0.000	0.081	0.034	0.109	0.000	0.144
58	0.020	0.057	0.000	0.077	0.015	0.055	0.000	0.070	0.011	0.033	0.000	0.044	0.017	0.060	0.000	0.077
60	0.019	0.048	0.000	0.068	0.016	0.035	0.000	0.051	0.008	0.029	0.000	0.038	0.012	0.065	0.000	0.076
62	0.004	0.028	0.000	0.032	0.006	0.020	0.000	0.026	0.006	0.027	0.000	0.034	0.005	0.034	0.000	0.039
64	0.002	0.033	0.000	0.035	0.007	0.023	0.000	0.030	0.002	0.021	0.000	0.022	0.004	0.035	0.000	0.039
66	0.002	0.025	0.000	0.027	0.003	0.013	0.000	0.016	0.002	0.016	0.000	0.018	0.004	0.022	0.000	0.026
68	0.000	0.014	0.000	0.014	0.000	0.008	0.000	0.009	0.001	0.013	0.000	0.013	0.001	0.028	0.000	0.029
70	0.001	0.011	0.000	0.011	0.000	0.009	0.000	0.009	0.001	0.012	0.000	0.012	0.000	0.020	0.000	0.020
72	0.000	0.014	0.000	0.014	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.014	0.000	0.014
74	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.008	0.000	0.008	0.000	0.014	0.000	0.014
76	0.000	0.005	0.000	0.005	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008	0.000	0.006	0.000	0.006
78	0.000	0.005	0.000	0.005	0.000	0.007	0.000	0.007	0.000	0.012	0.000	0.012	0.000	0.021	0.000	0.021
80	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.005	0.000	0.010	0.000	0.010
82	0.000	0.002	0.000	0.002	0.000	0.004	0.000	0.004	0.000	0.003	0.000	0.003	0.000	0.007	0.000	0.007
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.007	0.000	0.007
86	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.003	0.000	0.003	0.000	0.006	0.000	0.006
88	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001
90	0.000	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002
92	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001	0.000	0.001
96	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Total	11.087	16.467	1.445	28.999	14.270	19.987	0.239	34.496	14.821	21.726	0.251	36.799	6.364	11.103	0.286	17.753
Nº samples (*):				75				84				78				81
Nº Ind. (*):	3444	5550	55	9049	4470	7080	14	11564	4012	6533	6	10551	2991	6162	10	9163
Sampled catch:				390				539				524				635
Range (*):				10-92				11-94				7-104				11-94
Total catch:				1259				1885				1898				1437
Total hauls (*):				128				124				114				118

TABLE 6 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Length (cm.)	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.011	0.014	0.019	0.044	0.029	0.013	0.064	0.106
10	0.404	0.313	0.311	1.028	0.172	0.201	0.050	0.422	0.347	0.437	0.040	0.824
12	1.318	1.937	0.566	3.820	0.725	0.715	0.036	1.476	0.707	1.004	0.007	1.718
14	1.555	2.089	0.159	3.804	0.465	0.523	0.007	0.994	0.361	0.622	0.000	0.983
16	0.280	0.349	0.000	0.629	0.041	0.033	0.000	0.074	0.051	0.049	0.000	0.100
18	0.134	0.115	0.000	0.250	0.019	0.013	0.000	0.032	0.021	0.025	0.000	0.046
20	0.763	0.900	0.000	1.663	0.095	0.085	0.000	0.180	0.112	0.098	0.000	0.210
22	1.431	1.614	0.000	3.045	0.186	0.246	0.000	0.432	0.393	0.513	0.000	0.906
24	0.521	0.798	0.000	1.319	0.228	0.277	0.000	0.505	0.305	0.506	0.000	0.810
26	0.104	0.136	0.000	0.241	0.115	0.148	0.000	0.262	0.161	0.225	0.000	0.386
28	0.033	0.040	0.000	0.073	0.059	0.070	0.000	0.129	0.190	0.132	0.000	0.323
30	0.054	0.088	0.000	0.142	0.095	0.118	0.000	0.213	0.342	0.238	0.000	0.581
32	0.160	0.189	0.000	0.349	0.115	0.232	0.000	0.347	0.256	0.467	0.000	0.723
34	0.169	0.259	0.000	0.428	0.142	0.200	0.000	0.342	0.317	0.422	0.000	0.739
36	0.291	0.348	0.000	0.639	0.134	0.182	0.000	0.316	0.173	0.382	0.000	0.555
38	0.352	0.528	0.000	0.880	0.132	0.192	0.000	0.324	0.214	0.494	0.000	0.708
40	0.539	0.834	0.000	1.373	0.081	0.303	0.000	0.383	0.260	0.469	0.000	0.729
42	0.515	0.829	0.000	1.343	0.129	0.260	0.000	0.389	0.182	0.350	0.000	0.532
44	0.443	1.064	0.000	1.507	0.106	0.218	0.000	0.324	0.094	0.320	0.000	0.414
46	0.384	0.865	0.000	1.249	0.064	0.166	0.000	0.230	0.149	0.266	0.000	0.415
48	0.186	0.650	0.000	0.836	0.038	0.129	0.000	0.167	0.149	0.172	0.000	0.321
50	0.107	0.347	0.000	0.453	0.072	0.138	0.000	0.209	0.095	0.227	0.000	0.322
52	0.051	0.188	0.000	0.239	0.016	0.048	0.000	0.064	0.090	0.187	0.000	0.277
54	0.046	0.129	0.000	0.175	0.023	0.087	0.000	0.110	0.037	0.089	0.000	0.127
56	0.012	0.073	0.000	0.085	0.000	0.038	0.000	0.038	0.032	0.116	0.000	0.148
58	0.019	0.061	0.000	0.080	0.000	0.009	0.000	0.009	0.007	0.087	0.000	0.094
60	0.011	0.027	0.000	0.038	0.000	0.017	0.000	0.017	0.000	0.035	0.000	0.035
62	0.007	0.042	0.000	0.049	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.038
64	0.003	0.024	0.000	0.027	0.000	0.014	0.000	0.014	0.000	0.027	0.000	0.027
66	0.003	0.028	0.000	0.030	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000
68	0.000	0.011	0.000	0.011	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000
70	0.000	0.011	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.022	0.000	0.022
72	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.023
74	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.017
76	0.000	0.014	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.008
78	0.000	0.034	0.000	0.034	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
80	0.000	0.004	0.000	0.004	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000
82	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.012
84	0.000	0.007	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.002	0.000	0.002	0.000	0.012	0.000	0.012	0.000	0.000	0.000	0.000
88	0.000	0.001	0.000	0.001	0.000	0.009	0.000	0.009	0.000	0.000	0.000	0.000
90	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.010
96	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	9.894	14.977	1.036	25.907	3.262	4.718	0.111	8.092	5.077	8.101	0.111	13.288
N° samples (*):				44				76				79
N° Ind. (*):	445	739	80	1264	535	782	17	1334	878	1317	17	2212
Sampled catch:				291				430				742
Range (*):				10-78				9-89				8-95
Total catch:				332				429				749
Total hauls (*):				123				125				118

TABLE 6 (cont.).- Greenland halibut length distribution per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Lenght (cm.)	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.007	0.009	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.139	0.093	0.015	0.248	0.005	0.028	0.000	0.033	0.116	0.030	0.000	0.146
12	0.799	0.810	0.039	1.648	0.097	0.078	0.012	0.187	0.505	0.523	0.007	1.035
14	1.793	1.820	0.023	3.636	0.322	0.383	0.000	0.705	0.755	0.674	0.000	1.429
16	0.928	0.858	0.000	1.785	0.133	0.270	0.000	0.403	0.323	0.259	0.000	0.582
18	0.081	0.066	0.000	0.147	0.032	0.035	0.000	0.068	0.053	0.060	0.000	0.113
20	0.056	0.087	0.000	0.142	0.151	0.092	0.000	0.243	0.013	0.007	0.000	0.020
22	0.193	0.200	0.000	0.394	0.441	0.552	0.000	0.993	0.024	0.019	0.000	0.043
24	0.293	0.382	0.000	0.675	0.302	0.518	0.000	0.820	0.073	0.106	0.000	0.179
26	0.197	0.327	0.000	0.524	0.152	0.320	0.000	0.472	0.075	0.081	0.000	0.156
28	0.154	0.212	0.000	0.366	0.099	0.131	0.000	0.230	0.050	0.144	0.000	0.194
30	0.307	0.302	0.000	0.609	0.102	0.193	0.000	0.294	0.102	0.159	0.000	0.260
32	0.337	0.519	0.000	0.856	0.199	0.226	0.000	0.425	0.177	0.167	0.000	0.344
34	0.282	0.490	0.000	0.772	0.216	0.307	0.000	0.523	0.278	0.203	0.000	0.481
36	0.241	0.412	0.000	0.654	0.191	0.320	0.000	0.511	0.193	0.284	0.000	0.478
38	0.163	0.402	0.000	0.566	0.215	0.377	0.000	0.592	0.163	0.294	0.000	0.457
40	0.126	0.304	0.000	0.430	0.182	0.343	0.000	0.525	0.200	0.332	0.000	0.533
42	0.114	0.244	0.000	0.358	0.118	0.225	0.000	0.343	0.160	0.397	0.000	0.557
44	0.072	0.194	0.000	0.266	0.047	0.196	0.000	0.243	0.099	0.303	0.000	0.402
46	0.132	0.167	0.000	0.300	0.050	0.164	0.000	0.214	0.052	0.120	0.000	0.172
48	0.079	0.099	0.000	0.178	0.067	0.117	0.000	0.184	0.082	0.147	0.000	0.229
50	0.098	0.128	0.000	0.226	0.038	0.095	0.000	0.133	0.050	0.149	0.000	0.199
52	0.045	0.085	0.000	0.130	0.053	0.081	0.000	0.134	0.031	0.102	0.000	0.133
54	0.047	0.075	0.000	0.121	0.073	0.067	0.000	0.141	0.028	0.054	0.000	0.082
56	0.012	0.037	0.000	0.049	0.047	0.026	0.000	0.072	0.033	0.050	0.000	0.083
58	0.019	0.048	0.000	0.067	0.020	0.088	0.000	0.109	0.018	0.037	0.000	0.055
60	0.014	0.018	0.000	0.032	0.013	0.024	0.000	0.037	0.023	0.019	0.000	0.042
62	0.009	0.018	0.000	0.027	0.000	0.020	0.000	0.020	0.006	0.010	0.000	0.016
64	0.008	0.005	0.000	0.012	0.009	0.018	0.000	0.027	0.000	0.019	0.000	0.019
66	0.000	0.007	0.000	0.007	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
68	0.000	0.000	0.000	0.000	0.006	0.011	0.000	0.017	0.000	0.000	0.000	0.000
70	0.000	0.005	0.000	0.005	0.000	0.015	0.000	0.015	0.000	0.000	0.000	0.000
72	0.000	0.005	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005
74	0.000	0.016	0.000	0.016	0.000	0.018	0.000	0.018	0.000	0.000	0.000	0.000
76	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.007
78	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
80	0.000	0.006	0.000	0.006	0.000	0.008	0.000	0.008	0.000	0.000	0.000	0.000
82	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
84	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
86	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.005
88	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
92	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
94	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
96	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
98	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
104	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	6.738	8.459	0.087	15.284	3.381	5.359	0.012	8.752	3.683	4.765	0.007	8.455
N° samples (*):				79				78				71
N° Ind. (*):	1235	1511	13	2759	579	925	2	1506	611	773	1	1385
Sampled catch:				624				507				460
Range (*):				9-96				11-81				10-87
Total catch:				624				551				467
Total hauls (*):				120				119				120

TABLE 7.-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											0.15	0.15				
1	3.74	4.74	1.44	9.92	0.57	0.92	0.22	1.71	1.14	3.15	0.10	4.38	1.15	1.49	0.29	2.92
2	2.70	2.82	0.00	5.52	2.61	2.62	0.01	5.24	1.86	2.94	0.00	4.80	0.22	0.27		0.49
3	1.67	1.82		3.49	4.24	4.84		9.08	4.09	3.12		7.21	0.34	0.47		0.80
4	0.81	2.99		3.81	3.35	5.12		8.47	4.35	4.96		9.31	0.59	0.80		1.39
5	0.98	1.26		2.24	1.92	3.14		5.06	2.06	4.23		6.29	1.50	2.34		3.84
6	0.77	1.20		1.97	0.97	1.80		2.77	0.81	2.12		2.92	1.48	2.95		4.42
7	0.21	1.01		1.22	0.34	0.76		1.10	0.32	0.45		0.77	0.89	1.67		2.56
8	0.19	0.41		0.60	0.20	0.46		0.66	0.13	0.36		0.49	0.12	0.59		0.71
9	0.01	0.06		0.07	0.04	0.17		0.21	0.04	0.19		0.23	0.06	0.23		0.28
10	0.00	0.05		0.05	0.03	0.06		0.08	0.03	0.06		0.09	0.02	0.06		0.08
11	0.00	0.05		0.05	0.01	0.03		0.03	0.01	0.02		0.03	0.01	0.05		0.06
12	0.00	0.01		0.02	0.00	0.03		0.03	0.00	0.04		0.05	0.00	0.03		0.04
13		0.01		0.01		0.02		0.02		0.03		0.03	0.00	0.04		0.05
14		0.02		0.02		0.01		0.01		0.03		0.03	0.00	0.05		0.06
15		0.01		0.01		0.01		0.01		0.02		0.02		0.03		0.03
16		0.00		0.00		0.00		0.00		0.01		0.01		0.02		0.02
17		0.00		0.00		0.00		0.00		0.00		0.00		0.01		0.01
18		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00
19										0.00				0.00		0.00
20		0.00		0.00						0.00						
Total	11.09	16.47	1.44	29.00	14.27	19.99	0.24	34.50	14.82	21.73	0.25	36.80	6.36	11.10	0.29	17.75

Age	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	3.40	4.44	1.03	8.87	1.40	1.40	0.11	2.91	1.39	2.07	0.11	3.56
2	2.59	3.30	0.01	5.90	0.33	0.32	0.00	0.64	1.05	1.35	0.00	2.40
3	0.51	0.67		1.18	0.38	0.65		1.02	0.82	0.86		1.68
4	0.41	0.66		1.07	0.24	0.46		0.69	0.86	1.05		1.91
5	1.20	1.64		2.84	0.47	0.67		1.14	0.35	1.22		1.58
6	1.23	2.73		3.96	0.32	0.60		0.92	0.29	0.61		0.90
7	0.50	1.06		1.56	0.11	0.33		0.44	0.28	0.50		0.78
8	0.02	0.20		0.22	0.01	0.21		0.23	0.04	0.23		0.26
9	0.01	0.05		0.06		0.02		0.02	0.00	0.06		0.06
10	0.01	0.04		0.05		0.01		0.01		0.04		0.04
11	0.01	0.03		0.04		0.02		0.02		0.01		0.01
12	0.00	0.05		0.05		0.02		0.02		0.07		0.07
13	0.00	0.04		0.05		0.01		0.01		0.01		0.01
14	0.00	0.04		0.04		0.01		0.01		0.01		0.01
15		0.02		0.02		0.02		0.02				
16		0.00		0.00								
17		0.00		0.00						0.01		0.01
18												
19		0.00		0.00								
20												
Total	9.89	14.98	1.04	25.91	3.26	4.72	0.11	8.09	5.08	8.10	0.11	13.29

