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Comparative length-weight characteristics of beaked redfish *Sebastes mentella* in the different regions of fishing in the opened part of North Atlantic.

By

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Abstract

One of major fisheries commercial objects of North Atlantic is beaked redfish *Sebastes mentella*. Author generalized information of the own measurements of sizes and weight of redfish in 2002-2008 in three basic fishing regions in the opened part of ocean: Irminger Sea, Labrador Sea and Norwegian Sea. Conclusions are done about the features of seasonal, interannual and regional changeability of length and weight separately for females and males.

Introduction

4 kinds of redfish dwell in North Atlantic: golden redfish *Sebastes marinus*, beaked redfish *Sebastes mentella*, Acadian redfish *Sebastes fasciatus* and Norwegian redfish *Sebastes viviparus*.

Beaked redfish (*Sebastes mentella*) is one of major commercial kinds, dwellings both in Northeastern (NEA) and in Northwestern (NWA) Atlantic. Redfish fishery is conducted practically from the beginning of XX century, and practically always basic commercial type of redfish was beaked redfish. At the beginning of 80th of the last century commercial redfish fishery began outside EEZ in the Irminger Sea (NEA), at the end of 90th – in the Labrador Sea (NWA), from 2005 in the Norwegian Sea (NEA). For the last 30 years of XX century the total catch of redfish in NWA was about 2.5 million t (Chepel, 2001). Presently fishery in all regions is regulated.

Length -weight composition of redfish from the catches of fishing ships is one of basic parameters for the estimation of redfish biomass and organization of optimum exploitation. In this work information by length and weight of *Sebastes mentella* from the different regions of North Atlantic for the last 7 years was generalized.

Material and Methods

In basis of work materials are fixed collected an author aboard the Latvian f/v “Dorado”, on which he worked as a scientific observer NAFO and NEAFC in North Atlantic from 2002 to 2008. Aboard a ship mass measurements and biological analyses of redfish was executed in obedience to methods accepted in YUGNIRO.

Total length (TL) of fish was measured by a tapeline within 1 cm. Length distribution was summarized with an interval in 1 cm. Weight of fish was measured by electronic scales within 5 g. Except for information of 2002, all measurements were made separately for females and males.

48640 measurements were executed in all, including: Irminger Sea - 28290, Labrador Sea - 15700, Norwegian Sea - 4650.

The order of consideration of regions corresponds fishery motion – at first the Irminger Sea, after the Labrador Sea and last the Norwegian Sea (Fig.1, and Fig.2).

Results

Irminger Sea. This is the basic region of redfish fishery. Most statistical material is collected exactly on this region. It is characterized most seasonal scope – a period from March to September is observed. Spatial scope, opposite, not very many great - almost all measured individuals behaved to the division XIVb, and only small part behaves to the division XII (in September).

The generalized length distribution is presented in table 1. The sizes of redfish was 23-52 cm, weight 150-2175 g; including females 23-52 cm and 150-2175 g and males 23-51 cm and 155-1740 g accordingly. In catches episodically there were more large examples. So, in 2003 were caught male long 74 cm and by weight of 5875 r (on May, 05) (fig.3) and female long 62 cm and by weight of 3750 r (on April, 27). Similar big examples met in other years also.

Spatial changeability. The largest individuals, both males and females, were caught near the Reykjanes Ridge. As far as a move from the Reykjanes Ridge westward and south the sizes of fish diminished. Sizes and weight of redfish in division XII less, than in XIVB and approach the size of redfish in the Labrador Sea (see below).

Seasonal changeability was estimated by generalized of long-term information by months and presented in table 2-8. Basic characteristics of females and males are shown in table 33. On the whole with small rejections, diminishing of average length and weight is observed from March to September. Other feature, which was observed only in division XIVB, is, that females larger than males in March – May, and males larger than female – in June-August. Growth of sizes of females marked before (Alekseev, 2002) from May to August was not confirmed by information of the last years.

Interannual changeability. Information was generalized by years and presented in table 34. Both for males and females had a maximum of sizes and weight in 2005 (by the way, this year there were minimum catches on effort). Further there was diminishing of average sizes and weights to 2008 year for females and to 2007 year with a subsequent small increasing in 2008 for males. The especially sharp diminishing of average sizes and weights happened from 2006 to 2007 years, when females diminished in sizes on 3.5 cm and 105 g, and males accordingly on 2.9 cm and 65 g.

Before 2007 year females were larger than males, in 2007 their sizes and the weights were practically equal (we can see it also from data of survey of pelagic redfish in 2007 (ICES, 2007)), and in 2008 males were a few larger than females.

Labrador Sea. Here both general volume of information and temporal scope (June-September) is less. But here information succeeded to be broken up by divisions (1F, 2J and 2H).

The generalized length distribution is presented in table 15. Length of fish in catches was 20-47 cm, weight – 125-1196 g; including: females are 22-47 cm and 165-1195 g and males are 20-43 cm and 125-1040 g accordingly.

Spatial changeability. In tables 16, 21 and 25 generalized data are presented by divisions 1F, 2J and 2H. Comparison of average values of length and weight shows, that they are very near in all divisions (distinction lies within the limits of tenths of centimeter or 10-15 grams). The most shallow fish was observed in the division 2J (20-43 cm and 125-1040 g), most large in 1F (22-47 cm and 145-1195 g).

Seasonal changeability is presented in tables 17-20 (division 1F) and 22-24 (division 2J), and average values in table 35. In the division 1F the largest fish (both males and females) observed at the beginning and end of period of works (June and September). In 2J the most large females and males were observed in July and August. In 2H to estimate seasonal changeability is not possible, because information is present only for July.

In all periods in all divisions females were larger than males.

Interannual changeability. Average values of length and weight, generalized by years for all divisions of NAFO presented in table 36 and length distribution by separate years in tables 26-31. Here we can see those features, what were in NEAFC region, namely: maximal sizes both males and females marked in 2005 and noticeable, though not such considerable, as in the Irminger Sea, decline of size and weight from 2006 to 2007 - for females on 1.9 cm and 15 g, and for males on 1.6 cm and 12 g accordingly. But, unlike the Irminger Sea, females always were larger than males, although this distinction diminished the last years (2007-2008).

Norwegian Sea. On this region the least amount of information is collected. Direct redfish fishery began in the opened waters from 2005; however information on length-weight composition of redfish in catches were collected in 2006-2008. The generalized length distribution for 3 years is presented in table 32. Beaked redfish from the Norwegian Sea had sizes 27-45 cm and weight of 255-1065 g; females were 27-45 cm and 255-1065 g and males were 30-43 cm and 315-990 g accordingly.

It is possible only to mark from **spatial changeability**, that fish (both females and males) was larger on west and shallower on east and northeast of region.

Estimating **seasonal changeability** is impossible, because all information behaves to September. **Interannual changeability** can be estimated on табл.34. Females and males with maximal length registered in 2006, with minimum – in 2007; justly for weight of males. As for weight of females, it practically was constantly multiplied from 2006 to 2008 years.

