



SCIENTIFIC COUNCIL MEETING - JUNE 1998

Spanish Research Report for 1997

by

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**Fishing activity**

The Spanish fleet fishing in NAFO Convention area includes three components: pair-trawlers, traditionally fishing for cod and currently fishing for Greenland halibut, small trawlers fishing for flatfish in the past, and large trawlers. Both types of trawlers are now fishing for Greenland halibut. As happened in 1996, in 1997 a remarkable increase in the catches of unregulated species (mainly skates and sharks) was noted in both the trawler fleets.

- Pair – trawler fleet.

The pair-trawl activity was very low in 1997. Only one pair-trawl has been fishing for Greenland halibut in the deep water zones (beyond 700 m) of Divisions 3LM (mainly 3L), from April to June. One scientific observer was on board this pair-trawler. A total of 80 hauls were sampled. Length frequencies recorded include Greenland halibut and discard species. Length distributions for Greenland halibut, American plaice and roughhead grenadier are presented in tables 1 to 3. Otoliths of Greenland halibut, roughhead grenadier and American plaice have been taken. The Greenland halibut and the roughhead grenadier catch at age in Divisions 3LM are presented in table 4 and 5 respectively.

- Trawler fleet.

In 1997, 28 trawlers have been involved in the Greenland halibut fishery. A total of 5 scientific observers were on board this fleet. Sampling includes Greenland halibut and by-catch and discard species. The length distributions of Greenland halibut, roughhead grenadier, witch flounder, American plaice and yellowtail flounder in the catches are presented in tables 6 to 9 respectively. Otoliths of Greenland halibut and roughhead grenadier have been taken. The Greenland halibut and roughhead grenadier catches at age are presented in table 10 and 11 respectively. Biological samples of Greenland halibut and by-catch species have been taken. This includes recording weight at length, sex-ratio and maturity stages and collecting data and material for feeding studies.

## Research studies

In April-May 1997, a bottom trawl survey have been made in Divisions 3NO. A total of 128 hauls with an stratified design have been performed, to a depth of 1400 meters. The results of this survey have been presented in SCR 97/25, which includes abundance indices and length distributions of american plaice, yellowtail flounder, witch flounder and Greenland halibut .

In July 1997, an EU (Spain and Portugal) stratified bottom trawl survey have been made in Flemish Cap (Division 3M). A total of 117 valid hauls have been carried out to a depth of 720 meters. The results of this survey include abundance indices of the main commercial species, and age distributions for cod, the three species of *Sebastes*, american plaice and Greenland halibut and are presented in the SCR 98/XX. Data on length distributions of shrimp from this survey are presented in SCR Doc 97/88. Feeding studies on the main species and collection of material for histological assessment of sexual maturity of cod and redfish have also been carried out.

Table 1.- Greenland halibut length distribution in the pair-trawler catches in Div. 3L and 3M, in 1997.

Greenland halibut						
Division 3L					Division 3M	
LENGTH (cm)	April	May	June	Total	LENGTH (cm)	April
22 - 23	0	206	0	206	28 - 29	125
24 - 25	0	103	0	103	30 - 31	250
26 - 27	0	310	268	578	32 - 33	275
28 - 29	153	1239	1556	2948	34 - 35	825
30 - 31	687	6297	4024	11009	36 - 37	775
32 - 33	1069	12181	7243	20494	38 - 39	1274
34 - 35	3208	20129	9229	32566	40 - 41	1524
36 - 37	4660	36336	11697	52692	42 - 43	1499
38 - 39	5500	36336	14272	56108	44 - 45	1599
40 - 41	6722	38813	16043	61578	46 - 47	1999
42 - 43	7180	37988	14648	59816	48 - 49	1349
44 - 45	7410	43562	14380	65351	50 - 51	949
46 - 47	6493	38194	14809	59496	52 - 53	625
48 - 49	5805	33033	13628	52467	54 - 55	525
50 - 51	4049	23639	12341	40028	56 - 57	675
52 - 53	2597	12697	8907	24201	58 - 59	250
54 - 55	2215	8774	4936	15926	60 - 61	350
56 - 57	2139	4955	3649	10742	62 - 63	350
58 - 59	1757	4645	1932	8334	64 - 65	225
60 - 61	1986	3923	1395	7304	66 - 67	125
62 - 63	993	2890	644	4527	68 - 69	250
64 - 65	306	2271	268	2845	70 - 71	50
66 - 67	458	1239	161	1858	72 - 73	100
68 - 69	153	1548	54	1755	74 - 75	
70 - 71	76	1032	0	1109	76 - 77	50
72 - 72	0	516	0	516	78 - 79	
74 - 75	0	206	0	206	80 - 81	
76 - 77	0	0	0	0	82 - 83	100
78 - 79	76	103	0	180	84 - 85	75
Total	65693	373166	156084	594943	86 - 87	
					88 - 89	75
Fish measured	860	3615	2909	7384	90 - 91	50
Samp. Catch (t)	0.75	2.81	2.22	5.78	Total	16316
Catch (t)	57.2	290.7	119.2	467		
					Fish measured	648
					Samp. Catch (t)	0.67
					Catch (t)	16.9