TABLE 7 (Cont.).-Greenland halibut age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	0.45	0.71	0.05	1.22	0.42	0.33	0.01	0.76	1.24	1.06	0.01	2.31
2	3.55	3.37	0.04	6.96	0.56	0.66	0.00	1.22	0.58	0.53		1.12
3	0.74	1.34		2.09	0.63	0.92		1.55	0.14	0.27		0.41
4	1.01	1.04		2.06	0.44	0.68		1.12	0.68	0.87		1.55
5	0.33	0.91		1.24	0.49	0.75		1.25	0.37	1.01		1.38
6	0.39	0.46		0.85	0.40	1.15		1.56	0.37	0.45		0.81
7	0.15	0.37		0.51	0.30	0.49		0.78	0.20	0.32		0.52
8	0.09	0.12		0.21	0.08	0.14		0.22	0.06	0.16		0.22
9	0.01	0.04		0.05	0.02	0.03		0.05	0.02	0.03		0.05
10	0.02	0.01		0.03	0.02	0.10		0.11	0.02	0.01		0.03
11	0.01	0.00		0.01	0.00	0.03		0.03		0.02		0.02
12		0.03		0.03	0.01	0.02		0.03		0.02		0.02
13		0.02		0.02		0.03		0.03		0.00		0.00
14		0.01		0.01		0.03		0.03		0.01		0.01
15		0.01		0.01		0.01		0.01				0.00
16										0.00		
17						0.00		0.00				0.00
18												
19												
20												
Total	6.74	8.46	0.09	15.28	3.38	5.36	0.01	8.75	3.68	4.76	0.01	8.45

TABLE 8.-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												7.50	7.50			
1	19.81	18.18	12.74	18.01	21.13	19.32	14.09	19.24	16.18	15.28	12.90	15.46	13.81	13.69	12.61	13.63
2	25.07	23.39	20.19	24.21	25.80	24.54	21.50	25.16	23.11	22.79	18.50	22.91	21.01	19.39		20.12
3	30.53	29.26		29.87	30.57	29.55		30.03	31.66	30.02		30.95	26.56	27.06		26.85
4	35.84	33.84		34.27	34.21	33.49		33.78	34.05	34.09		34.07	33.79	32.46		33.02
5	39.56	39.25		39.38	37.70	38.41		38.14	37.18	38.20		37.87	38.28	38.60		38.47
6	43.76	44.13		43.99	42.32	42.05		42.14	42.30	40.91		41.30	41.55	42.53		42.21
7	50.97	47.85		48.38	48.42	47.13		47.53	46.47	46.35		46.40	44.89	45.91		45.58
8	50.30	52.28		51.66	50.85	50.89		50.88	51.48	50.42		50.69	53.78	50.51		51.05
9	59.75	59.71		59.72	55.22	53.98		54.22	54.20	53.41		53.54	54.71	55.22		55.12
10	62.50	65.54		65.39	55.28	60.01		58.54	52.29	58.76		56.86	59.85	60.83		60.63
11	65.19	64.52		64.53	62.73	63.40		63.25	62.78	63.55		63.35	62.57	62.58		62.58
12	66.19	71.70		70.74	64.83	68.11		67.86	65.90	66.89		66.83	62.94	65.05		64.77
13		75.84		75.84		73.38		73.38		72.91		72.91	63.53	68.44		68.21
14		77.14		77.14		74.81		74.81		74.49		74.49	67.06	72.48		72.06
15		75.41		75.41		77.99		77.99		76.64		76.64		78.52		78.52
16		86.66		86.66		81.44		81.44		83.60		83.60		78.94		78.94
17		91.50		91.50		87.76		87.76		90.06		90.06		83.62		83.62
18		83.35		83.35		90.48		90.48		94.50		94.50		85.17		85.17
19														91.03		91.03
20		92.50		92.05												
Total	28.46	29.93	12.76	28.52	32.78	33.62	14.54	33.14	32.05	31.74	9.76	31.72	34.47	37.83	12.61	36.22

TABLE 8 (Cont.).-Greenland halibut mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Age	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	13.85	13.94	12.78	13.77	13.51	13.40	11.53	13.39	12.96	13.17	10.15	12.99
2	22.07	22.05	14.84	22.05	22.93	20.64	14.50	21.80	23.06	23.83	12.50	23.49
3	24.68	26.41		25.66	25.34	25.56		25.48	31.31	31.43		31.37
4	33.45	35.67		34.83	33.61	33.31		33.41	36.64	36.62		36.63
5	39.96	41.07		40.60	37.57	39.21		38.53	42.37	41.22		41.48
6	44.62	45.07		44.93	44.31	43.42		43.73	47.12	46.49		46.70
7	48.26	49.83		49.33	50.04	48.67		49.03	51.58	52.40		52.11
8	56.67	55.58		55.66	55.13	53.43		53.53	56.19	56.47		56.43
9	59.08	59.18		59.16		57.13		57.13	58.50	60.69		60.57
10	60.33	62.15		61.71		61.02		61.02		63.25		63.25
11	62.31	64.62		64.21		63.39		63.39		64.50		64.50
12	63.71	67.60		67.33		71.71		71.71		72.19		72.19
13	66.28	73.91		73.25		78.50		78.50		77.50		77.50
14	78.50	76.47		76.49		87.50		87.50		82.50		82.50
15		80.53		80.53		88.68		88.68				
16		86.14		86.14								
17		89.08		89.08						95.50		95.50
18												
19		97.50		97.50								
20												
Total	26.34	29.99	12.80	27.91	25.23	30.33	11.55	28.02	28.49	31.73	10.16	30.31

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	12.14	12.94	11.54	12.58	14.77	16.35	12.50	15.42	13.77	14.07	13.50	13.91
2	16.47	16.75	14.07	16.59	20.68	21.16	12.50	20.93	17.68	17.03		17.37
3	25.29	29.09		27.74	24.98	25.79		25.46	26.28	27.23		26.91
4	33.61	34.70		34.17	31.66	29.71		30.48	34.31	35.11		34.76
5	39.85	39.40		39.52	36.91	37.79		37.44	39.43	41.20		40.72
6	45.12	44.79		44.94	41.07	42.56		42.17	43.24	44.80		44.10
7	52.07	50.62		51.04	48.58	48.64		48.62	49.53	50.18		49.93
8	54.02	55.95		55.16	55.20	56.01		55.70	54.46	54.90		54.78
9	59.66	58.82		59.04	57.66	58.58		58.20	59.57	58.01		58.62
10	61.61	61.10		61.41	62.45	60.71		61.00	61.82	61.50		61.73
11	64.50	64.50		64.50	61.50	64.15		63.87		62.10		62.10
12		63.61		63.61	68.48	68.16		68.24		64.50		64.50
13		73.79		73.79		70.93		70.91		72.50		72.50
14		75.50		75.50		76.19		76.19		77.50		77.50
15		88.20		88.20		78.77		78.77				
16										87.50		87.50
17						83.50		83.50				
18												
19												
20												
Total	24.00	27.33	12.63	25.78	30.85	35.07	12.50	33.41	27.30	32.39	13.50	30.16

TABLE 9.-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0											2.53	2.53				
1	56.55	44.11	12.86	44.25	66.73	56.01	19.75	54.81	33.43	28.91	14.71	29.77	14.69	13.93	10.45	13.89
2	116.19	90.71	54.44	103.16	126.63	111.44	70.48	118.89	93.56	89.74	45.51	91.18	59.74	47.35		52.97
3	210.65	184.05		196.79	216.07	199.69		207.33	248.40	218.64		235.53	128.63	150.58		141.39
4	343.22	296.07		306.12	307.90	300.76		303.58	313.10	327.53		320.789	282.32	262.15		270.66
5	477.91	474.14		475.79	416.64	461.62		444.53	409.22	473.15		452.20	427.90	463.68		449.67
6	655.66	691.54		677.57	598.59	618.72		611.69	609.82	591.51		596.56	569.60	645.43		620.11
7	1039.74	904.80		927.81	910.39	891.49		897.31	822.33	886.29		859.87	730.54	839.28		801.57
8	1026.08	1215.64		1156.61	1069.28	1143.26		1120.75	1140.19	1164.85		1158.54	1328.46	1174.58		1199.73
9	1712.22	1824.90		1803.51	1386.01	1376.62		1378.47	1348.28	1405.65		1395.92	1413.25	1563.75		1533.36
10	1955.36	2451.90		2427.15	1432.74	1924.36		1771.37	1232.46	1904.19		1707.55	1905.57	2159.81		2106.74
11	2237.75	2337.64		2335.75	2039.82	2276.20		2223.67	2111.90	2448.25		2362.51	2208.37	2378.52		2363.60
12	2352.23	3300.22		3135.63	2253.06	2917.28		2867.21	2463.10	2940.32		2912.86	2245.01	2715.93		2653.68
13		3942.66		3942.66		3684.55		3684.55		3877.33		3877.33	2312.31	3242.15		3199.58
14		4190.79		4190.79		3909.22		3909.22		4188.33		4188.33	2772.46	3964.91		3872.13
15		3887.49		3887.49		4480.36		4480.36		4594.01		4594.01		5205.90		5205.90
16		6092.92		6092.92		5136.80		5136.80		6339.81		6339.81		5334.32		5334.32
17		7169.24		7169.24		6438.79		6438.79		7771.36		7771.36		6423.59		6423.59
18		5376.62		5376.62		7159.28		7159.28		8870.58		8870.58		6830.30		6830.30
19														8552.11		8552.11
20		7425.48		7425.48												
Total	232.20	308.61	12.96	264.67	303.57	365.55	22.83	337.54	299.38	352.89	7.97	328.98	420.62	613.57	10.45	534.68

Age	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	16.47	17.18	13.45	16.48	15.16	14.44	9.15	14.58	13.64	14.67	5.75	13.99
2	72.15	75.92	20.95	74.19	85.12	64.56	18.23	74.96	91.26	98.95	11.06	95.57
3	102.12	138.28		122.55	115.32	119.77		118.13	233.58	239.55		236.64
4	271.96	351.48		321.30	292.89	280.11		284.52	384.32	389.32		387.08
5	474.57	549.96		518.19	420.87	483.24		457.46	603.57	567.97		575.95
6	676.20	739.46		719.83	705.62	677.06		686.90	848.07	832.07		837.28
7	869.70	1020.42		971.90	1043.65	978.53		995.47	1139.15	1223.51		1193.47
8	1427.84	1443.38		1442.29	1413.34	1331.03		1336.18	1491.39	1556.30		1546.84
9	1628.57	1759.76		1735.49		1645.43		1645.43	1696.71	1957.74		1942.74
10	1741.34	2059.38		1981.96		2045.34		2045.34		2235.61		2235.61
11	1929.96	2341.88		2269.44		2325.25		2325.25		2380.78		2380.78
12	2073.82	2719.39		2673.75		3573.05		3573.05		3442.28		3442.28
13	2352.00	3656.76		3543.88		4688.33		4688.33		4308.25		4308.25
14	4033.42	4068.04		4067.64		6704.09		6704.09		5272.40		5272.40
15		4770.13		4770.13		7010.77		7010.77				
16		5906.19		5906.19								
17		6596.90		6596.90						8458.35		8458.35
18												
19		8790.83		8790.83								
20												
Total	235.78	384.60	13.51	312.93	222.00	406.07	9.20	326.40	290.81	443.31	5.78	381.40

TABLE 9 (Cont.).-Greenland halibut mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	10.36	12.15	8.85	11.35	20.40	31.52	12.40	25.09	16.77	17.32	15.20	17.02
2	32.38	33.31	16.10	32.74	61.94	76.58	12.40	69.79	39.71	35.77		37.83
3	127.49	187.69		166.28	109.33	133.56		123.71	128.14	147.05		140.62
4	276.74	315.37		296.34	235.20	206.27		217.62	296.98	335.57		318.55
5	474.56	478.78		477.67	384.54	430.37		412.25	463.22	558.91		533.21
6	707.95	723.66		716.51	540.86	632.11		608.39	614.40	718.56		671.84
7	1111.11	1087.07		1094.00	940.73	953.18		948.48	955.05	1039.83		1007.25
8	1261.22	1510.72		1408.99	1371.22	1454.85		1423.31	1261.22	1386.76		1351.91
9	1714.45	1774.27		1759.06	1567.35	1686.45		1638.10	1666.78	1648.82		1655.80
10	1901.04	2010.19		1944.89	2030.67	1867.95		1894.60	1871.62	1984.49		1901.68
11	2200.49	2398.03		2258.79	1926.64	2219.97		2188.21		2048.31		2048.31
12		2297.05		2297.05	2733.13	2695.05		2704.57		2314.58		2314.58
13		3746.17		3746.17		3065.83		3065.83		3376.88		3376.88
14		4034.69		4034.69		3843.10		3843.10		4188.75		4188.75
15		6945.38		6945.38		4252.78		4252.79				
16										6199.50		6199.50
17						5056.70		5056.70				
18												
19												
20												
Total	187.38	285.66	11.97	240.78	328.36	490.91	12.40	427.46	270.93	426.46	15.20	358.38