Females were longer and heavier than males.

It is possible to mark interesting facts. If in 2007 redfish in the Norwegian Sea by sizes and weight was almost similar to redfish from the Labrador Sea, in 2008 a difference was multiplied, and up to a point by length and weight characteristics redfish became nearer to the one from the Irminger Sea, especially females.

Discussion and Conclusion

The first and main conclusion is that changeability of sizes and weight of fish by divisions and seasons almost wholly depends from their migrations. Other conclusion, presently made by most scientists, is assertion that redfish stocks in Irminger and Labrador Seas behave to single population, dwelling also in waters of Iceland and Western and Eastern Greenland. And the third conclusion which an author came to, generalizing long-term observations – the first are begin migrations, both direct and reverse, most large individuals, the more shallow ones go after. The largest fish (more than 40 cm) accomplishes limited in time and space migrations, while medium-sized fish accomplishes the protracted and long migrations to Northwestern Atlantic (Paramonov, 2007, Paramonov, 2008).

Using the above said conclusions it is possible to explain many features of the spatial and temporal distribution of females and males of redfish. The largest redfish in the opened waters of the described regions (and, possibly, in all North Atlantic) dwells near of Reykjanes Ridge. General migrations are directed to southwest. Farther from Reykjanes Ridge, the more shallow fish is. In division XII fish is less, than in division XIVB.

Fish, reaching to the Labrador Sea, already has practically identical sizes in all NAFO divisions. But seasonal distinctions are present. In 1F divisions, located nearer to the Irminger Sea, more large fish registered in June (direct migrations) and September (return migrations). In the 2J division, located farther from Irminger Sea, more large fish registered in July (direct migrations) and August (return migrations).

A detailer retrospective analysis shows that after the third ten-day period of May, 2007 many length-weight characteristics of redfish changed sharply. Especially brightly it showed up in the Irminger Sea. Here sizes and weight of fish diminished sharply, and males became larger than females. Not so obviously, showed it up in the Labrador Sea. Sizes and weight of fish here diminished not so strongly, and females remained larger than males, although a difference diminished in sizes. Reason is unknown to author. Certainly, diminishing average sized of redfish can be explained aimed of fleet exactly to large redfish fishery, but it does not explain its so sharp (during 1 ten-day period) diminishing.

By opinion of author, in the opened part of the Labrador Sea approach of beaked redfish is possible also from off-shore waters of Canada. During work in NWA, sometimes there were accumulations of redfish with size-weight and biological descriptions, different from usual. These could be the accumulations of redfish from Canadian off-shore waters. As evaluated by author, done by indirect method, the amount of the «Canadian» redfish usually does not exceed 10% from a common amount.

Beaked redfish, dwelling in the Norwegian Sea, probably, behaves to other population. Nevertheless, his length-weight descriptions are near to descriptions of perch from the Labrador Sea, and in 2008 certain rapprochement of average sizes of redfish registered from all three basic fishery regions.

By opinion of author, now there is forming of fish stock of redfish in the opened part of the Norwegian Sea, probably occupying part of the environmental niche of herring (it is a basic object of by-catch).

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Table 1. NEAFC 2003-2008 TL *Sebastes mentella*
 Female: weight 150-2175 g; average length 39.38 cm
 Male: weight 155-1740 g; average length 39.17 cm
 Total: weight 150-2175 g; average length 39.28 cm

Length, cm (TL)	Female			Male			Total		
	Total num- ber	Total weight, g	Average weight g	Total num- ber	Total weight, g	Avera-ge weight g	Total num- ber	Total weight, g	Average weight, g
20									
21									
22									
23	1	150	150.0	1	155	155.0	2	305	152.5
24	1	180	180.0	1	175	175.0	2	355	177.5
25	2	455	227.5	2	420	210.0	4	875	218.8
26	3	695	231.7	2	395	197.5	5	1090	218.0
27	17	4345	255.6	15	3785	252.3	32	8130	254.1
28	35	9945	281.4	17	4960	291.8	52	14905	286.6
29	61	18855	309.1	63	19700	312.7	124	38555	310.9
30	135	46580	345.0	131	44330	338.4	266	90910	341.8
31	234	88240	377.1	222	82330	370.9	456	170570	374.1
32	332	135830	409.1	320	130030	406.3	652	265860	407.8
33	453	202270	446.5	347	154560	445.4	800	356830	446.0
34	584	285210	488.4	522	255150	488.8	1106	540360	488.6
35	741	395530	533.8	716	382600	534.4	1457	778130	534.1
36	1088	639465	587.7	1016	592105	582.8	2104	1231570	585.3
37	1074	676290	629.7	1085	685960	632.2	2159	1362250	631.0
38	1160	786080	677.7	1156	795455	688.1	2316	1581535	682.9
39	1087	790825	727.5	1266	933245	737.2	2353	1724070	732.7
40	1174	924575	787.5	1397	1108685	793.6	2571	2033260	790.8
41	1156	983300	850.6	1516	1283310	846.5	2672	2266610	848.3
42	1264	1164990	921.6	1545	1405625	909.8	2809	2570115	915.1
43	1316	1295775	984.6	1181	1146455	970.7	2497	2442230	978.1
44	1084	1120065	1033.3	814	826730	1015.6	1898	1946795	1025.7
45	773	844335	1092.3	391	420320	1075.0	1164	1264655	1086.5
46	401	458225	1142.7	186	209000	1123.7	587	667225	1136.7
47	123	148085	1203.9	42	49910	1188.3	165	197995	1200.0
48	23	29795	1295.4	6	7435	1239.2	29	37230	1283.8
49	4	5615	1403.8	0	0	0	4	5615	1403.8
50	2	4045	2022.5	0	0	0	2	4045	2022.5
51	0	0	0	1	1740	1740.0	1	1740	1740.0
52	1	1905	1905.0				1	1905	1905.0
Total/ Average	14329	11061655	772.0	13961	10544565	755.3	28290	21606220	763.7

Table 2. NEAFC 2003-2007 TL March *Sebastes mentella*
 Female: weight 370-1390 g; average length 41.71 cm
 Male: weight 315-1380 g; average length 40.66 cm
 Total: weight 315-1390 g; average length 41.20 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30				1	350	350.0	1	350	350.0
31				4	1350	337.5	4	1350	337.5
32	2	805	402.5	2	690	345.0	4	1495	373.8
33	3	1275	425.0	6	2410	401.7	9	3685	409.4
34	1	445	445.0	5	2175	435.0	6	2620	436.7
35	2	1180	590.0	5	2275	455.0	7	3455	493.6
36	8	4485	560.6	4	2210	552.5	12	6695	557.9
37	16	9850	615.6	12	7295	607.9	28	17145	612.3
38	16	10655	665.9	12	7645	637.1	28	18300	653.6
39	16	11485	717.8	18	12650	702.8	34	24135	709.0
40	25	19615	784.6	28	22090	788.9	53	41705	786.9
41	19	16540	870.5	36	29485	819.0	55	46025	836.8
42	24	23065	961.0	27	24015	889.4	51	47080	923.1
43	39	39525	1013.5	36	34080	946.7	75	73605	981.4
44	37	39050	1055.4	26	26540	1020.8	63	65590	1041.1
45	33	38440	1164.8	17	18715	1100.9	50	57155	1143.1
46	13	16120	1240.0	2	2215	1107.5	15	18335	1222.3
47	5	6330	1266.5				5	6330	1266.0
48									
49									
50									
51									
52									
Total/Average	259	238865	922.3	241	196190	814.1	500	435055	870.1