Table 2.- American plaice length distribution in the pair-trawler catches in Div. 3M in 1997

American plaice			
Division 3L			
LENGTH (cm)	April	May	Total
22 - 23	66	0	66
24 - 25	66	0	66
26 - 27	132	0	132
28 - 29	330	873	1202
30 - 31	1186	3054	4241
32 - 33	1450	3927	5377
34 - 35	1417	3927	5344
36 - 37	1054	3054	4109
38 - 38	395	4145	4541
40 - 41	461	2618	3079
42 - 43	66	2509	2575
44 - 45	461	873	1334
48 - 49	198	873	1070
50 - 51	66	436	502
52 - 53	0	218	218
54 - 55	66	0	66
Total	7414	26507	33921
Fish measured	225	243	468
Samp. Catch (t)	0.09	0.12	0.21
Catch (t)	3.1	13.1	16.2

Table 3.- Roughhead grenadier length distribution in the pair-trawler catches in Div. 3L in 1997

<i>Macrourus berglax</i>	
Division 3L	
LENGTH (cm)	May
11 - 12.5	49
13 - 14.5	196
15 - 16.5	1473
17 - 18.5	1473
19 - 20.5	2357
21 - 22.5	1375
23 - 24.5	1326
25 - 26.5	982
27 - 28.5	589
29 - 30.5	884
31 - 32.5	295
33 - 34.5	393
Total	11393
Fish measured	232
Samp. Catch (t)	0.22
Catch (t)	10.8

Table 4.- Pair-trawler Greenland halibut catch at age in Div. 3L and 3M in 1997.

Greenland halibut			
AGE	3L	3M	Total
2	1577	48	1625
3	32651	668	33319
4	77247	1514	78760
5	92389	2094	94483
6	122371	3135	125506
7	133152	3515	136668
8	67557	1980	69537
9	34305	1125	35430
10	13440	597	14037
11	6237	372	6608
12	3581	251	3832
13	3444	272	3716
14	1438	130	1568
15	761	135	896
16	557	126	683
17	320	95	415
18	12	50	62
19	24	71	95
20	0	15	15
21	0	5	5
Total	594943	16316	611260

Table 5.- Pair-trawler roughhead grenadier catch at age in 1997.

<i>Macrourus berglax</i>	
AGE	Total
4	41
5	139
6	995
7	1503
8	1336
9	1455
10	1275
11	1039
12	875
13	328
14	417
15+	1989
Total	11393

Table 6.- Greenland halibut monthly length distribution of the trawlers catch in Div. 3L, 3M and 3N, in 1997.