TABLE 10.- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menguña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997				1998				1999				2000			
	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD
353	0.0480	4	47.97	25.084	0.0465	4	267.95	103.830	0.0360	3	388.97	37.624	0.0356	3	426.02	210.639
354	0.0233	2	34.16	18.447	0.0356	3	381.49	146.407	0.0218	2	184.12	100.017	0.0356	3	147.44	84.780
355	0.0233	2	14.02	4.617	0.0221	2	134.67	132.931	0.0229	2	60.82	30.122	0.0233	2	60.01	1.539
356	0.0225	2	8.15	4.133	0.0221	2	14.23	5.343	0.0229	2	31.47	23.877	0.0225	2	28.11	24.368
357	0.0443	4	1.86	1.051	0.0240	2	2.33	0.484	0.0236	2	3.06	1.913	0.0124	1	0.55	-
358	0.0563	5	4.44	4.415	0.0236	3	6.73	1.265	0.0349	3	9.06	15.047	0.0341	3	298.64	437.609
359	0.0690	6	30.12	15.773	0.0698	6	198.60	199.740	0.0364	3	484.88	84.636	0.0469	4	659.75	139.208
360	0.3754	32	26.15	17.839	0.2561	25	107.53	64.858	0.2325	19	263.77	91.624	0.2396	20	324.76	269.238
374	0.0353	3	8.40	3.170	0.0353	3	4.00	0.906	0.0244	2	44.00	1.495	0.0240	2	5.60	0.440
375	0.0116	1	1.85	-	0.0345	3	5.93	3.550	0.0236	2	42.21	15.545	0.0244	2	30.11	9.300
376	0.1583	14	12.53	8.741	0.0930	10	82.92	73.283	0.1219	10	119.90	62.748	0.1200	10	250.98	179.289
377	0.0116	1	20.96	-	0.0229	2	47.18	59.694	0.0240	2	86.16	117.320	0.0229	2	27.02	29.064
378	0.0210	2	1.87	1.583	0.0120	2	5.22	2.199	0.0229	2	7.14	4.199	0.0233	2	19.74	22.646
379	0.0206	2	1.78	1.568	0.0356	3	2.65	1.804	0.0236	2	0.78	0.308	0.0225	2	2.30	1.146
380	0.0210	2	1.41	0.079	0.0113	2	1.69	0.945	0.0236	2	2.22	0.066	0.0236	2	1.74	0.402
381	0.0221	2	1.55	0.895	0.0229	2	8.41	10.927	0.0229	2	0.59	0.231	0.0236	2	2.03	1.269
382	0.0461	4	0.59	0.340	0.0229	3	4.35	3.017	0.0484	4	2.25	0.610	0.0499	4	1.92	0.562
721	0.0221	2	13.40	12.225	0.0203	2	7.68	6.464	0.0244	2	20.06	10.378	0.0236	2	4.21	4.725
722	0.0214	2	46.66	65.850	0.0101	2	1.99	2.375	0.0229	2	2.43	0.704	0.0218	2	1.21	1.715
723	0.0210	2	8.79	5.464	0.0233	2	10.04	8.619	0.0229	2	34.05	29.946	0.0248	2	10.67	7.344
724	0.0225	2	13.33	17.024	0.0206	2	10.84	2.528	0.0225	2	9.89	10.466	0.0233	2	12.31	1.803
725	0.0206	2	1.31	0.882	0.0086	1	0.62	-	0.0229	2	2.48	0.073	0.0210	2	8.64	8.707
726	n.s.	n.s.	n.s.	n.s.	0.0094	2	2.95	2.726	0.0225	2	39.96	47.051	0.0221	2	8.24	4.177
727	0.0094	1	9.37	-	0.0233	2	9.02	3.782	0.0236	2	7.56	7.651	0.0210	2	4.59	2.089
728	0.0214	2	32.09	23.965	0.0206	2	15.58	4.617	0.0233	2	37.93	22.294	0.0210	2	22.82	0.178
752	0.0218	2	112.70	128.072	0.0229	2	49.95	7.102	0.0233	2	35.68	10.927	0.0206	2	128.14	25.680
753	0.0214	2	56.78	41.643	0.0218	2	146.98	13.280	0.0229	2	14.74	4.969	0.0218	2	169.96	216.964
754	0.0330	3	5.50	6.447	0.0210	2	2.67	3.782	0.0206	2	0.00	0.000	0.0195	2	0.00	0.000
755	n.s.	n.s.	n.s.	n.s.	0.0206	2	0.39	0.550	0.0311	3	0.05	0.090	0.0431	4	0.00	0.000
756	0.0109	1	75.68	-	0.0225	2	199.76	258.188	0.0225	2	124.34	44.457	0.0203	2	31.68	11.829
757	0.0304	3	626.06	753.372	0.0206	2	82.24	100.918	0.0233	2	17.07	3.782	0.0214	2	5.12	6.827
758	0.0214	2	0.60	0.447	0.0105	2	4.03	5.695	0.0214	2	0.31	0.438	0.0210	2	1.32	1.649
759	n.s.	n.s.	n.s.	n.s.	0.0214	2	0.00	0.000	0.0218	2	0.34	0.484	0.0210	2	1.99	2.814
760	0.0105	1	17.16	-	0.0214	2	8.04	5.519	0.0225	2	20.30	28.275	0.0210	2	43.59	58.396
761	0.0315	3	1.21	1.954	0.0206	2	3.47	1.605	0.0210	2	0.00	0.000	0.0221	2	0.19	0.264
762	0.0308	3	0.00	0.000	0.0094	2	0.00	0.000	0.0210	2	18.49	26.142	0.0203	2	0.00	0.000
763	n.s.	n.s.	n.s.	n.s.	0.0218	2	0.08	0.110	0.0311	3	0.00	0.000	0.0416	4	0.30	0.606
764	0.0206	2	0.17	0.237	0.0218	2	0.25	0.352	0.0225	2	0.00	0.000	0.0218	2	0.00	0.000
765	0.0206	2	0.00	0.000	0.0098	2	0.00	0.000	0.0221	2	0.00	0.000	0.0203	2	0.00	0.000
766	0.0308	3	0.00	0.000	0.0191	2	0.00	0.000	0.0218	2	0.00	0.000	0.0214	2	0.00	0.000
767	n.s.	n.s.	n.s.	n.s.	0.0109	2	0.00	0.000	0.0214	2	0.00	0.000	0.0210	2	0.11	0.156

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 10 (cont.).- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	2001				2002				2003			
	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD
353	0.0341	3	451.08	185.936	0.0476	4	630.50	240.448	0.0334	3	470.86	217.828
354	0.0338	3	172.21	144.326	0.0356	3	207.67	77.048	0.0338	3	806.33	68.178
355	0.0240	2	206.75	85.065	0.0236	2	100.75	40.659	0.0229	2	112.14	7.297
356	0.0240	2	83.56	40.362	0.0233	2	53.95	51.548	0.0225	2	159.80	99.561
357	0.0244	2	76.85	105.720	0.0240	2	5.18	2.015	0.0229	2	59.40	76.650
358	0.0345	3	35.80	28.161	0.0345	3	27.67	21.202	0.0338	3	26.50	16.096
359	0.0803	7	347.89	328.624	0.0686	6	177.40	129.497	0.0791	7	459.09	433.737
360	0.2423	20	261.79	173.177	0.2865	25	143.72	117.177	0.2254	20	229.12	120.612
374	0.0240	2	14.95	1.909	0.0345	3	3.42	1.630	0.0225	2	15.33	4.207
375	0.0338	3	4.77	1.680	0.0353	3	1.41	1.073	0.0330	3	9.96	10.915
376	0.1155	10	46.95	32.487	0.1140	10	47.96	50.207	0.1125	10	62.92	55.173
377	0.0229	2	21.09	10.204	0.0229	2	34.05	39.527	0.0225	2	48.61	30.816
378	0.0236	2	2.75	1.287	0.0233	2	8.10	6.364	0.0225	2	9.42	8.040
379	0.0229	2	0.84	0.092	0.0229	2	5.75	5.445	0.0229	2	3.47	4.667
380	0.0206	2	2.97	0.638	0.0225	2	7.25	1.768	0.0229	2	6.68	0.735
381	0.0236	2	2.35	0.154	0.0229	2	3.81	2.821	0.0229	2	7.70	3.111
382	0.0469	4	3.02	0.929	0.0341	3	1.09	0.904	0.0454	4	2.12	0.643
721	0.0248	2	115.20	86.974	0.0233	2	18.20	12.445	0.0225	2	222.75	273.155
722	0.0233	2	30.29	35.511	0.0236	2	30.10	42.568	0.0221	2	14.31	15.493
723	0.0240	2	36.15	39.244	0.0233	2	7.20	0.849	0.0229	2	2.10	2.687
724	0.0353	3	26.47	26.158	0.0225	2	47.05	41.931	0.0225	2	7.02	7.050
725	0.0116	2	3.37	0.368	0.0225	2	3.55	4.313	0.0229	2	3.34	0.049
726	0.0116	2	1.80	0.430	0.0214	2	2.83	0.948	0.0225	2	0.00	0.000
727	0.0225	2	8.46	5.277	0.0233	2	2.85	1.061	0.0218	2	42.85	21.001
728	0.0229	2	5.85	1.143	0.0229	2	9.58	13.467	0.0225	2	40.45	23.264
752	0.0210	2	15.79	7.922	0.0116	1	0.00	-	0.0229	2	27.05	12.516
753	0.0214	2	60.01	68.290	0.0229	2	3.60	5.091	0.0229	2	0.00	0.000
754	0.0195	2	1.26	1.781	0.0341	3	8.60	14.206	0.0218	2	0.00	0.000
755	0.0416	4	0.00	0.000	0.0338	3	0.00	0.000	0.0221	2	0.00	0.000
756	0.0113	2	11.58	8.167	0.0229	2	11.73	12.551	0.0221	2	1.83	0.884
757	0.0233	2	105.18	148.295	0.0225	2	31.15	13.223	0.0221	2	5.17	7.304
758	0.0218	2	0.16	0.220	0.0225	2	1.27	0.523	0.0221	2	0.00	0.000
759	0.0221	2	0.26	0.374	0.0225	2	0.00	0.000	0.0113	1	0.00	-
760	0.0229	2	37.80	37.618	0.0229	2	4.75	6.718	0.0218	2	0.00	0.000
761	0.0225	2	0.25	0.346	0.0225	2	1.90	1.577	0.0225	2	0.00	0.000
762	0.0116	2	0.00	0.000	0.0225	2	0.30	0.424	0.0225	2	0.00	0.000
763	0.0330	3	0.00	0.000	0.0225	2	0.00	0.000	0.0311	3	0.00	0.000
764	0.0240	2	0.35	0.205	0.0236	2	0.50	0.707	0.0221	2	0.63	0.884
765	0.0113	2	0.05	0.071	0.0236	2	0.64	0.792	0.0113	1	0.00	-
766	0.0203	2	0.44	0.616	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000
767	0.0218	2	0.00	0.000	0.0225	2	0.05	0.071	0.0229	2	0.00	0.000

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 10 (cont.).- Swept area, number of hauls and American plaice mean catch (kg) and SD by stratum. Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. Swept area in square miles. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Menduña* data, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	2004				2005				2006			
	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD	Swept area	Tow number	A. Plaice Mean catch	A. Plaice SD
353	0.0338	3	418.60	276.823	0.0353	3	224.63	106.622	0.0371	3	321.42	64.587
354	0.0345	3	220.64	173.634	0.0353	3	220.46	151.511	0.0364	3	134.53	130.027
355	0.0229	2	23.50	9.758	0.0225	2	73.44	60.161	0.0248	2	32.85	27.506
356	0.0221	2	0.66	0.893	0.0233	2	8.37	11.257	0.0240	2	4.38	6.194
357	0.0229	2	0.84	1.190	0.0233	2	0.00	0.000	0.0244	2	6.82	9.378
358	0.0330	3	27.72	15.234	0.0349	3	26.52	20.817	0.0349	3	22.10	19.361
359	0.0791	7	440.97	296.394	0.0814	7	371.26	369.519	0.0975	8	329.81	332.590
360	0.2310	20	283.51	168.955	0.2325	20	293.79	173.170	0.2340	19	562.23	459.478
374	0.0233	2	89.95	46.315	0.0229	2	126.47	116.171	0.0236	2	120.64	27.344
375	0.0338	3	73.12	19.172	0.0349	3	56.44	35.364	0.0364	3	55.90	18.748
376	0.1166	10	195.37	112.407	0.1174	10	177.42	92.305	0.1219	10	136.03	74.695
377	0.0218	2	84.23	73.928	0.0233	2	317.45	167.514	0.0236	2	242.64	52.446
378	0.0225	2	34.30	14.001	0.0225	2	10.15	7.734	0.0240	2	21.65	15.203
379	0.0124	1	0.71	-	0.0236	2	1.37	1.923	0.0236	2	0.12	0.171
380	0.0221	2	2.01	2.174	0.0229	2	0.35	0.488	0.0229	2	0.00	0.000
381	0.0225	2	29.64	18.611	0.0233	2	57.15	57.629	0.0229	2	6.43	6.824
382	0.0461	4	55.76	49.674	0.0458	4	36.82	11.832	0.0469	4	44.32	11.998
721	0.0221	2	0.00	0.000	0.0229	2	0.00	0.000	0.0236	2	0.00	0.000
722	0.0218	2	1.02	1.442	0.0233	2	0.00	0.000	0.0240	2	0.00	0.000
723	0.0229	2	0.68	0.955	0.0233	2	0.00	0.000	0.0236	2	0.04	0.049
724	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000	0.0233	2	0.00	0.000
725	0.0225	2	19.30	27.294	0.0236	2	5.45	7.707	0.0233	2	1.02	1.385
726	0.0225	2	0.00	0.000	0.0113	1	0.00	-	0.0225	2	0.20	0.287
727	0.0233	2	0.37	0.338	0.0229	2	0.00	0.000	0.0225	2	0.00	0.000
728	0.0180	2	0.00	0.000	0.0109	1	0.00	-	0.0225	2	0.00	0.000
752	0.0214	2	0.00	0.000	0.0236	2	0.00	0.000	0.0225	2	0.07	0.092
753	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000
754	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000
755	0.0319	3	0.00	0.000	0.0450	4	0.00	0.000	0.0338	3	0.00	0.000
756	0.0218	2	0.00	0.000	0.0233	2	0.00	0.000	0.0229	2	0.00	0.000
757	0.0218	2	0.00	0.000	0.0225	2	0.00	0.000	0.0225	2	0.14	0.191
758	0.0214	2	0.00	0.000	0.0225	2	0.00	0.000	0.0225	2	0.00	0.000
759	0.0214	2	0.00	0.000	0.0229	2	0.00	0.000	0.0225	2	0.00	0.000
760	0.0221	2	0.00	0.000	0.0229	2	6.10	8.627	0.0225	2	0.00	0.000
761	0.0221	2	0.01	0.007	0.0221	2	0.00	0.000	0.0233	2	0.00	0.000
762	0.0233	2	0.00	0.000	0.0225	2	0.00	0.000	0.0233	2	0.00	0.000
763	0.0326	3	0.00	0.000	0.0334	3	0.00	0.000	0.0225	2	0.00	0.000
764	0.0229	2	0.00	0.000	0.0233	2	0.00	0.000	0.0233	2	0.00	0.000
765	0.0225	2	0.00	0.000	0.0229	2	0.00	0.000	0.0236	2	0.00	0.000
766	0.0225	2	0.00	0.000	0.0229	2	0.00	0.000	0.0229	2	0.00	0.000
767	0.0218	2	0.57	0.799	0.0113	1	0.00	-	0.0233	2	0.00	0.000