Table 3. NEAFC 2003-2007 TL April *Sebastes mentella*
 Female: weight 245-2175 g; average length 40.29 cm
 Male: weight 175-1740 g; average length 39.80 cm
 Total: weight 175-2175 g; average length 40.06 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight,g
20									
21									
22									
23									
24				1	175	175.0	1	175	175.0
25				0	0	0	0	0	0
26				0	0	0	0	0	0
27				5	1240	248.0	5	1240	248.0
28	1	245	245.0	2	605	302.5	3	850	281.7
29	6	1940	323.3	6	1905	317.5	12	3845	320.4
30	16	5745	359.1	26	9010	346.5	42	14755	351.3
31	31	12475	402.4	32	11725	366.4	63	24200	384.1
32	52	22200	426.9	56	22985	410.4	108	45185	418.4
33	67	31310	467.3	52	23430	450.6	119	54740	460.0
34	110	55400	503.6	89	43250	486.0	199	98650	495.7
35	141	77655	550.7	105	56775	540.7	246	134430	546.5
36	199	117940	592.7	150	87505	583.4	349	205445	588.7
37	211	135160	640.6	197	122940	624.1	408	258100	632.6
38	217	147050	677.6	191	131765	689.9	408	278815	683.4
39	211	152655	723.5	236	171720	727.6	447	324375	725.7
40	230	184070	800.3	243	191410	787.7	473	375480	793.8
41	268	231170	862.6	301	253970	843.8	569	485140	852.6
42	273	256650	940.1	342	306320	895.7	615	562970	915.4
43	361	362000	1002.8	274	262005	956.2	635	624005	982.7
44	328	342155	1043.2	221	220750	998.9	549	562905	1025.3
45	248	273345	1102.2	105	111035	1057.5	353	384380	1088.9
46	138	159750	1157.6	52	57905	1113.6	190	217655	1145.6
47	41	49350	1203.7	20	23690	1184.5	61	73040	1197.4
48	4	5065	1266.3	4	4940	1235.0	8	10005	1250.6
49	0	0	0	0	0	0	0	0	0
50	1	2175	2175.0	0	0	0	1	2175	2175.0
51				1	1740	1740.0	1	1740	1740.0
52									
Total/Average	3154	2625505	832.4	2711	2118795	781.6	5865	4744300	808.9

Table 4.NEAF 2003-2008 TL May *Sebastes mentella*
 Female: weight 185-1870 g; average length 39.54 cm
 Male: weight 225-1270 g; average length 39.25 cm
 Total: weight 185-1870 g; average length 39.41 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25	1	185	185.0				1	185	185.0
26	0	0	0	1	225	225.0	1	225	225.0
27	4	1040	260.0	1	260	260.0	5	1300	260.0
28	8	2255	281.9	2	595	297.5	10	2850	285.0
29	8	2535	316.9	10	3010	301.0	18	5545	308.1
30	35	12170	344.8	25	8345	333.8	60	20515	341.9
31	70	26335	376.2	58	21885	377.3	128	48220	376.7
32	96	39300	409.4	80	33225	415.3	176	72525	412.1
33	158	70330	445.1	111	49110	442.4	269	119440	444.0
34	187	90485	483.9	132	65135	493.4	319	155620	487.8
35	246	130435	530.2	183	98590	538.7	429	229025	533.9
36	385	225715	586.3	265	155235	585.8	650	380950	586.7
37	340	213125	626.8	310	198625	640.7	650	411750	633.5
38	376	253645	674.6	314	216440	689.3	690	470085	681.3
39	336	244105	726.5	323	242205	749.9	659	486310	738.0
40	391	306835	784.7	407	320540	787.6	798	627375	786.2
41	385	328580	853.5	400	335735	839.3	785	664315	846.3
42	452	417490	923.7	408	370590	908.3	860	788080	916.4
43	443	433865	979.4	308	296740	963.4	751	730605	972.8
44	387	396145	1023.6	237	239740	1011.6	624	635885	1019.0
45	262	282785	1079.3	96	101820	1060.6	358	384605	1074.3
46	138	154715	1121.1	53	59160	1116.2	191	213875	1119.8
47	46	55325	1202.7	15	17790	1186.0	61	7318	1198.6
48	5	6465	1293.0				5	6465	1293.0
49	1	1390	1390.0				1	1390	1390.0
50	1	1870	1870.0				1	1870	1870.0
51									
52									
Total/Average	4761	3697125	776.5	3739	2835000	758.2	8500	6532125	768.5

Table 5.NEAF 2003-2008 TL June *Sebastes mentella*
 Female: weight 180-1460 g; average length 39.13 cm
 Male: weight 170-1350 g; average length 39.31 cm
 Total: weight 170-1460 g; average length 39.23 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24	1	180	180.0				1	180	180.0
25	0	0	0				0	0	0
26	2	490	245.0	1	170	170.0	3	660	220.0
27	8	2015	251.9	6	1540	256.6	14	3555	253.9
28	14	3985	284.6	8	2305	288.1	22	6290	285.9
29	27	8050	298.1	26	8015	308.3	53	16065	303.1
30	54	18360	340.0	41	13665	333.3	95	32025	337.1
31	79	29295	370.8	67	24820	370.4	146	54115	370.7
32	126	50830	403.4	102	40995	401.9	228	91825	402.7
33	133	57940	435.6	92	41465	450.7	225	99405	441.8
34	191	92010	481.7	150	73495	490.0	341	165505	485.4
35	237	124120	523.7	218	115970	532.0	455	240090	527.7
36	328	192445	586.7	327	191360	585.2	655	383805	586.0
37	328	204870	624.6	347	218035	628.3	675	422905	626.5
38	373	251055	673.1	397	269635	679.2	770	520690	676.2
39	374	270965	724.5	448	326520	728.8	822	597485	726.9
40	380	294795	775.8	513	407510	794.4	893	702305	786.5
41	386	322260	834.9	567	477545	842.2	953	799805	839.2
42	407	366160	899.7	544	493635	907.4	951	859795	904.1
43	393	380045	967.0	414	403015	973.5	807	783060	970.3
44	281	288200	1025.6	250	255440	1021.8	531	543640	1023.8
45	209	226395	1083.2	134	145315	1084.4	343	371710	1083.7
46	96	108780	1133.1	70	78865	1126.6	166	187645	1130.4
47	27	32505	1203.9	6	7220	1203.3	33	39725	1203.8
48	13	16860	1296.9	2	2495	1247.5	15	19355	1290.3
49	3	4225	1408.3				3	4225	1408.3
50									
51									
52									
Total/Average	4470	3346835	748.7	4730	3599030	760.9	9200	6945865	755.0