Greenland halibut											
Division 3L											
LENGTH (cm)	Jan.	Feb.	March	April	May	July	Aug.	Oct.	Nov.	Dec.	Total
22-23	0	0	0	0	0	510	0	0	0	0	510
24-25	0	0	0	0	0	1268	269	0	0	0	1537
26-27	0	121	0	0	0	0	150	0	142	0	412
28-29	0	598	0	0	218	1268	0	0	771	215	3070
30-31	561	474	249	0	436	4065	1252	941	2647	3047	13673
32-33	1834	2021	700	0	2995	4824	3112	3766	13275	9152	41680
34-35	4604	6833	2536	983	15341	13471	6468	7531	31027	36138	124931
36-37	10527	13319	8317	8643	30285	28673	10744	8473	51360	73457	243798
38-39	18557	21779	12470	12244	27715	24387	19341	15063	70222	90462	312241
40-41	26791	35062	17755	10781	31850	19579	25406	19770	84047	106713	377755
42-43	38733	53731	25517	15260	31583	32519	26313	30125	83679	114301	451762
44-45	41543	61532	33084	17707	28877	23158	22348	22594	79741	92242	422825
46-47	42132	65036	33299	16110	20143	20589	24476	20711	56494	85349	384339
48-49	29019	59266	36918	12490	14318	16745	23387	23535	41448	51095	308221
50-51	22312	33564	35224	6495	8385	17508	15184	18828	27853	37459	222811
52-53	16404	23829	24677	3983	4728	15227	12277	15063	20066	23822	160075
54-55	10773	13553	20978	1202	2873	16998	8415	3766	8946	16104	103610
56-57	5514	9085	15131	1857	1738	16463	7058	5648	6856	8835	78186
58-59	6855	6575	11684	423	709	8358	2866	11297	2990	4558	56316
60-61	3996	6750	7784	813	1094	7609	4039	1883	2045	2859	38872
62-63	3506	3715	5987	807	1443	8868	3207	0	1011	1251	29795
64-65	946	2099	3615	0	126	2532	1687	0	722	1374	13101
66-67	3839	1049	2836	317	112	1019	674	0	128	589	10562
68-69	1982	331	1427	0	156	3805	388	0	210	883	9183
70-71	680	850	937	0	224	2536	620	0	125	166	6139
72-73	795	635	728	0	112	0	620	0	51	452	3392
74-75	530	239	854	0	112	2536	661	941	63	571	6507
76-77	418	347	662	0	224	0	0	0	0	0	1650
78-79	267	274	446	0	224	0	494	0	90	0	1794
80-81	0	955	133	0	0	0	0	941	0	333	2362
82-83	611	110	216	0	0	0	182	0	63	333	1515
84-85	410	428	549	0	112	0	269	0	0	119	1886
86-87	413	292	313	0	0	0	0	0	25	0	1043
88-89	410	221	0	0	0	0	0	0	0	0	631
90-91	0	539	0	0	0	0	0	0	0	0	539
92-93	561	0	0	0	0	0	0	0	0	166	727
94-95	0	110	0	0	0	0	0	0	0	0	110
Total	295523	425322	305026	110115	226133	294515	221907	210876	586097	762045	3437559
Fish measured	835	1830	1370	1077	1833	372	1148	224	7270	3620	19579
Sampled catch (t)	9,2	30,2	19,1	47,3	40,5	6,0	10,4	0,8	36,1	24,5	224,2
Catch (t)	275,9	380,5	313,8	87,2	158,3	191,7	194,8	185,3	404,3	541,7	3084,0

Table 6.- (Cont.)

Greenland halibut							
Division 3M							
LENGTH (cm)	Jan.	March	April	May	July	Aug.	Total
30-31	0	0	0	0	0	313	323
32-33	0	0	227	3626	867	0	4880
34-35	0	1492	3285	9189	0	313	14764
36-37	0	4919	9542	12316	1734	474	29970
38-39	0	7687	15155	14825	1734	2836	43673
40-41	1743	13960	24892	14135	4336	2977	64151
42-43	6973	21305	30478	15478	10406	4572	92244
44-45	6973	20802	42821	16632	17343	4400	112674
46-47	5230	16092	32503	21159	13007	6298	97493
48-49	3487	18031	29397	18375	14741	7711	94860
50-51	3487	9037	21491	7961	9538	4896	58327
52-53	0	7338	16971	10188	7804	3806	47675
54-55	3487	4239	9565	6887	12140	1919	39536
56-57	1743	3102	4769	6484	6070	2727	25740
58-59	1743	2023	2838	2514	6070	1908	17678
60-61	3487	1930	2248	383	2601	2383	13474
62-63	5230	849	2587	1189	2601	1110	14028
64-65	0	725	658	2380	1734	798	6509
66-67	0	1814	460	422	1734	474	5072
68-69	1743	908	0	0	0	162	2909
70-71	1743	516	0	422	0	162	2940
72-73	3487	540	0	0	867	162	5227
74-75	0	540	0	0	867	636	2113
76-77	1743	91	0	0	0	0	1897
78-79	3487	0	0	0	0	162	3772
80-81	0	242	0	0	0	0	250
82-83	1743	0	0	0	0	0	1803
84-85	0	484	0	0	0	162	667
86-87	0	0	0	0	0	0	0
88-89	0	0	0	0	0	162	167
90-91	0	242	0	0	0	0	250
Total	57529	138908	249887	164565	116194	51523	805067
Fish measured	33	622	1268	350	134	214	2621
Sampled catch (t)	0.8	6.6	38.6	11.7	0.8	2.6	61.2
Catch (t)	102.4	125.8	218.8	140.5	123.8	59.3	1107.9

Table 6.- (Cont.)