$$SD = \frac{\sum (x_i - \bar{x})^2}{n-1}$$

TABLE 11.- Stratified mean catches (Kg) by stratum and year and SD by year of American plaice (1997-2006). n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
353	12903.67	72078.57	104632.35	114599.70	121339.62	169604.50	126660.44	112602.50	60426.37	86461.08
354	8402.49	93846.24	45293.87	36269.52	42363.66	51086.00	198357.18	54277.44	54233.57	33093.23
355	1037.72	9965.35	4500.63	4440.80	15299.50	7455.50	8298.36	1739.00	5434.56	2430.90
356	382.89	668.59	1478.94	1321.33	3927.32	2535.65	7510.60	30.95	393.39	205.86
357	304.55	382.45	502.29	90.77	12602.58	848.70	9741.60	138.01	0.00	1118.23
358	999.88	1513.72	2037.49	67195.07	8055.00	6225.00	5962.50	6236.25	5966.25	4972.28
359	12680.29	83608.73	204132.53	277756.52	146459.89	74685.40	193275.09	185648.37	156301.96	138849.75
360	72766.01	299247.75	734066.28	903798.01	728547.66	399985.01	637653.48	789018.07	817625.50	1564674.81
374	1796.59	856.16	9415.49	1197.73	3199.30	731.88	3279.55	19249.30	27063.51	25815.89
375	500.53	1606.63	11438.83	8160.97	1291.77	381.21	2698.26	19816.42	15294.34	15149.44
376	16719.30	110620.38	159942.67	334810.31	62631.30	63978.64	83931.28	260619.58	236676.28	181467.22
377	2095.72	4718.47	8616.07	2702.20	2108.50	3405.00	4861.00	8422.50	31745.00	24263.50
378	259.32	726.10	991.91	2744.49	382.25	1125.90	1308.69	4767.70	1411.06	3009.35
379	188.36	281.25	82.40	243.73	88.51	609.50	367.82	75.26	145.22	12.83
380	134.92	162.68	213.43	167.31	285.07	696.00	641.28	193.20	33.12	0.00
381	222.76	1211.16	84.85	291.71	338.05	547.92	1108.80	4268.16	8229.60	925.20
382	202.64	1493.12	770.56	657.24	1037.19	372.73	726.30	19126.54	12628.40	15200.90
721	871.09	499.21	1303.60	273.96	7488.00	1183.00	14478.75	0.00	0.00	0.00
722	3919.11	167.16	203.73	101.86	2544.36	2528.40	1201.62	85.68	0.00	0.00
723	1362.72	1556.71	5277.38	1653.10	5603.25	1116.00	325.50	104.63	0.00	5.43
724	1653.48	1343.68	1226.09	1526.83	3281.87	5834.20	869.86	0.00	0.00	0.00
725	137.94	65.30	260.04	907.63	353.82	372.75	350.18	2026.50	572.25	107.21
726	n.s	212.68	2876.79	593.27	129.33	203.76	0.00	0.00	0.00	14.62
727	899.68	865.65	725.35	440.29	811.92	273.60	4113.60	35.42	0.00	0.00
728	2502.92	1215.08	2958.88	1780.30	455.96	747.05	3155.10	0.00	0.00	0.00
752	14763.59	6543.72	4674.08	16785.97	2068.61	0.00	3543.55	0.00	0.00	8.52
753	7835.24	20283.24	2033.90	23454.24	8281.50	496.80	0.00	0.00	0.00	0.00
754	989.34	481.33	0.00	0.00	226.67	1548.60	0.00	0.00	0.00	0.00
755	n.s	149.64	19.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00
756	7643.89	20175.92	12558.72	3200.13	1169.09	1184.23	184.33	0.00	0.00	0.00
757	63857.75	8388.77	1741.19	522.51	10728.11	3177.30	526.83	0.00	0.00	13.77
758	59.81	398.64	30.63	130.83	15.39	125.73	0.00	0.00	0.00	0.00
759	n.s	0.00	43.44	252.73	33.57	0.00	0.00	0.00	0.00	0.00
760	2643.21	1237.81	3126.85	6713.38	5821.20	731.50	0.00	0.00	939.40	0.00
761	206.83	592.85	0.00	31.90	41.90	324.05	0.00	0.86	0.00	0.00
762	0.00	0.00	3918.87	0.00	0.00	63.60	0.00	0.00	0.00	0.00
763	n.s	20.29	0.00	79.13	0.00	0.00	0.00	0.00	0.00	0.00
764	16.71	24.87	0.00	0.00	34.50	50.00	62.50	0.00	0.00	0.00
765	0.00	0.00	0.00	0.00	6.20	79.36	0.00	0.00	0.00	0.00
766	0.00	0.00	0.00	0.00	62.68	0.00	0.00	0.00	0.00	0.00
767	n.s	0.00	0.00	17.44	0.00	7.90	0.00	89.27	0.00	0.00
TOTAL	240960.96	747209.90	1331180.06	1814912.89	1199115.08	804322.34	1315194.03	1488571.60	1435119.78	2097800.01
(\bar{Y})	25.80	72.25	128.72	175.49	115.95	77.77	127.17	143.93	138.77	202.84
S.D.	5.09	6.51	6.85	19.24	12.31	7.46	10.79	13.03	12.92	29.01

TABLE 12.- Survey estimates (by the swept area method) of American plaice biomass (t) and SD by stratum and year on NAFO Div. 3NO. n.s. means stratum not surveyed. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

Stratum	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
353	1075	6200	8719	9651	10666	14245	11385	10009	5143	6987
354	723	7903	4165	3054	3766	4302	17632	4720	4616	2729
355	89	901	393	382	1275	631	726	152	483	196
356	34	60	129	117	327	218	668	3	34	17
357	28	32	43	7	1034	71	852	12	0	92
358	89	130	175	5907	700	541	530	567	513	428
359	1103	7192	16836	23702	12775	6530	17099	16424	13445	11393
360	6203	25808	59988	75434	60151	34903	56586	68313	70333	127046
374	153	73	773	100	267	64	292	1656	2366	2185
375	43	140	968	670	115	32	245	1761	1316	1249
376	1479	9578	13124	27901	5422	5612	7461	22347	20164	14890
377	180	413	718	236	184	298	432	774	2731	2054
378	25	62	87	236	32	97	116	424	125	251
379	18	24	7	22	8	53	32	6	12	1
380	13	14	18	14	28	62	56	17	3	0
381	20	106	7	25	29	48	97	379	708	81
382	18	131	64	53	88	33	64	1659	1104	1297
721	79	49	107	23	605	102	1287	0	0	0
722	367	16	18	9	219	214	109	8	0	0
723	130	134	461	134	467	96	28	9	0	0
724	147	130	109	131	279	519	77	0	0	0
725	13	8	23	86	30	33	31	180	48	9
726	n.s.	21	256	54	11	19	0	0	0	1
727	96	74	61	42	72	24	378	3	0	0
728	234	118	255	170	40	65	280	0	0	0
752	1358	572	402	1628	197	143	310	0	0	1
753	733	1865	178	2157	775	43	0	0	0	0
754	90	46	0	0	23	6	0	0	0	0
755	n.s.	15	2	0	0	0	0	0	0	0
756	703	1793	1116	316	102	104	17	0	0	0
757	6307	813	150	49	923	282	48	0	0	1
758	6	37	3	12	1	11	0	0	0	0
759	n.s.	0	4	24	3	0	0	0	0	0
760	252	116	278	639	509	64	0	0	82	0
761	20	57	0	3	4	29	0	0	0	0
762	0	0	373	0	0	6	0	0	0	0
763	n.s.	2	0	8	0	0	0	0	0	0
764	2	2	0	0	3	4	6	0	0	0
765	0	0	0	0	1	7	0	0	0	0
766	0	0	0	0	6	0	0	0	0	0
767	n.s.	0	0	2	0	1	0	8	0	0
TOTAL	21827	64635	110010	152997	101137	69511	116842	129432	123227	170910
S.D.	4495	5946	5825	16740	10841	7097	9777	12335	11396	24806
Biomass 5+	21335	63888	109368	144336	78321	50934	110167	124194	117223	147423
Biomass 10+	2478	18824	58716	87123	40922	26548	34517	35194	26735	40175

TABLE 13.- Length weight relationships in the calculation of American plaice biomass. The equation is $Weight = a(l + 0.5)^b$ Spanish Spring Surveys on NAFO Div. 3NO: 1997-2006. To calculate the parameters for the indeterminate individuals, we used the total data (males + females + indeterminate individuals)

		1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Males	a	0.0043 Error = 0.1296	0.0041 Error = 0.1200	0.0049 Error = 0.2799	0.0024 Error = 0.1281	0.0064 Error = 0.1556	0.0041 Error = 0.0660	0.0037 Error = 0.0752	0.0075 Error = 0.1483	0.0027 Error = 0.0882	0.0061 Error = 0.1501
	b	3.1794 Error = 0.0378	3.1943 Error = 0.0348	3.1454 Error = 0.0817	3.3523 Error = 0.0382	3.0742 Error = 0.0485	3.1930 Error = 0.0205	3.2287 Error = 0.0234	3.0284 Error = 0.0468	3.3274 Error = 0.0274	3.0860 Error = 0.0458
		R ² = 0.995 N = 1050	R ² = 0.996 N = 573	R ² = 0.983 N = 183	R ² = 0.995 N = 321	R ² = 0.992 N = 188	R ² = 0.988 N = 384	R ² = 0.998 N = 622	R ² = 0.992 N = 411	R ² = 0.997 N = 311	R ² = 0.996 N = 434
Females	a	0.0027 Error = 0.1058	0.0027 Error = 0.0595	0.0048 Error = 0.1420	0.0020 Error = 0.0981	0.0039 Error = 0.0624	0.0032 Error = 0.0628	0.0030 Error = 0.0549	0.0047 Error = 0.0807	0.0027 Error = 0.0634	0.0049 Error = 0.0781
	b	3.3263 Error = 0.0291	3.3218 Error = 0.0162	3.1704 Error = 0.0389	3.4049 Error = 0.0271	3.2256 Error = 0.0177	3.2752 Error = 0.0178	3.2918 Error = 0.0157	3.1757 Error = 0.0228	3.3290 Error = 0.0177	3.1703 Error = 0.0219
		R ² = 0.998 N = 1396	R ² = 0.999 N = 937	R ² = 0.993 N = 201	R ² = 0.998 N = 402	R ² = 0.998 N = 370	R ² = 0.998 N = 703	R ² = 0.999 N = 960	R ² = 0.997 N = 765	R ² = 0.998 N = 569	R ² = 0.999 N = 757
Indet.	a	0.0026 Error = 0.0928	0.0028 Error = 0.0602	0.0022 Error = 0.1531	0.0020 Error = 0.0817	0.0054 Error = 0.0866	0.0035 Error = 0.0599	0.0032 Error = 0.0581	0.0069 Error = 0.1315	0.0025 Error = 0.0523	0.0045 Error = 0.0483
	b	3.3370 Error = 0.0255	3.3153 Error = 0.0164	3.3812 Error = 0.0431	3.4049 Error = 0.0226	3.1409 Error = 0.0248	3.2527 Error = 0.0171	3.2795 Error = 0.0167	3.0712 Error = 0.0382	3.3552 Error = 0.0148	3.1868 Error = 0.0138
		R ² = 0.997 N = 2446	R ² = 0.999 N = 1513	R ² = 0.989 N = 386	R ² = 0.997 N = 726	R ² = 0.996 N = 573	R ² = 0.998 N = 1087	R ² = 0.998 N = 1587	R ² = 0.990 N = 1226	R ² = 0.999 N = 884	R ² = 0.999 N = 1213

TABLE 14.- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Length (cm.)	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.087	5.812	22.898	0.203	10.681	0.227	11.111
12	0.000	0.000	0.000	0.000	0.007	0.008	0.000	0.015	0.000	4.272	4.272	8.543	11.240	11.450	0.117	22.807
14	0.073	0.049	0.000	0.121	0.009	0.000	0.000	0.009	0.289	1.667	0.190	2.146	30.021	34.561	0.000	64.582
16	0.136	0.242	0.000	0.378	0.546	0.263	0.000	0.809	1.474	2.739	0.000	4.212	59.167	75.997	0.000	135.164
18	0.648	0.705	0.023	1.377	0.044	0.146	0.000	0.190	0.210	0.894	0.000	1.104	24.333	41.298	0.005	65.635
20	1.215	0.750	0.000	1.966	0.370	0.163	0.000	0.533	0.398	0.508	0.000	0.906	4.514	5.307	0.000	9.821
22	2.337	1.371	0.000	3.708	1.053	0.693	0.000	1.746	0.765	0.857	0.000	1.622	2.416	2.785	0.000	5.201
24	2.605	1.883	0.000	4.489	3.474	2.310	0.000	5.784	2.904	0.468	0.000	3.372	1.722	1.695	0.000	3.417
26	4.484	2.641	0.000	7.126	5.241	3.713	0.000	8.954	10.069	2.129	0.000	12.197	2.762	0.685	0.000	3.447
28	8.809	2.201	0.000	11.010	8.847	4.872	0.000	13.719	19.126	7.192	0.000	26.318	7.298	1.581	0.000	8.879
30	7.228	3.773	0.000	11.001	11.342	5.977	0.000	17.319	29.710	11.614	0.000	41.323	18.574	3.666	0.000	22.240
32	5.657	4.242	0.000	9.898	10.173	8.235	0.000	18.408	24.357	10.595	0.000	34.952	25.029	7.213	0.000	32.242
34	3.662	4.350	0.000	8.012	7.537	13.315	0.000	20.852	16.253	10.386	0.000	26.638	15.779	13.921	0.000	29.699
36	1.897	4.574	0.000	6.471	4.471	15.805	0.000	20.276	9.405	18.159	0.000	27.564	9.881	16.429	0.000	26.310
38	0.964	3.885	0.000	4.849	2.240	15.381	0.000	17.621	4.435	20.646	0.000	25.081	4.817	18.573	0.000	23.390
40	0.359	3.021	0.000	3.381	0.785	12.615	0.000	13.400	1.846	23.474	0.000	25.320	2.094	26.863	0.000	28.957
42	0.205	1.968	0.000	2.173	0.462	8.995	0.000	9.457	0.370	18.287	0.000	18.657	1.180	25.649	0.000	26.828
44	0.182	1.128	0.000	1.310	0.117	6.272	0.000	6.388	0.467	12.030	0.000	12.497	0.465	19.940	0.000	20.404
46	0.039	0.666	0.000	0.705	0.119	3.702	0.000	3.821	0.043	6.881	0.000	6.924	0.266	13.733	0.000	13.999
48	0.006	0.433	0.000	0.438	0.025	2.391	0.000	2.416	0.020	4.457	0.000	4.478	0.233	8.588	0.000	8.821
50	0.003	0.385	0.000	0.388	0.000	1.132	0.000	1.132	0.000	3.395	0.000	3.395	0.031	6.231	0.000	6.263
52	0.000	0.158	0.000	0.158	0.000	0.476	0.000	0.476	0.000	1.747	0.000	1.747	0.092	3.692	0.000	3.784
54	0.000	0.122	0.000	0.122	0.023	0.380	0.000	0.404	0.000	1.360	0.000	1.360	0.000	3.440	0.000	3.440
56	0.000	0.047	0.000	0.047	0.000	0.301	0.000	0.301	0.000	0.938	0.000	0.938	0.000	1.172	0.000	1.172
58	0.000	0.037	0.000	0.037	0.000	0.314	0.000	0.314	0.000	0.432	0.000	0.432	0.000	1.290	0.000	1.290
60	0.000	0.034	0.000	0.034	0.000	0.306	0.000	0.306	0.000	0.401	0.000	0.401	0.000	1.120	0.000	1.120
62	0.000	0.054	0.000	0.054	0.000	0.103	0.000	0.103	0.000	0.047	0.000	0.047	0.000	1.168	0.000	1.168
64	0.000	0.057	0.000	0.057	0.000	0.122	0.000	0.122	0.000	0.298	0.000	0.298	0.000	0.637	0.000	0.637
66	0.000	0.008	0.000	0.008	0.000	0.045	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
68	0.000	0.011	0.000	0.011	0.000	0.091	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.086	0.000	0.086
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.018
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.000	0.054	0.000	0.000	0.000	0.000
Total	40.511	38.798	0.023	79.332	56.883	108.124	0.000	165.008	122.141	183.012	10.273	315.426	222.117	359.467	0.348	581.933
N° samples (*):				116				108				93				96
N° Ind. (*):	8297	5729	3	14029	4640	7390	0	12030	4541	7742	4	12287	3732	7721	5	11458
Sampled catch:				1390				1617				1858				1697
Range (*):				14-68				13-68				10-77				11-72
Total catch:				4209				8540				10565				15533
Total hauls (*):				128				124				114				118