Table 6.NEAF 2003-2008 TL July *Sebastes mentella*
 Female: weight 245-1905 g; average length 37.62 cm
 Male: weight 230-1345 g; average length 38.34 cm
 Total: weight 230-1905 g; average length 38.05 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25	1	270	270.0	1	230	230.0	2	500	250.0
26	0	0	0	0	0	0	0	0	0
27	4	1065	266.3	2	505	252.5	6	1570	261.7
28	6	1910	318.3	4	1170	292.5	10	3080	308.0
29	17	5450	320.6	15	4905	327.0	32	10355	323.6
30	17	5925	348.5	30	10375	345.8	47	16300	346.8
31	35	13255	378.7	45	17020	378.2	80	30275	378.4
32	37	14985	405.0	58	23605	407.0	95	38590	406.2
33	62	27875	449.6	42	18875	449.4	104	46750	449.5
34	64	31945	499.1	65	32400	498.5	129	64345	498.8
35	69	37630	545.4	89	49085	551.5	158	86715	548.8
36	93	55910	601.2	131	77640	592.7	224	133550	596.2
37	90	57025	633.6	101	65920	652.7	191	122945	643.7
38	99	69200	699.0	126	89630	711.3	225	158830	705.9
39	84	62530	744.4	143	107970	755.0	227	170500	751.1
40	97	77925	803.4	134	108900	812.7	231	186825	808.8
41	55	46950	853.6	125	109180	873.4	180	156130	867.4
42	64	59900	935.9	150	141525	943.5	214	201425	941.2
43	49	48595	991.7	111	111775	1007.0	160	160370	1002.3
44	38	40245	1059.1	61	63890	1047.4	99	104135	1051.9
45	19	20995	1105.0	38	42295	1113.0	57	63290	1110.4
46	15	17650	1176.7	7	8450	1207.1	22	26100	1186.4
47	4	4575	1143.8	1	1210	1210.0	5	5785	1157.0
48	1	1405	1405.0				1	1405	1405.0
49	0	0	0				0	0	0
50	0	0	0				0	0	0
51	0	0	0				0	0	0
52	1	1905	1905.0				1	1905	1905.0
Total/ Average	1021	705120	690.6	1479	1086555	734.7	2500	1791675	716.7

Table 7. NEAFC 2007 TL August *Sebastes mentella*
 Female: weight 150-1210 g; average length 37.74 cm
 Male: weight 155-1220 g; average length 38.14 cm
 Total: weight 150-1220 g; average length 37.98 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23	1	150	150.0	1	155	155.0	2	305	152.5
24	0	0	0	0	0	0	0	0	0
25	0	0	0	1	190	190.0	1	190	190.0
26	1	205	205.0	0	0	0	1	205	205.0
27	1	225	225.0	1	240	240.0	2	465	232.5
28	4	1055	263.8	1	285	285.0	5	1340	268.0
29	0	0	0	5	1615	323.0	5	1615	323.0
30	12	4095	341.3	6	1995	332.5	18	6090	338.3
31	18	6545	363.6	12	4260	355.0	30	10805	360.2
32	15	6185	412.3	15	6085	405.7	30	12270	409.0
33	26	11895	457.5	26	11860	456.2	52	23755	456.8
34	23	11490	499.6	39	19830	508.5	62	31320	505.2
35	36	19390	538.6	62	33605	542.0	98	52995	540.8
36	45	26660	592.4	74	43865	592.8	119	70525	592.6
37	58	37410	645.0	85	54405	640.1	143	91815	642.1
38	57	39840	698.9	101	70975	702.5	158	110815	701.4
39	54	40590	751.7	79	59410	752.0	133	100000	751.9
40	46	37585	817.1	68	55335	813.8	114	92920	815.1
41	43	37800	879.1	85	75870	893.6	128	113670	888.0
42	43	40910	951.4	74	69540	939.7	117	110450	944.0
43	31	31745	1024.0	38	38840	1022.1	69	70585	1023.0
44	13	14270	1097.7	19	20370	1072.1	32	34640	1082.5
45	2	2375	1187.5	1	1140	1140.0	3	3515	1171.7
46	1	1210	1210.0	2	2405	1202.5	3	3615	1205.0
47									
48									
49									
50									
51									
52									
Total/Average	530	371630	701.2	795	572275	719.8	1325	943905	712.4

Table 8.NEAF 2002-2003 TL September *Sebastes mentella*
 Female (2003): weight 240-815 g; average length 36.31 cm
 Male (2003): weight 250-780 g; average length 35.63 cm
 Total: weight 195-815 g; average length 35.43 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25							1	200	200.0
26							2	435	217.5
27							0	0	0
28	2	495	247.5				6	1505	250.8
29	3	880	293.3	1	250	250.0	6	1695	282.5
30	1	285	285.0	2	590	295.0	7	2145	306.4
31	1	335	335.0	4	1270	317.5	11	3780	343.6
32	4	1525	381.3	7	2445	349.3	16	5975	373.4
33	4	1645	411.3	18	7410	411.7	39	16360	419.5
34	8	3435	429.4	42	18865	449.2	68	30715	451.7
35	10	5120	512.0	54	26300	487.0	77	38405	498.8
36	30	16310	543.7	65	34290	527.5	108	58160	538.5
37	31	18850	608.1	33	18740	567.9	74	43915	593.4
38	22	14635	665.2	15	9365	624.3	41	26755	652.6
39	12	8495	707.9	19	12770	672.1	32	21970	686.6
40	5	3750	750.0	4	2900	725.0	9	6650	738.9
41	0	0	0	2	1525	762.5	2	1525	762.5
42	1	815	815.0				1	815	815.0
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/Average	134	76575	571.5	266	136720	514.0	500	261005	522.0