Greenland halibut					
Division 3N					
LENGTH (cm)	July	Aug.	Sept.	Oct.	Total
20-21	276	0	130	0	435
22-23	2203	0	290	0	2668
24-25	1188	0	130	0	1410
26-27	2928	0	901	613	4754
28-29	5271	0	778	3064	9754
30-31	8192	2165	1556	3677	16687
32-33	12322	4885	7702	4289	31253
34-35	17579	11933	10748	7353	50964
36-37	31420	20756	14212	11030	82865
38-39	29052	22127	15024	16545	88569
40-41	25276	29418	18732	12256	91709
42-43	28943	29353	21472	11643	97842
44-45	33112	26132	20284	7353	92993
46-47	20860	22969	19485	10417	78919
48-49	17877	23053	14678	11643	71983
50-51	16469	12670	11195	6128	49730
52-53	7729	7587	7472	3064	27671
54-55	7526	6417	5792	1838	23090
56-57	3905	4544	3638	1838	14904
58-59	2458	2276	2497	1226	9052
60-61	359	1153	652	1838	4283
62-63	2009	1428	679	0	4406
64-65	1015	678	1476	613	4048
66-67	829	372	858	613	2860
68-69	0	623	157	613	1490
70-71	0	0	0	613	656
72-73	359	506	157	0	1093
74-75	657	0	0	0	703
76-77	0	170	206	0	403
78-79	0	0	181	0	194
80-81	0	240	0	0	257
82-83	0	0	157	0	168
84-85	0	0	0	0	0
86-87	0	0	157	0	168
88-89	0	410	0	0	439
Total	279814	231865	181396	118267	868419
Fish measured	638	1119	1035	193	2985
Sampled catch (t)	5,5	8,5	6,9	0,7	21,6
Catch (t)	183,6	167,3	139,5	85,4	1558,9



Table 6.- Roughhead monthly length distribution of the trawlers catch in Div. 3L, 3M and 3N, in 1997.

ROUGHHEAD GRENADIER										
Division 3L										
LENGTH (cm)	Jan.	Feb.	March	April	May	July	Aug.	Nov.	Dec.	Total
7 - 8	0	0	0	0	0	854	0	619	0	1683
8,5 - 9,5	0	0	0	0	0	3042	0	4058	0	8110
10 - 11	0	6587	0	0	0	4477	1106	10949	7901	35436
11,5 - 12,5	0	37324	0	0	0	7895	3092	15925	14222	89627
13 - 14	0	65865	0	70375	12511	12302	6794	38499	52148	295298
14,5 - 15,5	0	61474	2365	105563	60742	38378	27175	75397	58469	490720
16 - 17	1561	27444	4066	105563	110655	28501	28947	93699	64790	531460
17,5 - 18,5	1561	24151	10546	129021	140250	17429	18125	42486	26864	468866
19 - 20	9366	30737	20702	82104	86842	18283	23260	52904	17383	390213
20,5 - 21,5	15609	23053	16435	70375	41239	16746	17572	34756	9481	280186
22 - 23	23414	4391	7955	5865	34642	8373	7516	28254	4741	142969
23,5 - 24,5	24975	1098	2376	11729	57509	9534	5801	15353	6321	153873
25 - 26	10927	1098	1401	23458	45130	7142	5857	6142	4741	120972
26,5 - 27,5	10927	0	1401	0	8542	3042	3476	5095	3160	40718
28 - 29	20292	0	976	0	3969	4751	3589	553	4741	44404
29,5 - 30,5	9366	1098	1113	0	1682	3042	4255	2204	3160	29610
31 - 32	1561	2196	325	0	10829	957	497	2340	0	21366
32,5 - 33,5	3122	0	163	0	2287	2563	2596	1168	0	13592
34 - 35	4683	0	163	0	0	0	553	0	0	6167
35,5 - 36,5	0	0	163	0	0	0	0	0	0	186
37 - 38	0	0	0	0	0	0	0	0	0	0
38,5 - 39,5	0	0	0	0	0	0	0	619	0	707
40 - 41	0	0	0	0	0	0	0	0	0	0
41,5 - 42,5	0	0	0	0	0	0	0	0	0	0
43 - 44	0	0	163	0	0	0	0	0	0	186
Total	137364	286516	70313	604053	616829	187311	160211	431020	278122	3166349
Fish measured	88	261	353	103	302	287	304	754	176	2628
Sampled catch (t)	0,072	0,105	1	0,3	1,3	0,3	0,5	0,4	0,07	3,9
Catch (t)	94,9	115,6	52,5	31,8	41,0	109,8	102,6	201,4	114,9	1114,2

Table 6.- (Cont.)