TABLE 14 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Length (cm.)	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
4	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.021	2.401	2.422	0.000	0.000	0.052	0.052	0.188	0.044	0.287	0.519
8	0.021	0.031	1.194	1.245	0.005	0.133	0.013	0.152	0.356	0.223	0.056	0.635
10	0.280	1.972	0.217	2.469	0.853	1.420	0.091	2.365	0.074	0.142	0.065	0.280
12	3.620	4.188	0.757	8.565	4.606	6.883	0.135	11.625	0.814	0.891	0.000	1.705
14	5.797	7.593	0.398	13.788	3.250	3.490	0.027	6.768	1.576	1.005	0.000	2.581
16	10.535	10.617	0.031	21.183	1.688	2.104	0.000	3.792	6.969	5.441	0.000	12.410
18	48.738	38.461	0.010	87.210	6.588	6.831	0.000	13.420	17.873	13.925	0.000	31.798
20	69.747	56.807	0.000	126.554	10.751	8.917	0.000	19.668	7.441	7.791	0.000	15.232
22	36.774	35.802	0.000	72.576	26.930	17.681	0.000	44.611	14.162	8.973	0.000	23.135
24	7.776	13.101	0.000	20.877	34.971	33.222	0.000	68.193	35.284	11.606	0.000	46.890
26	3.211	3.416	0.000	6.627	21.342	29.173	0.000	50.515	62.238	21.586	0.000	83.823
28	4.639	1.994	0.000	6.633	7.317	13.800	0.000	21.117	42.882	44.576	0.000	87.458
30	11.353	1.499	0.000	12.852	5.530	4.861	0.000	10.391	17.283	42.818	0.000	60.100
32	18.793	2.218	0.000	21.012	7.801	1.697	0.000	9.498	11.921	19.885	0.000	31.805
34	15.703	4.001	0.000	19.705	7.563	1.390	0.000	8.953	11.256	8.363	0.000	19.618
36	8.760	9.830	0.000	18.591	5.397	1.575	0.000	6.973	8.333	3.467	0.000	11.800
38	3.802	11.082	0.000	14.884	2.528	4.239	0.000	6.767	4.505	2.965	0.000	7.470
40	1.392	13.048	0.000	14.440	1.263	6.464	0.000	7.726	1.685	4.476	0.000	6.161
42	0.889	13.008	0.000	13.897	0.411	8.085	0.000	8.496	0.475	7.659	0.000	8.135
44	0.354	11.312	0.000	11.666	0.164	6.918	0.000	7.081	0.147	6.731	0.000	6.877
46	0.060	8.611	0.000	8.672	0.031	5.848	0.000	5.878	0.063	6.855	0.000	6.917
48	0.000	5.567	0.000	5.567	0.018	3.791	0.000	3.810	0.000	5.653	0.000	5.653
50	0.000	3.461	0.000	3.461	0.024	2.186	0.000	2.210	0.000	3.517	0.000	3.517
52	0.000	1.021	0.000	1.021	0.051	1.614	0.000	1.666	0.000	3.150	0.000	3.150
54	0.000	1.245	0.000	1.245	0.000	1.152	0.000	1.152	0.000	2.273	0.000	2.273
56	0.010	0.755	0.000	0.765	0.000	0.720	0.000	0.720	0.000	1.159	0.000	1.159
58	0.000	0.546	0.000	0.546	0.000	0.351	0.000	0.351	0.000	0.804	0.000	0.804
60	0.000	0.335	0.000	0.335	0.000	0.231	0.000	0.231	0.000	0.447	0.000	0.447
62	0.000	0.250	0.000	0.250	0.000	0.139	0.000	0.139	0.000	0.073	0.000	0.073
64	0.000	0.045	0.000	0.045	0.000	0.020	0.000	0.020	0.000	0.222	0.000	0.222
66	0.000	0.078	0.000	0.078	0.000	0.101	0.000	0.101	0.000	0.032	0.000	0.032
68	0.000	0.004	0.000	0.004	0.000	0.006	0.000	0.006	0.000	0.000	0.000	0.000
70	0.000	0.016	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	252.254	261.936	5.053	519.242	149.083	175.044	0.319	324.447	245.522	236.752	0.407	482.682
N° samples (*):				81				108				91
N° Ind. (*):	4996	7906	114	13016	5873	7234	12	13119	6122	7333	9	13464
Sampled catch:				3388				3675				3885
Range (*):				5-70				7-68				6-66
Total catch:				11477				9201				13955
Total hauls (*):				123				125				118

TABLE 14 (cont.).- American plaice length distribution. Estimated numbers per haul stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels. (*) indicates untransformed data.

Length (cm.)	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.084	0.090	8.701	8.875	0.014	0.007	0.513	0.534	0.029	0.000	0.066	0.095
8	1.027	0.746	49.783	51.556	0.172	0.400	1.875	2.446	0.013	0.007	0.065	0.085
10	0.133	0.271	6.226	6.630	1.474	1.177	0.099	2.750	0.049	0.041	0.000	0.090
12	1.164	1.209	0.004	2.377	29.728	22.828	0.062	52.618	1.945	1.483	0.000	3.428
14	6.529	4.615	0.000	11.145	46.137	45.635	0.056	91.828	6.116	5.507	0.000	11.623
16	3.692	3.184	0.000	6.875	22.245	20.487	0.000	42.733	10.935	10.067	0.000	21.001
18	1.904	1.239	0.000	3.143	6.715	6.709	0.000	13.424	46.895	35.076	0.000	81.971
20	4.051	3.190	0.000	7.241	6.343	5.253	0.000	11.596	65.237	64.464	0.000	129.700
22	18.341	8.930	0.000	27.271	3.618	3.026	0.000	6.644	23.186	25.575	0.000	48.760
24	18.592	14.481	0.000	33.073	7.908	3.341	0.000	11.249	11.152	8.557	0.000	19.709
26	27.188	10.344	0.000	37.532	17.567	6.709	0.000	24.276	12.378	6.964	0.000	19.342
28	46.289	14.760	0.000	61.048	31.709	13.734	0.000	45.444	22.149	4.592	0.000	26.741
30	36.904	23.718	0.000	60.622	46.328	13.928	0.000	60.256	39.254	8.006	0.000	47.260
32	17.960	43.845	0.000	61.804	32.463	16.433	0.000	48.896	33.135	15.114	0.000	48.249
34	10.580	42.211	0.000	52.791	14.535	26.469	0.000	41.005	18.136	14.221	0.000	32.358
36	6.172	20.482	0.000	26.654	7.360	35.775	0.000	43.134	8.514	18.105	0.000	26.619
38	3.628	6.955	0.000	10.583	3.353	24.246	0.000	27.600	2.754	25.420	0.000	28.174
40	1.587	4.815	0.000	6.402	0.745	10.301	0.000	11.046	1.214	19.672	0.000	20.887
42	0.582	5.407	0.000	5.990	0.202	4.700	0.000	4.903	0.208	8.889	0.000	9.097
44	0.183	6.655	0.000	6.838	0.057	3.419	0.000	3.477	0.148	4.667	0.000	4.814
46	0.109	7.216	0.000	7.325	0.164	3.433	0.000	3.597	0.010	2.258	0.000	2.267
48	0.000	5.071	0.000	5.071	0.090	2.990	0.000	3.080	0.025	2.382	0.000	2.407
50	0.008	3.552	0.000	3.559	0.107	2.272	0.000	2.379	0.000	2.322	0.000	2.322
52	0.000	2.925	0.000	2.925	0.049	1.634	0.000	1.683	0.000	1.454	0.000	1.454
54	0.000	2.326	0.000	2.326	0.000	1.531	0.000	1.531	0.000	0.993	0.000	0.993
56	0.059	1.604	0.000	1.663	0.000	1.546	0.000	1.546	0.000	1.613	0.000	1.613
58	0.000	1.066	0.000	1.066	0.000	0.905	0.000	0.905	0.000	1.082	0.000	1.082
60	0.000	0.271	0.000	0.271	0.000	0.753	0.000	0.753	0.000	0.522	0.000	0.522
62	0.000	0.294	0.000	0.294	0.000	0.407	0.000	0.407	0.000	0.205	0.000	0.205
64	0.000	0.162	0.000	0.162	0.000	0.174	0.000	0.174	0.000	0.137	0.000	0.137
66	0.000	0.132	0.000	0.132	0.000	0.302	0.000	0.302	0.000	0.061	0.000	0.061
68	0.000	0.049	0.000	0.049	0.000	0.081	0.000	0.081	0.000	0.013	0.000	0.013
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.011
72	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.010
74	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
76	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.004
Total	206.765	241.817	64.714	513.296	279.087	280.604	2.603	562.294	303.483	289.488	0.131	593.101
N° samples (*):				75				70				73
N° Ind. (*):	5076	7561	1353	13990	6097	8494	62	14653	5942	8030	20	13992
Sampled catch:				4614				4556				5906
Range (*):				6-68				6-69				6-77
Total catch:				13729				13193				17334
Total hauls (*):				120				119				120

TABLE 15.-American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Menduña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1																
2	0.05	0.05		0.10	0.14	0.01		0.15		16.05	5.74	21.79	19.25	31.09	0.19	50.52
3	1.06	0.89	0.01	1.96	0.28	0.16		0.45	0.78	9.11	4.49	14.37	73.87	115.31	0.16	189.34
4	2.49	2.31	0.01	4.80	2.83	3.04		5.87	1.78	2.32	0.04	4.14	36.19	31.67	0.00	67.85
5	2.99	3.15	0.00	6.14	4.14	4.44		8.58	10.45	2.44		12.89	5.46	5.54	0.00	11.00
6	11.99	7.93		19.92	8.52	5.73		14.25	24.16	13.76		37.92	12.33	7.31		19.64
7	15.93	9.81		25.74	14.20	15.79		29.99	15.93	16.22		32.15	24.53	25.18		49.71
8	5.19	8.49		13.68	19.26	29.24		48.49	28.20	14.33		42.53	20.83	18.66		39.49
9	0.78	3.77		4.55	6.22	27.61		33.83	31.52	29.00		60.52	23.00	28.90		51.90
10	0.00	1.26		1.26	0.92	12.76		13.68	7.40	42.71		50.12	5.44	41.54		46.98
11	0.03	0.45		0.48	0.27	5.12		5.39	1.74	18.72		20.46	0.86	28.23		29.09
12		0.40		0.40	0.04	1.93		1.97	0.20	8.99		9.19	0.34	13.21		13.56
13		0.12		0.12	0.06	0.89		0.95		5.00		5.00	0.02	6.36		6.38
14		0.11		0.11		1.03		1.03		1.87		1.87		0.97		0.97
15		0.03		0.03		0.19		0.19		1.20		1.20		3.32		3.32
16		0.04		0.04		0.09		0.09		0.48		0.48		1.59		1.59
17										0.39		0.39		0.48		0.48
18		0.01		0.01		0.05		0.05		0.35		0.35				
19		0.01		0.01		0.05		0.05								
20										0.05		0.05		0.10		0.10
Total	40.51	38.80	0.02	79.33	56.88	108.12	0.00	165.01	122.14	183.01	10.27	315.43	222.12	359.47	0.35	581.93

Age	2001				2002				2003				
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	
0													
1		0.02	0.02	1.76	1.80	0.00	0.01	0.04	0.05	0.14	0.27	0.25	0.65
2		10.71	12.12	2.68	25.51	4.54	6.04	0.20	10.78	2.75	1.28	0.16	4.19
3		135.76	120.45	0.60	256.81	10.72	14.24	0.08	25.04	19.77	15.58		35.35
4		38.91	39.15	0.01	78.07	75.72	89.62		165.33	36.63	21.35		57.98
5		2.09	2.72		4.81	21.83	16.57		38.40	119.14	116.03		235.17
6		9.78	1.66		11.44	7.53	3.88		11.40	25.58	30.85		56.43
7		18.82	11.77		30.59	8.07	1.98		10.04	18.36	4.17		22.53
8		12.20	16.30		28.50	13.57	5.27		18.84	12.33	4.58		16.91
9		14.72	12.44		27.17	4.41	9.87		14.28	8.42	11.00		19.43
10		6.82	13.62		20.44	1.65	7.22		8.86	1.94	6.17		8.11
11		2.40	18.80		21.20	0.98	9.69		10.67	0.44	8.06		8.50
12			8.26		8.26	0.06	7.39		7.45	0.02	10.40		10.41
13			2.27		2.27		1.84		1.84		3.88		3.88
14			0.96		0.96		1.03		1.03		1.73		1.73
15			0.76		0.76		0.09		0.09		0.78		0.78
16		0.01	0.21		0.22		0.27		0.27		0.48		0.48
17			0.20		0.20		0.05		0.05		0.11		0.11
18			0.17		0.17						0.04		0.04
19			0.02		0.02		0.01		0.01				
20			0.01		0.01								
Total		252.25	261.94	5.05	519.24	149.08	175.04	0.32	324.45	245.52	236.75	0.41	482.68

TABLE 15 (Cont.).- American plaice age numbers per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006 Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	0.17	0.84	55.58	56.59	0.03	0.41	1.28	1.71	0.02	0.00	0.05	0.07
2	8.18	3.18	9.13	20.50	38.79	36.13	1.26	76.18	5.21	4.16	0.07	9.44
3	6.48	6.59	0.00	13.07	69.41	60.61	0.06	130.08	60.27	50.37	0.01	110.64
4	19.63	15.40		35.03	8.67	8.40		17.07	75.01	73.94		148.95
5	45.07	31.73		76.80	27.91	12.71		40.63	39.42	33.00		72.41
6	98.55	106.16		204.71	57.34	34.11		91.46	38.48	20.24		58.72
7	16.71	30.43		47.14	50.92	70.21		121.13	37.44	26.08		63.52
8	7.92	4.91		12.83	13.57	28.80		42.37	27.97	25.85		53.82
9	2.88	8.29		11.17	9.76	8.06		17.82	15.48	24.12		39.60
10	1.02	10.93		11.95	2.39	3.72		6.11	3.44	14.08		17.51
11	0.00	6.44		6.44	0.21	4.18		4.39	0.71	7.41		8.12
12	0.09	7.80		7.90	0.05	4.25		4.29	0.03	4.39		4.42
13		4.39		4.39	0.05	3.25		3.30	0.00	2.37		2.37
14	0.02	3.78		3.80		2.38		2.38		1.56		1.56
15	0.02	0.64		0.66		1.76		1.76		1.01		1.01
16	0.02	0.19		0.21		0.82		0.82		0.52		0.52
17						0.09		0.09		0.21		0.21
18		0.08		0.08		0.63		0.63		0.15		0.15
19		0.02		0.02		0.08		0.08		0.03		0.03
20										0.02		0.02
Total	206.77	241.82	64.71	513.30	279.09	280.60	2.60	562.29	303.48	289.49	0.13	593.10