Table 9. NEAFC 2003 TL *Sebastes mentella*
 Female: weight 240-1430 g; average length 40.80 cm
 Male: weight 225-1390 g; average length 40.05 cm
 Total: weight 225-1390 g; average length 40.35 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27				1	225	225.0	1	225	225.0
28	2	495	247.5	1	230	230.0	3	725	241.7
29	5	1425	285.0	3	830	276.7	8	2255	281.9
30	4	1170	292.5	4	1150	287.5	8	2320	290.0
31	5	1670	334.0	10	3380	338.0	15	5050	336.7
32	17	6330	372.4	13	4725	363.5	30	11055	368.5
33	14	5670	405.0	27	10870	402.6	41	16540	403.4
34	22	9650	438.6	54	24025	444.9	76	33675	443.1
35	31	15180	489.7	68	33025	485.7	99	48205	486.9
36	46	24860	540.4	100	52740	527.4	146	77600	531.5
37	61	36485	598.1	80	46105	576.3	141	82590	585.7
38	62	39875	643.1	76	48490	638.0	138	88365	640.3
39	67	46450	693.3	114	78580	689.3	181	125030	690.8
40	57	42910	752.8	119	90550	760.9	176	133460	758.3
41	67	54975	820.5	148	120525	814.4	215	175500	816.3
42	77	69690	909.1	190	168440	886.5	267	238130	891.9
43	98	93365	952.7	160	152125	950.8	258	245490	951.5
44	99	101225	1022.5	105	106045	1010.0	204	207270	1016.0
45	95	106170	1117.6	68	73085	1074.8	163	179255	1099.7
46	57	67645	1186.8	35	39080	1116.6	92	106725	1160.0
47	22	26835	1219.8	9	10855	1206.1	31	37690	1215.8
48	6	7825	1304.2	1	1330	1330.0	7	9155	1307.9
49									
50									
51									
52									
Total/Average	914	759900	831.4	1386	1066410	769.4	2300	1826310	794.1

Table 10. NEAFC 2004 TL *Sebastes mentella*
 Female: weight 225-1405 g; average length 40.63 cm
 Male: weight 280-1330 g; average length 40.17 cm
 Total: weight 225-1405 g; average length 40.43 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27	1	225	225.0				1	225	225.0
28	1	245	245.0				1	245	245.0
29	2	550	275.0	1	290	290.0	3	840	280.0
30	1	275	275.0	3	920	306.7	4	1195	298.8
31	7	2635	376.4	10	3380	338.0	17	6015	353.8
32	14	5320	380.0	15	5525	368.3	29	10845	374.0
33	18	7330	407.2	10	3845	384.5	28	11175	399.1
34	31	13745	443.4	31	14015	452.1	62	27760	447.7
35	44	22195	504.4	31	15435	497.9	75	37630	501.7
36	60	32910	548.5	63	33720	535.2	123	66630	541.7
37	90	53210	591.2	53	31200	588.7	143	84410	590.3
38	91	57365	630.4	63	40650	645.2	154	98015	636.5
39	84	57595	685.7	79	54400	688.6	163	111995	687.1
40	99	73055	737.9	109	82625	758.0	208	155680	748.5
41	100	82735	827.4	126	102245	811.5	226	184980	818.5
42	127	114800	903.9	132	117905	893.2	259	232705	898.5
43	151	145740	965.2	102	97285	953.8	253	243025	960.6
44	128	132630	1036.2	87	87060	1000.7	215	219690	1021.8
45	112	123475	1102.5	45	48675	1081.7	157	172150	1096.5
46	47	54460	1158.7	14	16065	1147.5	61	70525	1156.1
47	10	12115	1211.5	5	5870	1174.0	15	17985	1199.0
48	2	2685	1342.5	1	1185	1185.0	3	3870	1290.0
49									
50									
51									
52									
Total/Average	1220	995295	815.8	980	762295	777.9	2200	1757590	798.9

Table 11. NEAFC 2005 TL *Sebastes mentella*
 Female: weight 260-1460 g; average length 41.49 cm
 Male: weight 170-1350 g; average length 40.89 cm
 Total: weight 170-1460 g; average length 41.20 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Avera-ge weight g	Total number	Total weight, g	Average weight,g
20									
21									
22									
23									
24									
25									
26				1	170	170.0	1	170	170.0
27				0	0	0	0	0	0
28				0	0	0	0	0	0
29	2	535	267.5	0	0	0	2	535	267.5
30	3	860	286.7	9	2635	292.8	12	3495	291.3
31	3	945	315.0	6	2045	340.8	9	2990	332.2
32	13	4590	353.1	15	5410	360.7	28	10000	357.1
33	20	7795	389.8	22	8545	388.4	42	16340	389.0
34	35	15260	436.0	39	17045	437.1	74	32305	436.6
35	56	26440	472.1	51	24040	471.4	107	50480	471.8
36	70	36175	516.8	61	31625	518.4	131	67800	517.6
37	123	69780	567.3	90	51830	575.9	213	121610	570.9
38	143	86580	605.5	108	66665	617.3	251	153245	610.5
39	131	86530	660.5	141	94700	671.6	272	181230	666.3
40	158	113480	718.2	201	147690	734.8	359	261170	727.5
41	165	129650	785.8	253	202455	800.2	418	332105	794.5
42	225	193545	860.2	260	222810	857.0	485	416355	858.5
43	252	236475	938.4	230	212565	924.2	482	449040	931.6
44	290	289025	996.6	209	205595	983.7	499	494620	991.2
45	223	237760	1066.2	106	111975	1056.4	329	349735	1063.0
46	144	160280	1113.1	67	75120	1121.2	211	235400	1115.6
47	43	51430	1196.0	19	22605	1189.7	62	74035	1194.1
48	10	12925	1292.5	1	1250	1250.0	11	14175	1288.6
49	2	2885	1442.5				2	2825	1442.5
50									
51									
52									
Total/Average	2111	1762945	835.1	1889	1506775	797.7	4000	3269720	817.4

Table 12. NEAFC 2006 TL *Sebastes mentella*
 Female: weight 245-1390 g; average length 41.27 cm
 Male: weight 260-1245 g; average length 40.69 cm
 Total: weight 245-1390 g; average length 40.97 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total num-ber	Total weight, g	Avera-ge weight g	Total num-ber	Total weight, g	Average weight,g
20									
21									
22									
23									
24									
25									
26									
27									
28	1	245	245.0				1	245	245.0
29	1	275	275.0	2	525	262.5	3	800	266.7
30	7	1995	285.0	4	1300	325.0	11	3295	299.5
31	3	920	306.7	10	3285	328.5	13	4205	323.5
32	15	5580	372.0	15	5450	363.3	30	11030	367.7
33	29	11575	399.1	26	10410	400.4	55	21985	399.7
34	60	26270	437.8	41	18365	447.9	101	44635	441.9
35	76	36495	480.2	62	30360	489.7	138	66855	484.5
36	108	57800	535.2	89	47585	534.7	197	105385	534.9
37	138	80220	581.3	134	77945	581.7	272	158165	581.5
38	159	100340	631.1	171	107610	629.3	330	207950	630.2
39	182	124485	684.0	187	127390	681.2	369	251875	682.6
40	204	149885	734.7	250	185875	743.5	454	335760	739.6
41	234	186065	795.1	290	231780	799.2	524	417845	797.4
42	245	211810	864.5	300	257160	857.2	545	468970	860.5
43	317	296610	935.7	249	230680	926.4	566	527290	931.6
44	340	342585	1007.6	229	226205	987.8	569	568790	999.6
45	273	292855	1072.7	129	136150	1055.4	402	429005	1067.2
46	142	162000	1140.8	61	67760	1100.8	203	229760	1131.8
47	48	57705	1202.2	9	10580	1175.6	57	68285	1198.0
48	5	6360	1272.0	3	3670	1223.3	8	10030	1253.8
49	2	2730	1365.0				2	2730	1365.0
50									
51									
52									
Total/Average	2589	2154805	832.3	2261	1780085	787.3	4850	3934890	811.3