ROUGHHEAD GRENADEIER						
Division 3M						
LENGTH (cm)	Jan.	March	April	May	Nov.	Total
8,5 - 9,5	462	0	0	0	0	633
10 - 11	175	0	0	0	2326	3422
11,5 - 12,5	3422	8844	0	40256	581	72681
13 - 14	11303	50856	4483	64410	6978	188914
14,5 - 15,5	20057	95078	68362	72461	14537	370214
16 - 17	25990	97289	356375	161025	19188	903129
17,5 - 18,5	13831	106134	354691	193230	15118	934793
19 - 20	28035	90656	757557	120768	13374	1382872
20,5 - 21,5	16062	42011	396154	88564	4070	748462
22 - 23	8994	30956	115993	72461	4652	318972
23,5 - 24,5	2943	2211	40349	56359	2907	143392
25 - 26	6178	2211	8966	32205	2907	71810
26,5 - 27,5	3453	4422	0	16102	0	32818
28 - 29	3409	2211	0	0	581	8488
29,5 - 30,5	3662	0	0	24154	0	38070
31 - 32	731	8844	0	24154	581	46960
32,5 - 33,5	1562	2211	0	0	0	5164
34 - 35	1034	2211	0	0	0	4441
35,5 - 36,5	462	0	0	0	0	633
37 - 38	637	0	0	0	0	872
Total	152402	546145	2102930	966149	87800	5276738
Fish measured	526	247	190	120	151	1234
Sampled catch (t)	861	300	234	492	66	1953
Catch (t)	110668	59236	127950	61761	38452	779097

Table 6.- (Cont.)

ROUGHHEAD GRENADEIER				
Division 3N				
LENGTH (cm)	July	Aug.	Total	
7 - 8	470	1560	3468	
8,5 - 9,5	3845	6152	17083	
10 - 11	3318	7546	18564	
11,5 - 12,5	9042	9727	32074	
13 - 14	9996	26500	62367	
14,5 - 15,5	30545	55662	147316	
16 - 17	23852	114022	235606	
17,5 - 18,5	13314	89495	175685	
19 - 20	14458	62091	130810	
20,5 - 21,5	16352	54467	121018	
22 - 23	43368	32305	129314	
23,5 - 24,5	19285	27633	80174	
25 - 26	15293	13463	49140	
26,5 - 27,5	13869	7559	36617	
28 - 29	18316	7905	44807	
29,5 - 30,5	22308	4164	45236	
31 - 32	58000	6247	109789	
32,5 - 33,5	53539	260	91934	
34 - 35	40154	3991	75437	
35,5 - 36,5	17846	0	30496	
37 - 38	0	0	0	
38,5 - 39,5	4462	0	7624	
40 - 41	4462	0	7624	
Total	436094	530749	1652186	
Fish measured	338	672	1010	
Sampled catch (t)	0,4	0,9	1,3	
Catch (t)	103,9	111,9	790,7	

Table 7.- American plaice monthly length distribution of the trawlers catch in Div. 3N, in 1997.

AMERICAN PLAICE			
LENGTH (cm)	Division 3N		
	Sept.	Oct.	Total
18 - 19	245	0	282
20 - 21	290	91	438
22 - 23	380	0	437
24 - 25	1569	365	2224
26 - 27	3055	231	3777
28 - 29	3734	1043	5492
30 - 31	6191	2018	9438
32 - 33	10080	4066	16263
34 - 35	17633	7442	28827
36 - 37	18900	10109	33351
38 - 39	20884	12045	37857
40 - 41	14511	13082	31723
42 - 43	9954	10892	23965
44 - 45	9235	7998	19812
46 - 47	4906	6560	13182
48 - 49	3209	4226	8547
50 - 51	1285	3384	5367
52 - 53	1424	2386	4381
54 - 55	627	2095	3129
56 - 57	381	1628	2309
58 - 59	369	778	1319
60 - 61	368	253	714
62 - 63	184	614	918
64 - 65	184	391	662
66 - 67	168	289	526
68 - 69	61	162	256
70 - 71	0	75	87
72 - 73	0	0	0
74 - 75	0	92	106
Total	129827	92315	255389
Fish measured	825	1801	2626
Sampled catch (t)	7,4	4,2	11,5
Catch (t)	75,9	75,9	331,1

Table 8.- Yellowtail flounder monthly length distribution of the trawlers catch in Div. 3N, in 1997.