TABLE 16.- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1																
2	16.20	16.36		16.28	16.88	13.00		16.68		11.05	11.31	11.12	15.47	15.70	11.39	15.60
3	20.00	19.84	19.00	19.92	16.90	17.00		16.93	16.63	14.09	12.64	13.77	16.41	16.23	12.13	16.30
4	22.71	23.32	19.00	23.00	24.68	26.67		25.71	19.69	19.26	15.00	19.40	18.45	18.96	19.00	18.69
5	24.88	25.92	19.00	25.41	26.09	27.79		26.97	28.04	27.20		27.88	21.51	20.88	19.00	21.19
6	28.79	30.21		29.35	29.13	28.81		29.00	29.95	30.69		30.22	30.78	32.45		31.40
7	31.63	34.77		32.82	31.33	33.73		32.59	31.27	32.35		31.81	32.24	35.87		34.08
8	35.20	38.91		37.50	33.54	36.78		35.49	32.33	35.83		33.51	33.57	37.63		35.49
9	40.00	41.66		41.38	35.26	40.19		39.28	33.76	38.53		36.05	35.23	40.61		38.22
10	49.00	45.60		45.60	39.49	42.52		42.31	36.58	41.18		40.50	39.01	42.85		42.41
11	47.61	47.57		47.57	44.30	45.94		45.86	40.90	44.01		43.75	42.80	45.58		45.50
12		51.85		51.85	46.10	49.16		49.09	43.85	46.89		46.83	50.18	48.57		48.61
13		56.49		56.49	50.67	51.38		51.34		49.44		49.44	51.00	52.68		52.68
14		62.46		62.46		59.22		59.22		53.85		53.85		54.91		54.91
15		62.46		62.46		58.52		58.52		56.43		56.43		59.15		59.15
16		63.31		63.31		63.83		63.83		57.41		57.41		60.23		60.23
17										61.54		61.54		62.98		62.98
18		68.56		68.56		68.67		68.67		62.71		62.71				
19		69.00		69.00		69.00		69.00								
20										77.00		77.00		71.34		71.34
Total	30.05	34.53	19.00	32.24	31.58	37.85		35.69	31.84	35.48	11.91	33.30	23.60	29.26	11.78	27.09

TABLE 16 (Cont.).- American plaice mean length (cm) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	9.00	7.20	7.08	7.10	9.00	9.00	7.07	7.52	7.64	8.67	7.45	7.99
2	15.13	14.58	9.83	14.31	13.03	12.65	11.48	12.79	14.00	13.17	8.61	13.54
3	20.78	20.88	12.84	20.81	18.06	18.13	13.27	18.08	19.79	19.55		19.68
4	21.21	21.58	17.72	21.39	23.99	24.99		24.53	22.84	21.16		22.22
5	29.82	29.77		29.79	26.15	27.62		26.79	27.20	29.31		28.24
6	31.33	34.37		31.77	29.59	30.84		30.01	29.74	31.44		30.67
7	33.26	36.76		34.61	32.15	37.21		33.14	31.52	35.54		32.26
8	34.31	39.83		37.46	34.40	39.20		35.74	35.69	38.92		36.56
9	35.60	40.82		37.99	35.89	41.82		39.99	36.88	42.31		39.95
10	35.60	43.15		40.63	38.57	44.54		43.43	39.04	46.18		44.48
11	36.57	45.57		44.55	41.10	46.24		45.77	38.37	46.69		46.26
12		47.80		47.80	52.00	49.28		49.30	45.00	49.13		49.12
13		51.72		51.72		50.73		50.73		52.73		52.73
14		50.96		50.96		55.21		55.21		53.75		53.75
15		58.43		58.43		57.62		57.62		58.22		58.22
16	57.00	61.94		61.72		63.51		63.51		61.98		61.98
17		58.49		58.49		63.00		63.00		61.00		61.00
18		61.80		61.80						63.00		63.00
19		65.00		65.00		66.96		66.96				
20		71.00		71.00								
Total	24.09	28.07	9.24	25.95	25.86	29.44	11.45	27.78	27.26	31.64	7.91	29.39

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	8.51	8.78	8.79	8.79	8.50	8.97	8.47	8.58	7.20	9.00	7.25	7.25
2	14.09	14.28	9.73	12.18	14.01	14.60	9.09	14.21	15.50	15.99	8.41	15.66
3	18.31	16.23	13.00	17.26	15.94	15.81	14.15	15.88	19.54	19.60	9.00	19.57
4	24.11	25.41		24.68	22.82	20.41		21.64	21.01	21.26		21.14
5	26.66	27.17		26.87	27.26	27.98		27.49	25.10	24.24		24.71
6	29.90	33.11		31.57	30.21	31.40		30.66	29.99	32.29		30.78
7	33.18	34.84		34.25	32.14	35.83		34.28	31.96	35.60		33.45
8	35.47	38.87		36.78	34.35	38.45		37.14	33.27	38.01		35.55
9	39.32	42.08		41.36	34.79	40.92		37.56	34.26	39.76		37.61
10	41.33	44.53		44.25	39.18	44.52		42.43	35.99	41.53		40.44
11	51.00	46.82		46.82	44.85	47.50		47.38	38.10	45.00		44.40
12	45.10	49.10		49.06	49.73	48.33		48.34	45.38	49.22		49.19
13		51.99		51.99	53.00	51.06		51.09	48.62	52.74		52.70
14	57.00	55.83		55.84		54.96		54.96		55.82		55.82
15	57.00	64.15		63.94		57.83		57.83		58.33		58.33
16	57.00	51.00		51.57		58.81		58.81		59.62		59.62
17						65.00		65.00		60.67		60.67
18		63.48		63.48		65.10		65.10		62.83		62.83
19		69.00		69.00		66.93		66.93		65.88		65.88
20										73.07		
Total	28.32	33.90	8.92	28.50	24.69	28.90	8.91	26.72	25.66	29.05	7.99	27.31

TABLE 17.- American plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	1997				1998				1999				2000			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0																
1																
2	30.58	30.09		30.32	34.08	13.56		33.00		9.81	8.24	9.40	24.78	26.73	8.24	25.92
3	60.98	59.53	48.25	60.25	34.14	33.05		33.75	34.19	23.00	12.02	20.17	29.96	28.38	10.43	28.98
4	90.53	102.43	48.25	96.16	115.88	160.85		139.18	65.34	60.28	21.02	62.07	45.19	47.76	45.86	46.39
5	122.41	143.19	48.25	133.03	142.60	176.64		160.21	180.39	180.47		180.40	85.85	67.41	45.86	76.56
6	192.63	236.88		210.25	197.61	195.48		196.75	219.78	253.61		232.06	240.11	293.64		260.03
7	259.54	373.88		303.10	252.15	331.81		294.09	253.60	300.02		277.02	282.85	409.54		347.02
8	368.81	542.51		476.56	311.29	438.62		388.05	282.41	415.58		327.29	323.42	484.21		399.40
9	548.18	678.61		656.33	368.71	590.74		549.92	323.00	523.92		419.27	379.83	622.11		514.73
10	1019.79	911.38		911.53	526.59	713.13		700.57	414.67	642.60		608.93	537.06	743.81		719.87
11	933.18	1064.95		1055.90	746.72	910.89		902.75	585.62	796.73		778.79	724.88	923.47		917.61
12		1384.64		1384.64	841.32	1137.44		1130.94	726.28	971.49		966.25	1221.32	1139.85		1141.90
13		1843.51		1843.51	1157.79	1325.51		1315.68		1140.42		1140.42	1283.48	1494.13		1493.61
14		2580.03		2580.03		2111.99		2111.99		1495.55		1495.55		1707.48		1707.48
15		2565.46		2565.46		2027.53		2027.53		1727.69		1727.69		2232.76		2232.76
16		2681.12		2681.12		2684.74		2684.74		1828.20		1828.20		2334.60		2334.60
17										2283.43		2283.43		2736.30		2736.30
18		3491.89		3491.89		3415.05		3415.05		2413.08		2413.08				
19		3564.93		3564.93		3468.37		3468.37								
20										4610.97		4610.97		4149.65		4149.65
Total	233.91	421.32	48.25	325.51	268.47	527.64		438.29	276.33	519.04	9.94	408.48	153.75	393.67	9.49	301.87

Age	2001				2002				2003			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	5.52	2.36	2.58	2.61	4.53	4.27	2.03	2.55	2.77	3.78	2.40	3.05
2	28.14	24.01	8.97	24.16	15.31	13.47	10.57	14.19	20.82	14.97	4.43	18.40
3	74.66	74.78	17.85	74.58	48.02	51.69	16.15	50.00	61.32	57.36		59.58
4	80.14	84.04	45.36	82.09	107.46	126.02		117.52	96.29	73.44		87.88
5	224.47	241.89		234.33	141.66	175.42		156.23	162.64	209.46		185.74
6	259.90	361.60		274.64	213.89	247.39		225.28	219.41	263.99		243.78
7	312.53	459.67		369.14	273.99	454.37		309.50	265.20	406.54		291.34
8	345.34	585.81		482.85	336.57	541.72		393.92	386.93	539.83		428.35
9	385.35	636.37		500.33	388.21	662.77		577.97	432.35	692.92		579.94
10	392.43	762.73		639.11	482.17	812.73		751.27	515.51	927.79		829.32
11	425.17	899.33		845.69	584.61	928.89		897.25	489.24	958.75		934.29
12		1053.94		1053.94	1234.38	1142.20		1142.96	804.42	1130.44		1129.93
13		1356.99		1356.99		1256.80		1256.80		1432.20		1432.20
14		1291.89		1291.89		1645.89		1645.89		1516.23		1516.23
15		1981.57		1981.57		1875.93		1875.93		1958.44		1958.44
16	1607.50	2379.43		2344.69		2589.45		2589.45		2416.37		2416.37
17		1989.94		1989.94		2499.50		2499.50		2266.74		2266.74
18		2364.16		2364.16						2520.70		2520.70
19		2776.59		2776.59		3061.95		3061.95				
20		3691.44		3691.44								
Total	142.91	305.31	7.85	223.52	156.68	311.92	11.07	240.29	180.42	351.16	3.20	264.02

TABLE 17 (Cont.).- American plaice mean weight (gr) per haul mean catches by sex and year. Number per stratified mean catches. Spanish Spring Survey on NAFO 3NO: 1997-2006. Indet. means indeterminate. 1997-2000 data are transformed C/V *Playa de Mendiña* data. 2002-2006 data are original R/V *Vizconde de Eza* data. In 2001, there are data from the two vessels.

Age	2004				2005				2006			
	Males	Females	Indet.	Total	Males	Females	Indet.	Total	Males	Females	Indet.	Total
0												
1	5.04	4.74	5.53	5.52	3.49	4.05	3.33	3.51	2.78	5.14	2.58	2.65
2	23.80	22.39	8.27	16.66	18.32	21.44	4.47	19.57	30.35	33.38	4.18	31.48
3	53.80	34.33	18.13	43.98	29.37	29.28	18.27	29.32	61.78	64.12	5.00	62.84
4	118.24	148.37		131.49	103.39	67.26		85.60	77.10	81.96		79.51
5	162.74	177.90		169.00	165.83	187.83		172.71	138.74	133.07		136.15
6	224.80	324.26		276.38	234.71	271.80		248.54	229.61	310.73		257.57
7	311.03	377.96		354.24	285.75	415.68		361.06	275.74	413.68		332.37
8	375.48	540.09		438.48	357.86	519.53		467.77	312.24	504.70		404.67
9	507.87	698.52		649.34	371.97	637.50		492.07	342.78	580.80		487.76
10	597.92	832.90		812.86	558.48	852.01		737.11	401.15	670.26		617.44
11	1108.14	964.46		964.56	885.54	1066.20		1057.75	480.60	871.24		837.04
12	764.27	1117.01		1112.85	1209.09	1120.37		1121.31	808.17	1152.76		1150.11
13		1335.85		1335.85	1480.60	1334.19		1336.37	986.79	1423.36		1422.33
14	1551.96	1679.11		1678.45		1711.56		1711.56		1692.58		1692.58
15	1551.96	2585.25		2554.39		2022.18		2022.18		1940.19		1940.19
16	1551.96	1243.96		1273.41		2136.98		2136.98		2083.56		2083.56
17						2953.40		2953.40		2198.82		2198.82
18		2522.62		2522.62		2986.58		2986.58		2446.73		2446.73
19		3248.73		3248.73		3266.33		3266.33		2836.06		2836.06
20										3941.25		
Total	206.83	417.77	5.92	280.87	166.30	329.92	4.24	247.20	165.03	307.24	3.61	234.41

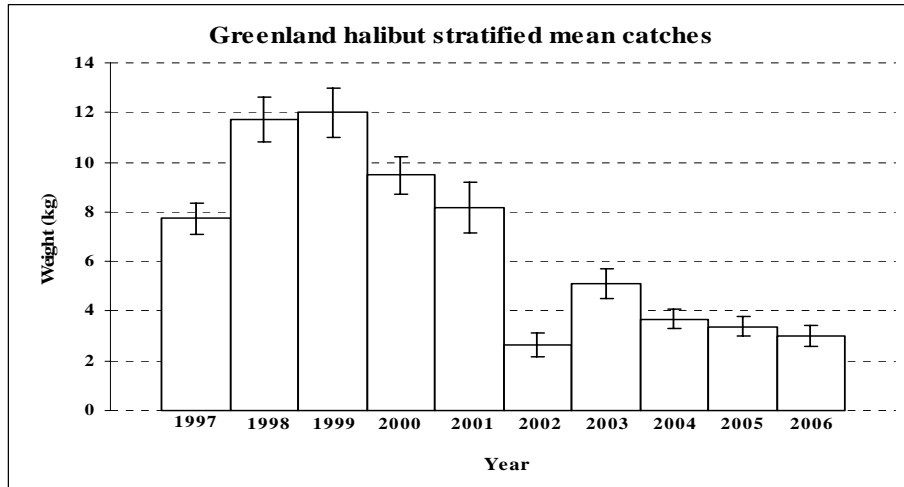


FIGURE 1.- Greenland halibut stratified mean catches in Kg and \pm SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2006 (1997-2000 transformed data from *C/V Playa de Mendiña*; 2002-2006 original data from *R/V Vizconde de Eza*. In 2001, there are data from the two vessels).