Table 13. NEAFC 2007 TL *Sebastes mentella*
 Female: weight 150-2175 g; average length 37.79 cm
 Male: weight 155-1740 g; average length 37.81 cm
 Total: weight 150-2175 g; average length 37.80 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Avera-ge weightg	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23	1	150	150.0	1	155	155.0	2	305	152.5
24	0	0	0	1	175	175.0	1	175	175.0
25	1	270	270.0	2	420	210.0	3	690	230.0
26	3	695	231.7	0	0	0	3	695	231.7
27	9	2375	263.9	12	3050	254.2	21	5425	258.3
28	24	6980	290.8	14	4165	297.5	38	11145	293.3
29	41	13005	317.2	46	14700	319.6	87	27705	318.4
30	100	35270	352.7	90	31090	345.4	190	66360	349.3
31	152	57730	379.8	137	51730	377.6	289	109460	378.8
32	200	83725	418.6	190	78970	415.6	390	162695	417.2
33	260	119915	461.2	183	85020	464.6	443	204935	462.6
34	321	163045	507.9	245	125330	511.6	566	288375	509.5
35	368	204845	556.6	321	178860	557.2	689	383705	556.9
36	510	310310	608.5	450	273215	607.1	960	583525	607.8
37	433	287840	664.8	463	305245	659.3	896	593085	661.9
38	442	316210	715.4	501	362025	722.6	943	678235	719.2
39	398	305715	768.1	474	369485	779.5	872	675200	774.3
40	448	377060	841.7	470	394125	838.6	918	771185	840.1
41	410	372565	908.7	453	408255	901.2	863	780820	904.8
42	441	434990	986.4	422	409650	970.7	863	844640	978.7
43	386	409800	1061.7	263	272480	1036.0	649	682280	1051.3
44	159	180225	1133.5	107	117975	1102.6	266	298200	1121.1
45	49	59525	1214.8	23	27155	1180.7	72	866680	1203.9
46	8	10195	1274.4	4	4905	1226.3	12	15100	1258.3
47	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0
50	2	4045	2022.5	0	0	0	2	4045	2022.5
51	0	0	0	1	1740	1740.0	1	1740	1740.0
52	1	1905	1905.0				1	1905	1905.0
Total/Average	5167	3758390	727.4	4873	3519920	722.3	10040	7278310	724.9

Table 14. NEAFC 2008 TL *Sebastes mentella*
 Female: weight 180-1320 g; average length 37.74 cm
 Male: weight 225-1285 g; average length 38.34 cm
 Total: weight 180-1320 g; average length 38.05 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24	1	180	180.0				1	180	180.0
25	1	185	185.0				1	185	185.0
26	0	0	0	1	225	225.0	1	225	225.0
27	7	1745	249.3	2	510	255.0	9	2255	250.6
28	7	1980	282.9	2	565	282.5	9	2545	282.8
29	10	3065	306.5	11	3355	305.0	21	6420	305.7
30	20	7010	350.5	21	7235	344.5	41	14245	347.4
31	64	24340	380.3	49	18510	377.8	113	42850	379.2
32	73	30285	414.9	72	29950	416.0	145	60235	415.4
33	112	49985	446.3	79	35870	454.1	191	85855	449.5
34	115	57240	497.7	112	56370	503.3	227	113610	500.5
35	166	90375	544.4	183	100880	551.3	349	191255	548.0
36	294	177410	603.4	253	153220	605.6	547	330630	604.4
37	229	148755	649.6	265	173635	655.2	494	322390	652.6
38	263	185710	706.1	237	170015	717.4	500	355725	711.5
39	225	170050	755.8	271	208690	770.1	496	378740	763.6
40	208	168185	808.6	248	207820	838.0	456	376005	824.6
41	180	157310	873.9	246	218050	886.4	426	375360	881.1
42	149	140155	940.6	241	229660	952.9	390	369815	948.2
43	112	113785	1015.9	177	181320	1024.4	289	295105	1021.1
44	68	74375	1093.8	77	83850	1089.0	145	158225	1091.2
45	21	24550	1169.0	20	23280	1164.0	41	47830	1166.6
46	3	3645	1215.0	5	6070	1214.0	8	9715	1214.4
47									
48									
49									
50									
51									
52									
Total/ Average	2328	1630320	700.3	2572	1909080	742.3	4900	3539400	722.3

Table 15.NAFO 2002-2008 TL *Sebastes mentella*

Female (2003-2008): weight 165-1195 g; average length 35.54 cm

Male (2003-2008): weight 125-1040 g; average length 34.82 cm

Total: weight 125-1195 g; average length 35.04 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20				1	125	125.0	1	125	125.0
21				0	0	0	0	0	0
22	1	165	165.0	1	140	140.0	3	445	148.3
23	1	185	185.0	1	160	160.0	2	345	172.5
24	1	165	165.0	0	0	0	4	640	160.0
25	5	1045	209.0	1	230	230.0	12	2360	196.7
26	13	3015	231.9	6	1270	211.7	27	5900	218.5
27	13	3345	257.3	20	4880	244.0	47	11590	246.6
28	44	11895	270.3	29	7800	269.0	110	29345	268.8
29	79	23420	296.5	79	23975	303.5	201	60030	298.7
30	129	42900	332.6	150	50210	334.7	337	111795	331.7
31	220	80145	364.3	325	119150	366.6	641	233440	364.2
32	325	129875	399.6	527	215790	409.7	983	398305	405.2
33	411	180565	439.3	880	399735	454.2	1528	685480	448.5
34	646	311040	481.5	1404	691500	492.5	2345	1147800	489.5
35	695	370330	532.8	1598	840170	525.8	2616	1383110	528.7
36	865	504375	583.1	1404	791700	563.9	2571	1474265	573.4
37	891	550375	617.7	818	495905	606.2	1929	1186490	615.1
38	654	432170	660.8	450	293010	651.1	1241	818605	659.6
39	379	262900	693.7	190	131785	693.6	633	441335	697.2
40	210	156335	744.5	92	68600	745.7	319	238565	747.8
41	66	52325	792.8	33	26295	796.8	104	82530	793.6
42	23	19450	845.7	6	5170	861.7	32	27200	850.0
43	8	7275	909.4	2	1890	945.0	11	10105	981.6
44	0	0	0				0	0	0
45	2	2235	1117.5				2	2235	1117.5
46	0	0	0				0	0	0
47	1	1175	1175.0				1	1175	1175.0
48									
49									
50									
51									
52									
Total/ Average	5682	3146705	553.8	8017	4169490	520.1	15700	8353015	532.0