YELLOWTAIL FLOUNDER			
LENGTH (cm)	Division 3N		
	Sept.	Oct.	Total
12-13	0	316	316
14-15	100	81	181
16-17	865	768	1633
18-19	2163	1926	4090
20-21	533	4947	5480
22-23	5299	14577	19876
24-25	8381	28056	36437
26-27	16356	34107	50463
28-29	23741	34729	58471
30-31	20218	35091	55309
32-33	16575	24584	41158
34-35	17646	18257	35903
36-37	14004	17522	31526
38-39	18777	16849	35626
40-41	17363	15145	32509
42-43	11897	12882	24778
44-45	9029	9855	18885
46-47	5725	4961	10686
48-49	1568	1968	3536
50-51	736	771	1506
52-53	100	388	488
54-55	0	69	69
56-57	0	60	60
Total	191076	277909	468985
Fish measured	782	1894	2676
Sampled catch (t)	3,0	10,3	13,2
Catch (t)	79,8	91,9	348,6

Table 9.- Witch flounder monthly length distribution of the trawlers catch in Div. 3L, in 1997

WITCH FLOUNDER					
Division 3L					
LENGTH (cm)	Jan.	Feb.	April	May	Total
24-25	701	0	0	0	1180
26-27	701	0	0	0	1180
28-29	1403	6982	235	0	14501
30-31	7181	17454	775	0	42747
32-33	26353	13963	540	1559	71354
34-35	27489	27926	906	2079	98245
36-37	30027	24435	2561	4417	103361
38-39	35805	22690	2234	4937	110469
40-41	45091	29671	2829	2598	134902
42-43	53574	17454	1998	4157	129845
44-45	31430	13963	2859	4417	88604
46-47	26253	8727	1917	4417	69501
48-49	18905	10472	1544	3378	57700
50-51	3240	1745	844	1559	12429
52-53	1837	1745	589	0	7017
54-55	1837	3491	304	779	10786
56-57	0	0	235	0	396
58-59	0	0	118	0	198
60-61	0	0	0	0	0
62-63	0	0	0	260	437
Total	311827	200718	20488	34557	954851
Fish measured	260	115	225	133	733
Sampled catch (t)	0,8	0,08	0,3	0,2	1,4
Catch (t)	151,2	80,7	16,6	28,2	516,7

Table 10.- Trawlers Greenland halibut catch at age in 1997.

AGE	Div. 3L	Div. 3M	Div.3N	TOTAL
1			795	795
2	1672	10	8406	10088
3	79154	10636	36248	126038
4	338173	31832	106434	476439
5	511698	77807	213046	802551
6	758554	192989	237878	1189421
7	774280	211381	167303	1152964
8	388665	136279	72529	597473
9	216921	63473	10193	290587
10	92097	27533	6165	125795
11	40445	8413	4272	53130
12	18483	8055	2105	28643
13	17153	10879	615	28647
14	10476	4107	1148	15731
15	6013	5337	497	11847
16	5964	4107	49	10120
17	4026	1544	133	5703
18	1253	2198		3451
19	2313	1327		3640
20	617	301		918
21	352	718		1070

Table 11.- Trawlers roughhead grenadier catch at age in 1997.

AGE	Div. 3L	Div. 3M	Div. 3N	TOTAL
2	77	0	158	234
3	8306	3266	10895	22467
4	36832	9217	24237	70286
5	92318	57897	29430	179645
6	351615	250867	94999	697481
7	744726	958498	265331	1968556
8	275232	453497	106475	835204
9	364580	853914	138213	1356707
10	268062	671191	106878	1046131
11	287649	749994	142897	1180540
12	312830	774749	155088	1242667
13	205193	273992	110568	589754
14	73910	89944	43324	207178
15	60520	31149	42749	134417
16	6343	1213	6401	13957
17	6343	1213	6401	13957
19+	71814	96140	322904	490858