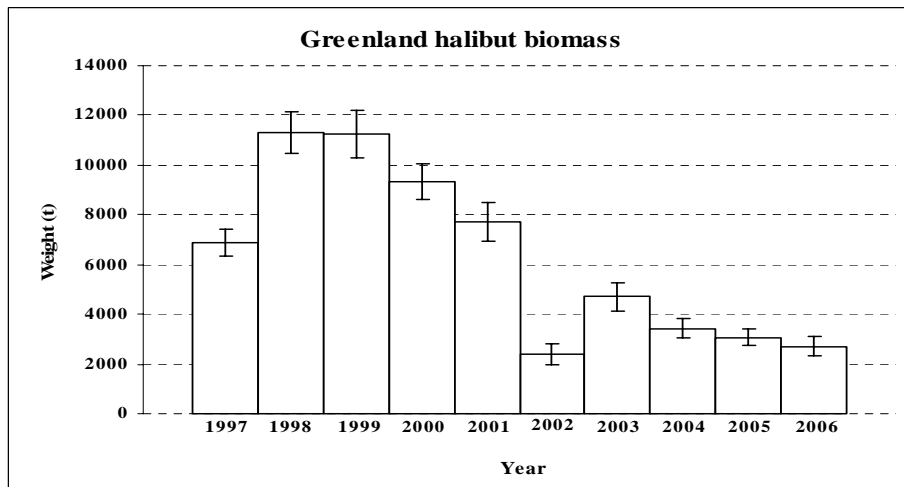


FIGURE 2.- Greenland halibut biomass calculated by the swept method in tons and \pm SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2006 (1997-2000 transformed data from *C/V Playa de Mendiña*; 2002-2006 original data from *R/V Vizconde de Eza*. In 2001, there are data from the two vessels).

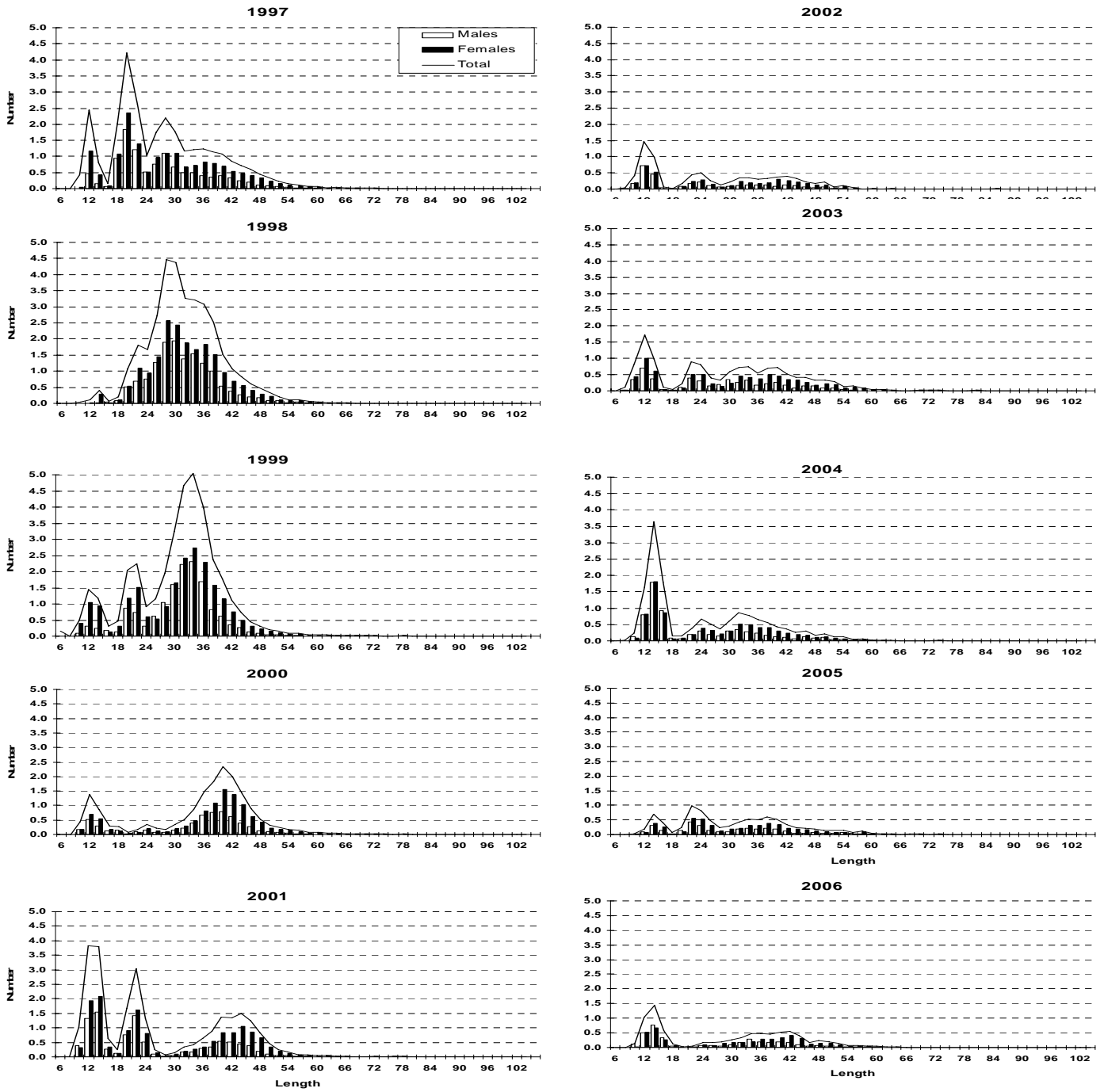


FIGURE 3.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2006. Number per stratified mean catches. 1997-2000 data are transformed data from C/V *Playa de Mendiña*, and 2002-2006 data are original from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels.

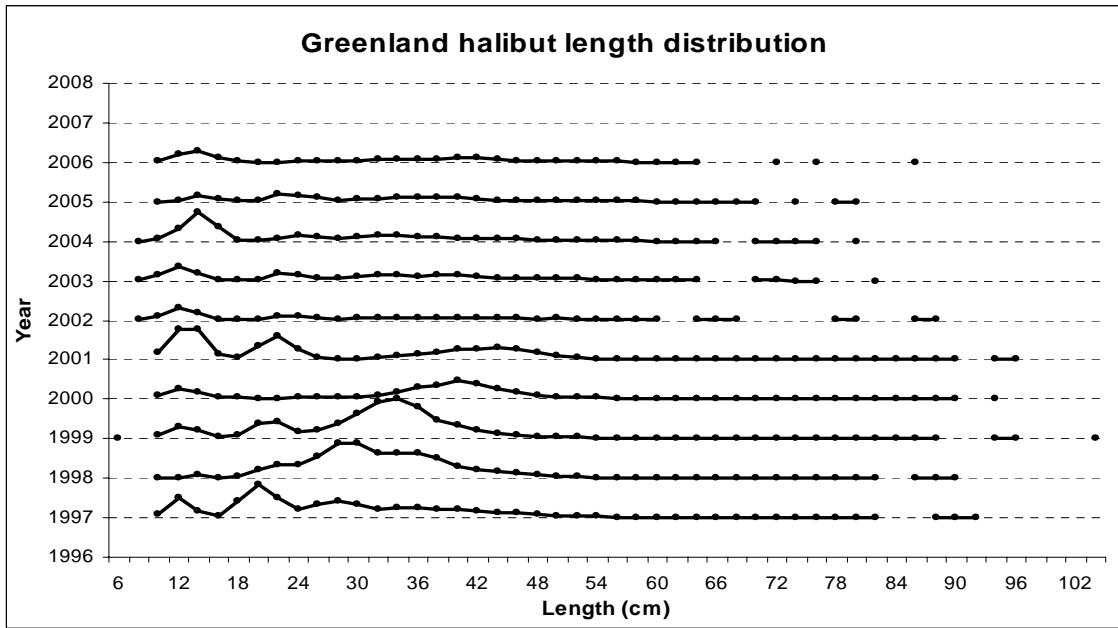


FIGURE 4.- Greenland halibut length distribution (cm) on NAFO 3NO: 1997-2006.

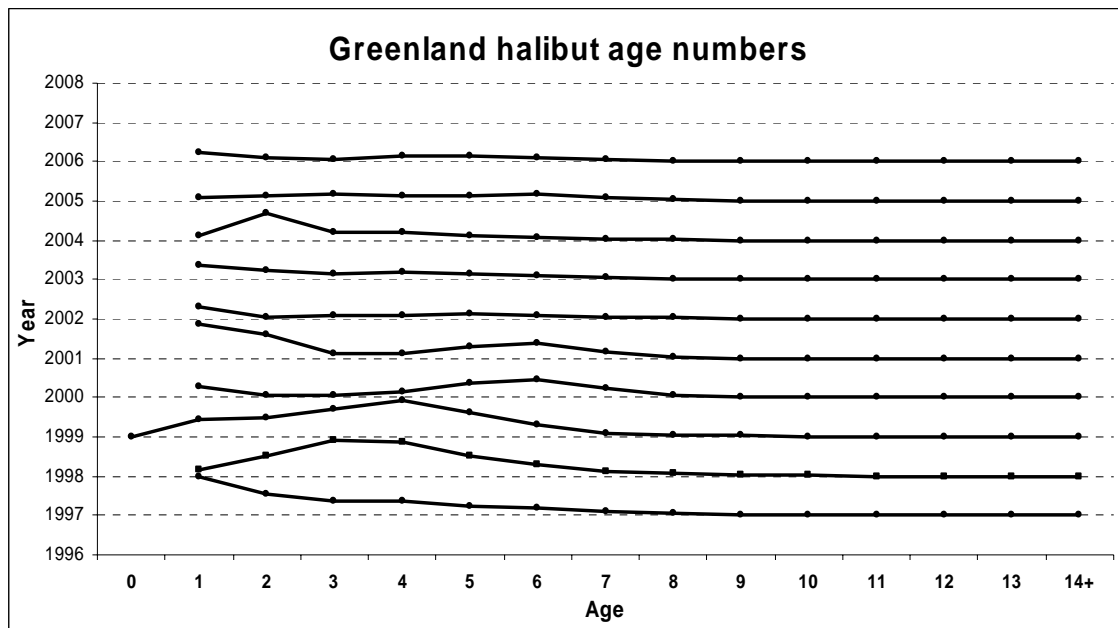


FIGURE 5.- Greenland halibut age distribution on NAFO 3NO: 1997-2006.

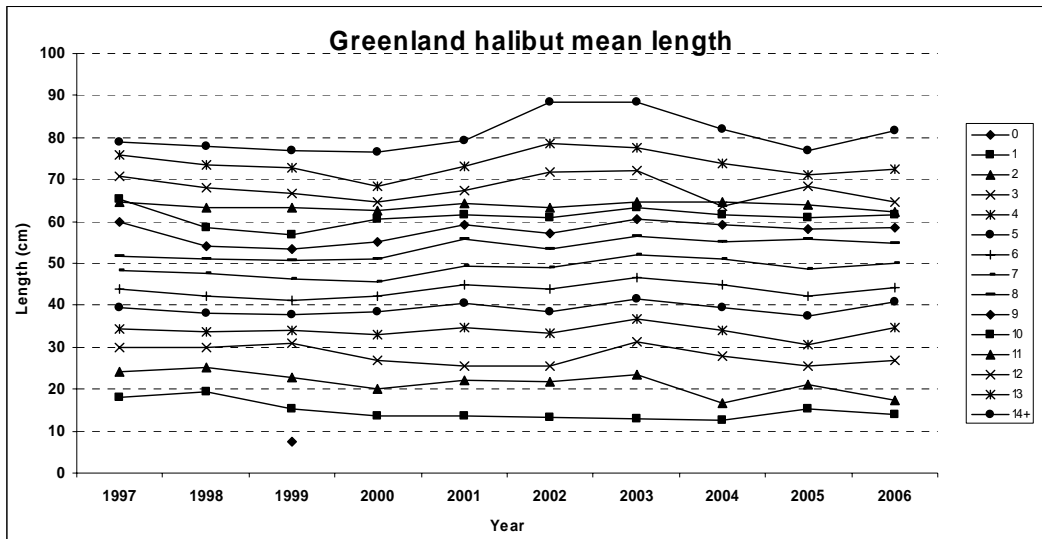


FIGURE 6.- Greenland halibut mean length (cm) at age on NAFO 3NO: 1997-2006. Ages from 0 to 14+.

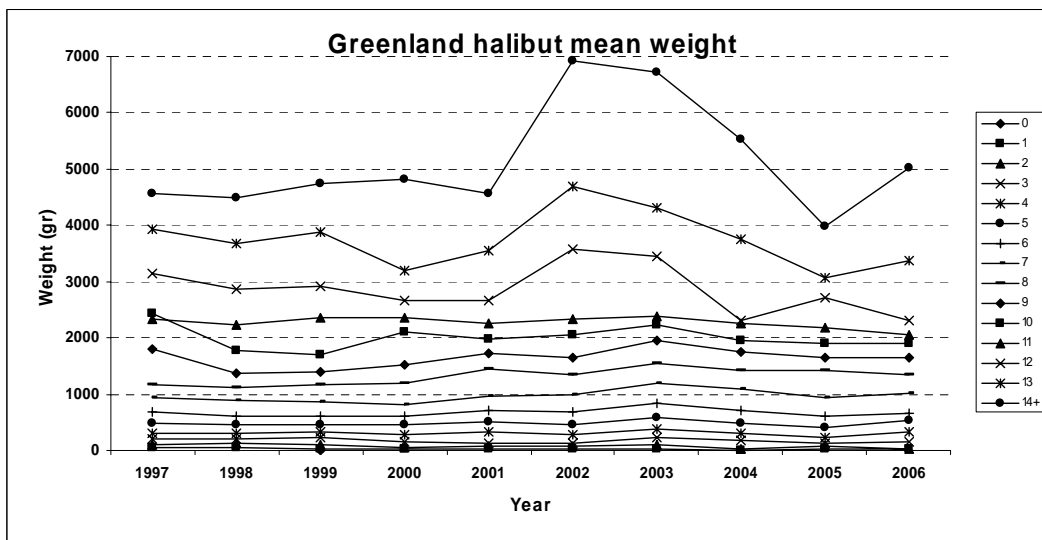


FIGURE 7.- Greenland halibut mean weight (gr) at age on NAFO 3NO: 1997-2006. Ages from 0 to 14+.