Table 16.NAFO 1F 2002-2008 TL *Sebastes mentella*
 Female (2003-2008): weight 165-1195 g; average length 35.49 cm
 Male (2003-2008): weight 160-965 g; average length 34.81 cm
 Total: weight 145-1195 g; average length 35.02 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight, g
20									
21									
22	1	165	165.0				1	165	165.0
23	1	185	185.0	1	160	160.0	2	345	172.5
24	1	165	165.0	0	0	0	4	640	160.0
25	3	590	196.7	1	230	230.0	9	1740	193.3
26	9	2070	230.0	4	840	210.0	17	3725	219.1
27	10	2685	268.5	9	2370	263.3	30	7665	255.5
28	27	7420	274.8	12	3415	284.6	67	18145	270.8
29	51	15490	303.7	51	15845	310.7	137	41395	302.2
30	80	27335	341.7	109	37005	339.5	234	78790	336.7
31	168	61965	368.8	229	84740	370.0	473	173785	367.4
32	242	98230	405.9	372	154290	414.8	715	292980	409.8
33	295	130815	443.4	629	288220	458.2	1131	510475	451.3
34	469	227385	484.8	965	479810	497.2	1688	831695	492.7
35	498	267175	536.5	1121	593030	529.0	1893	1006205	531.5
36	580	338810	584.2	956	541050	566.0	1796	1032940	575.1
37	617	381500	618.3	558	339175	607.8	1371	845410	616.6
38	439	291190	663.3	304	198555	653.1	869	575855	662.7
39	257	178445	694.3	130	90080	692.9	442	308760	698.6
40	145	107870	743.9	63	46710	741.4	221	165140	747.2
41	44	34955	794.4	26	20695	796.0	75	59560	794.1
42	11	9480	861.8	5	4335	867.0	19	16395	862.9
43	4	3600	900.0				4	3600	900.0
44	0	0	0				0	0	0
45	1	1195	1195.0				1	1195	1195.0
46	0	0	0				0	0	0
47	1	1175	1175.0				1	1175	1175.0
48									
49									
50									
51									
52									
Total/ Average	3954	2189895	553.8	5545	2900555	523.1	11200	5977780	533.7

Table17.NAFO 1F 2006 June TL *Sebastes mentella*
 Female: weight 260-740 g; average length 36.17 cm
 Male: weight 315-760 g; average length 35.75 cm
 Total: weight 260-760 g; average length 35.89 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27									
28									
29	1	260	260.0				1	260	260.0
30	0	0	0	1	315	315.0	1	315	315.0
31	0	0	0	0	0	0	0	0	0
32	0	0	0	2	755	377.5	2	755	377.5
33	1	435	435.0	6	2450	408.3	7	2885	412.1
34	6	2630	438.3	11	4965	451.4	17	7595	446.8
35	1	495	495.0	7	3535	505.0	8	4030	503.8
36	8	4590	573.8	13	7405	569.6	21	11995	571.2
37	9	5330	592.2	13	7915	608.8	22	13245	602.5
38	6	3885	647.5	12	8010	667.5	18	11895	660.8
39	2	1455	727.5	0	0	0	2	1455	727.5
40				1	760	760.0	1	760	760.0
41									
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	34	19080	561.2	66	36110	547.1	100	55190	551.9

Table 18. NAFO 1F 2002-2008 July TL *Sebastes mentella*
 Female (2003-2008): weight 165-1175 g; average length 35.22 cm
 Male (2003-2008): weight 160-965 g; average length 34.68 cm
 Total: weight 155-1175 g; average length 34.89 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Avera-ge weight g	Total number	Total weight, g	Average weight, g
20									
21									
22	1	165	165.0				1	165	165.0
23	1	185	185.0	1	160	160.0	2	345	172.5
24	1	165	165.0	0	0	0	3	495	165.0
25	2	415	207.5	0	0	0	7	1335	190.7
26	7	1585	226.4	3	635	221.7	11	2435	211.4
27	8	2135	266.9	7	1865	266.4	20	5205	260.3
28	17	4725	277.9	7	2040	291.4	41	11170	272.4
29	33	10265	311.1	35	10925	312.1	89	27145	305.0
30	54	18740	347.0	65	12555	347.0	130	44830	344.8
31	120	44205	368.4	139	52080	374.7	275	101930	370.7
32	153	62545	408.8	211	87825	416.2	388	159915	412.2
33	191	85350	446.9	317	146110	460.9	537	243825	454.1
34	304	148175	487.4	460	229545	499.0	805	396910	493.1
35	292	156585	536.3	554	293695	530.1	884	470005	531.7
36	311	179975	578.7	470	264850	563.5	828	471720	569.7
37	332	203265	612.2	272	163825	602.3	622	377980	607.7
38	240	159275	663.6	155	101280	653.4	410	270640	660.1
39	145	99875	688.8	64	44025	687.9	218	150320	689.5
40	64	47525	742.6	21	15525	739.3	86	63810	742.0
41	22	17490	795.0	10	8270	827.0	32	25760	805.0
42	7	6060	865.7	2	1690	845.0	9	7750	861.1
43	1	815	815.0				1	815	815.0
44	0	0	0				0	0	0
45	0	0	0				0	0	0
46	0	0	0				0	0	0
47	1	1175	1175.0				1	1175	1175.0
48									
49									
50									
51									
52									
Total/ Average	2307	1250695	542.1	2793	1446900	518.5	5400	2835680	525.1

Table 19. NAFO 1F 2002-2008 August TL *Sebastes mentella*
 Female (2003-2008): weight 175-915 g; average length 35.71 cm
 Male (2003-2008): weight 205-880 g; average length 34.82 cm
 Total: weight 145-915 g; average length 35.10 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24							1	145	145.0
25	1	175	175.0	1	230	230.0	2	405	202.5
26	2	485	242.5	1	205	205.0	6	1290	215.0
27	2	550	275.0	2	505	252.5	9	2230	247.8
28	9	2420	268.9	4	1115	278.8	22	5880	267.3
29	17	4965	292.1	15	4640	309.3	42	12550	298.8
30	25	8270	330.8	42	13840	329.5	91	29725	326.6
31	45	16760	372.4	84	30720	365.7	166	60575	364.9
32	85	34255	403.0	148	61595	416.2	280	114730	409.8
33	93	40880	439.6	287	131925	459.7	471	213150	452.5
34	147	71030	483.2	443	222200	501.6	709	351960	496.4
35	191	102860	538.5	481	256275	532.8	790	421230	533.2
36	224	132810	592.9	404	230615	570.8	749	434635	580.3
37	229	143610	627.1	213	131145	615.7	542	337285	622.3
38	162	107135	661.3	108	70590	653.6	343	226760	661.1
39	93	65040	699.4	47	32325	687.8	173	121370	701.6
40	66	49035	743.0	36	26490	735.8	106	78680	742.3
41	21	16710	795.7	15	11590	772.7	39	30475	781.4
42	4	3420	855.0	1	865	865.0	8	6865	858.1
43	1	900	900.0				1	900	900.0
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	1417	801310	565.5	2332	1226870	526.1	4550	2450840	538.7