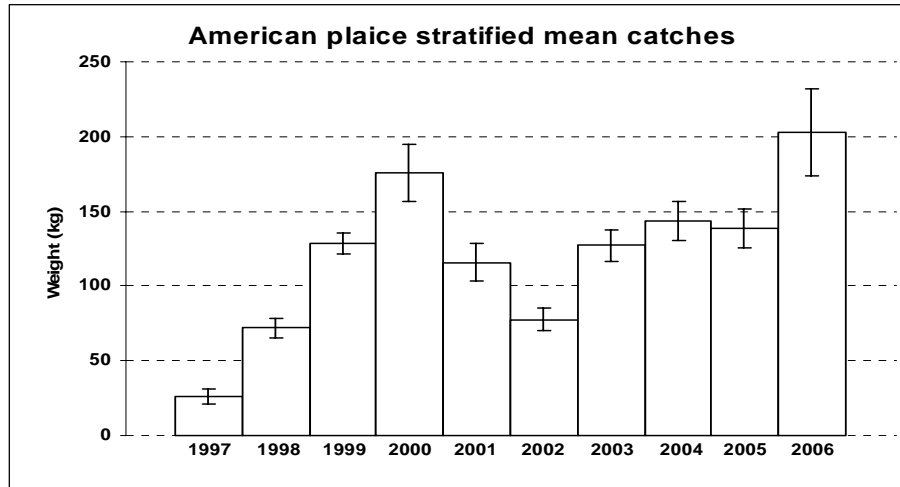


FIGURE 8.- American plaice stratified mean catches in Kg and \pm SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2006 (1997-2000 transformed data from C/V *Playa de Mendiña*; 2002-2006 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

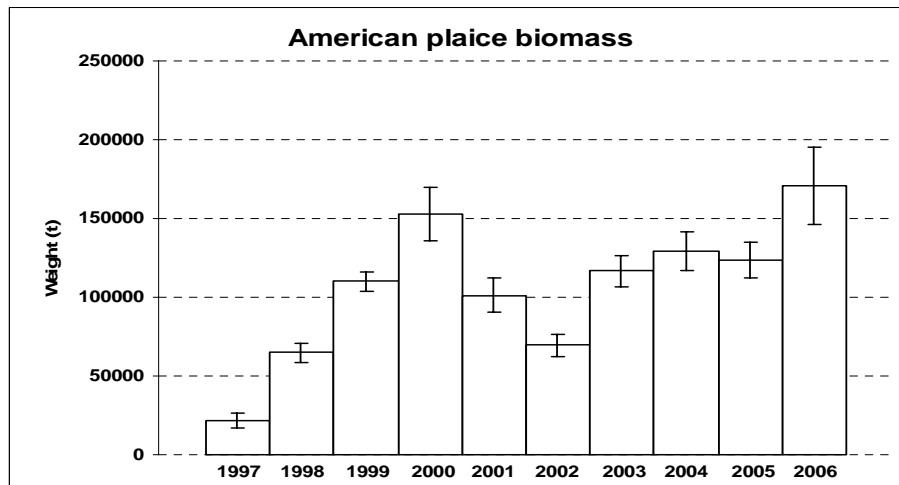


FIGURE 9.- American plaice biomass calculated by the swept method in tons and \pm SD by year. Spanish Spring surveys on NAFO Div. 3NO: 1997-2006 (1997-2000 transformed data from C/V *Playa de Mendiña*; 2002-2006 original data from R/V *Vizconde de Eza*. In 2001, there are data from the two vessels).

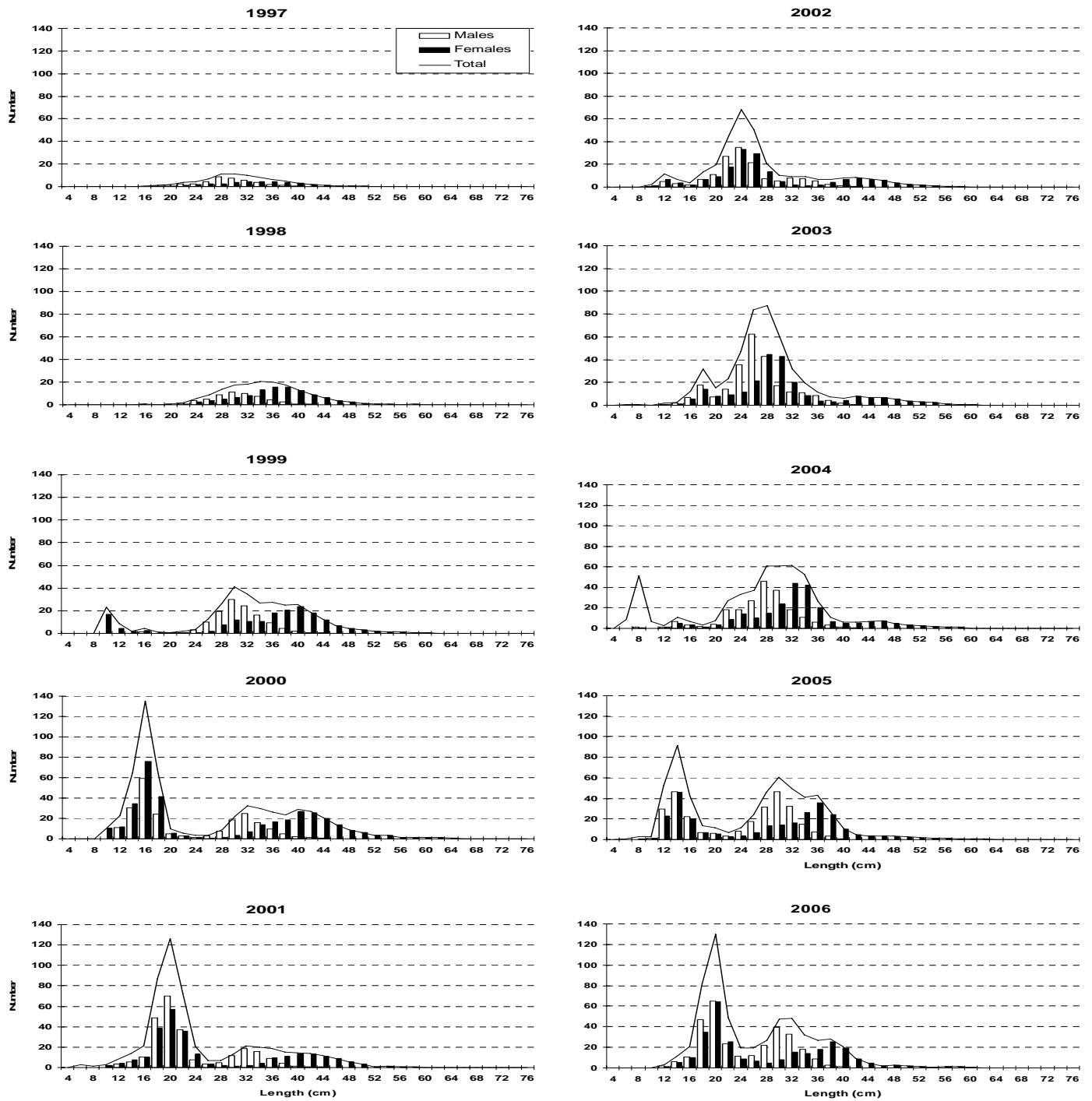


FIGURE 10.- American plaice length distribution (cm) on NAFO 3NO: 1997-2006. Estimated numbers per haul stratified mean catches. 1997-2000 data are transformed data from *C/V Playa de Mendiña*, and 2002-2006 data are original from *R/V Vizconde de Eza*. In 2001, there are data from the two vessels.

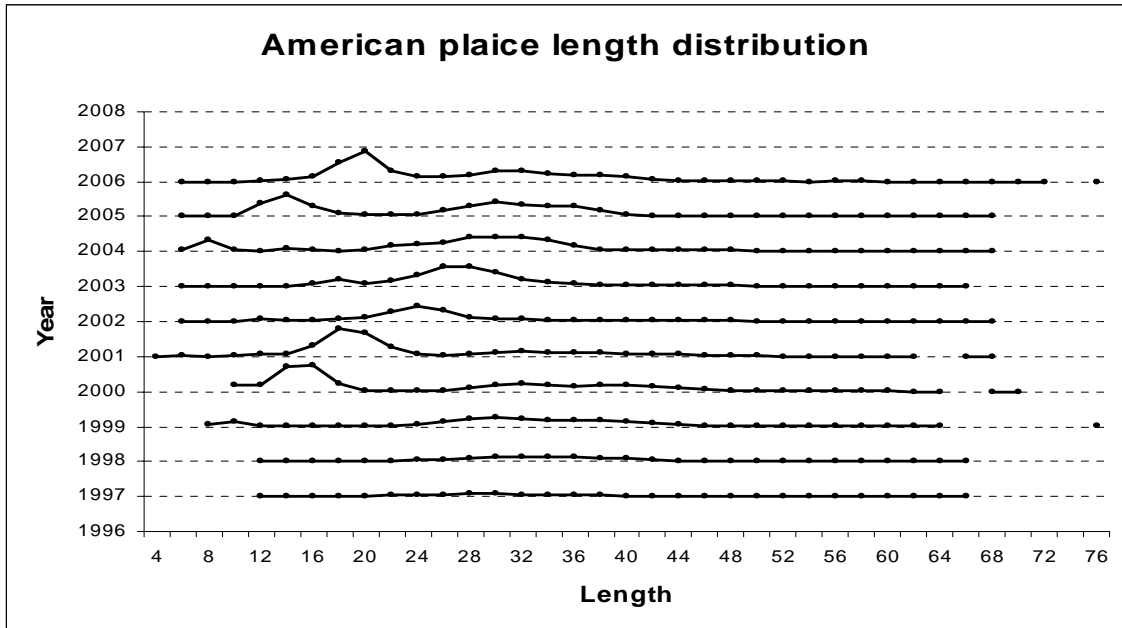


FIGURE 11.- Series of American plaice length distribution (cm) on NAFO 3NO: 1997-2006.

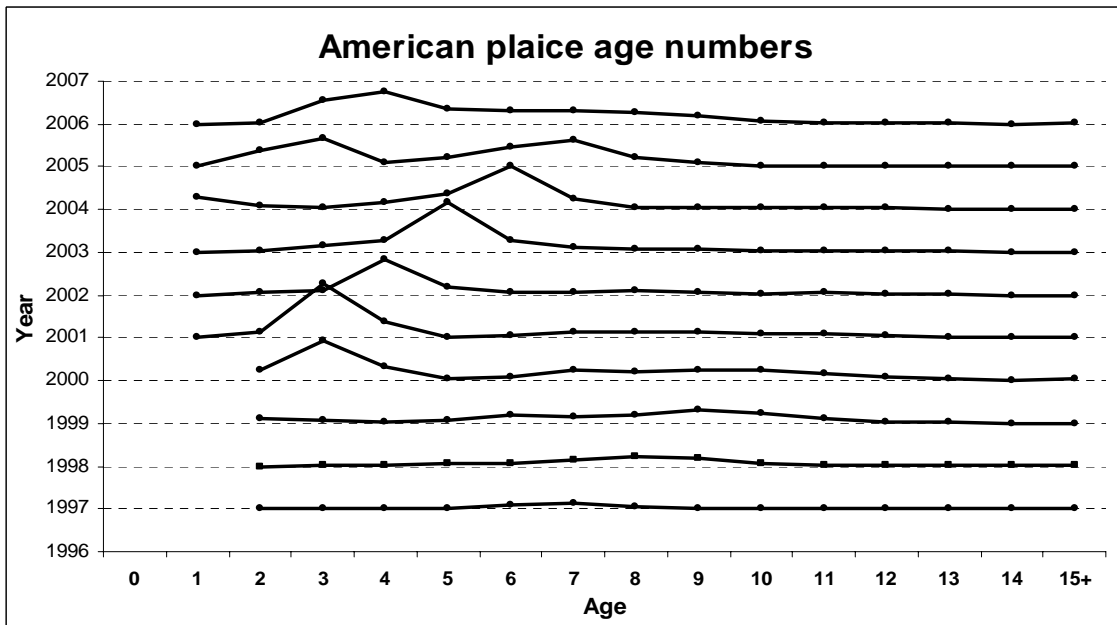


FIGURE 12.- Series of American plaice age distribution on NAFO 3NO: 1997-2006.

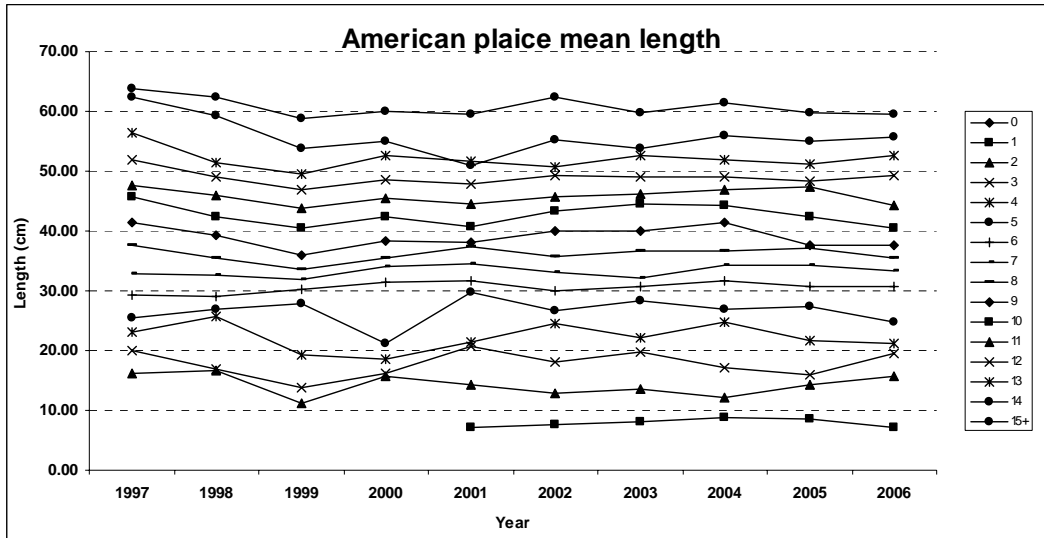


FIGURE 13.- American plaice mean length (cm) at age on NAFO 3NO: 1997-2006. Ages from 0 to 15+.

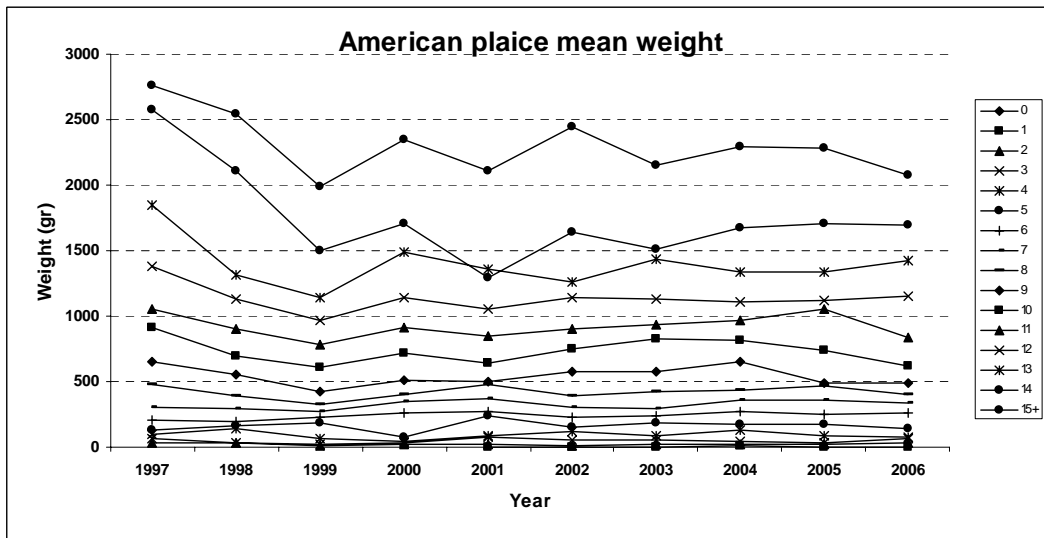


FIGURE 14.- American plaice mean weight (gr) at age on NAFO 3NO: 1997-2006. Ages from 0 to 15+.