Table 20. NAFO 1F 2002, 2004 September TL *Sebastes mentella*
 Female (2004): weight 275-1195 g; average length 36.74 cm
 Male (2004): weight 260-905 g; average length 35.71 cm
 Total: weight 260-1195 g; average length 35.47 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27							1	230	230.0
28	1	275	275.0	1	260	260.0	4	1095	273.8
29	0	0	0	1	280	280.0	5	1440	288.0
30	1	325	325.0	1	295	295.0	12	3920	326.7
31	3	1000	333.3	6	1940	323.3	32	11280	352.5
32	4	1430	357.5	11	4115	374.1	45	17580	390.7
33	10	4150	415.0	19	7735	407.1	116	50615	436.3
34	12	5550	462.5	51	23100	452.9	157	75230	479.2
35	14	7235	516.8	79	39525	500.3	211	110940	525.8
36	37	21435	579.3	69	38180	553.3	198	114590	578.7
37	47	29295	623.3	60	36290	604.8	185	116900	631.9
38	31	20895	674.0	29	18675	644.0	98	66560	679.2
39	17	12075	710.3	19	13730	722.6	49	35615	726.8
40	15	11310	754.0	5	3935	787.0	28	21890	781.8
41	1	755	755.0	1	835	835.0	4	3325	831.3
42	0	0	0	2	1780	890.0	2	1780	890.0
43	2	1885	942.5				2	1885	942.5
44	0	0	0				0	0	0
45	1	1195	1195.0				1	1195	1195.0
46									
47									
48									
49									
50									
51									
52									
Total/ Average	196	118810	606.2	354	190675	538.6	1150	636070	553.1

Table 21. NAFO 2J 2002-2007 TL *Sebastes mentella*
 Female (2003-2007): weight 210-950 g; average length 35.65 cm
 Male (2003-2007): weight 125-1040 g; average length 34.83 cm
 Total: weight 125-1040 g; average length 35.08 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20				1	125	125.0	1	125	125.0
21				0	0	0	0	0	0
22				1	140	140.0	2	280	140.0
23				0	0	0	0	0	0
24				0	0	0	0	0	0
25	2	455	227.5	0	0	0	3	620	206.7
26	4	945	236.3	2	430	215.0	10	2175	217.5
27	3	660	220.0	11	2510	228.2	17	3925	230.9
28	16	4170	260.6	16	4105	256.6	41	10615	258.9
29	27	7615	282.0	26	7555	290.6	61	17745	290.9
30	48	15285	318.4	40	12870	321.8	101	32390	320.7
31	50	17395	347.9	86	30670	356.6	156	55130	353.4
32	78	29660	380.3	149	58965	395.7	257	100805	392.2
33	113	48355	427.9	233	103610	444.7	376	165505	440.2
34	169	80020	473.5	419	201775	481.6	629	302555	481.0
35	189	98880	523.2	458	236965	517.4	696	362455	520.8
36	276	160180	580.4	427	238405	558.3	745	423695	568.7
37	255	157160	616.3	245	147375	601.5	524	320010	610.7
38	209	136995	655.5	136	88120	647.9	356	232430	652.9
39	114	79085	693.7	60	41705	695.1	183	127205	695.1
40	61	45705	750.1	28	21175	756.3	93	69950	752.2
41	22	17370	789.5	7	5600	800.0	29	22970	792.1
42	12	9970	830.8	1	835	835.0	13	10805	831.2
43	4	3675	918.8	2	1890	945.0	7	6505	929.3
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	1652	913580	553.0	2348	1204825	513.1	4300	2267895	527.4

Table 22. NAFO 2J 2002-2007 July TL *Sebastes mentella*
 Female (2003-2007): weight 215-890 g; average length 35.70 cm
 Male (2003-2007): weight 125-850 g; average length 34.84 cm
 Total: weight 125-890 g; average length 35.01 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20				1	125	125.0	1	125	125.0
21				0	0	0	0	0	0
22				1	140	140.0	2	280	140.0
23				0	0	0	0	0	0
24				0	0	0	0	0	0
25	1	225	225.0	0	0	0	2	390	195.0
26	3	690	230.0	0	0	0	7	1490	212.9
27	0	0	0	2	450	225.0	4	935	233.8
28	4	1040	260.0	2	505	252.5	14	3615	258.2
29	10	2875	287.5	5	1495	299.0	23	6945	302.8
30	24	7760	323.3	16	5185	324.1	49	15885	324.2
31	15	5340	356.0	31	11225	362.1	63	22560	358.1
32	35	13445	384.1	50	20215	404.3	100	39785	397.9
33	39	16625	426.3	94	42635	453.6	153	68230	445.9
34	61	29025	475.8	164	79770	486.4	251	122050	486.3
35	62	32410	522.7	153	80705	527.5	243	128385	528.3
36	93	53010	570.0	154	86795	563.6	271	154020	568.3
37	98	59610	608.3	90	54260	602.9	205	124850	609.0
38	83	53605	645.8	41	26745	652.3	133	86335	649.1
39	49	33585	685.4	19	12865	677.1	74	50650	684.5
40	21	15375	732.1	13	9745	749.6	38	28190	741.8
41	10	7930	793.0	2	1630	815.0	12	9560	796.7
42	4	3185	796.3				4	3185	796.3
43							1	940	940.0
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	612	335735	548.6	838	434490	518.5	1650	868395	526.3

Table 23. NAFO 2J 2003-2007 August TL *Sebastes mentella*
 Female: weight 230-950 g; average length 35.74 cm
 Male: weight 200-835 g; average length 34.93 cm
 Total: weight 200-950 g; average length 35.27 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25	1	230	230.0				1	230	230.0
26	1	255	255.0	1	200	200.0	2	455	227.5
27	0	0	0	2	460	230.0	2	460	230.0
28	6	1595	265.8	5	1285	257.0	11	2880	261.8
29	10	2805	280.5	14	4115	292.9	24	6920	288.3
30	16	5200	325.0	19	6145	323.4	35	11345	324.1
31	26	9050	348.1	37	13495	364.7	63	22545	357.9
32	30	11480	382.7	74	29880	403.8	104	41360	397.7
33	54	23220	430.0	112	50235	448.5	166	73455	442.5
34	93	44340	476.8	206	100005	485.5	299	144345	482.8
35	102	54095	530.3	254	131630	518.2	356	185725	521.7
36	151	89585	593.3	227	127210	560.4	378	216795	573.5
37	123	76945	625.6	110	67020	609.3	233	143965	617.9
38	106	70685	666.8	76	49470	650.9	182	120155	660.2
39	48	33375	695.3	33	23240	704.2	81	56615	699.0
40	29	22105	762.2	12	9185	765.5	41	31290	763.2
41	8	6395	799.4	3	2385	795.0	11	8780	798.2
42	7	5965	852.1	1	835	835.0	8	6800	850.0
43	3	2800	933.3				3	2800	933.3
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/Average	814	460125	565.3	1186	616795	520.1	2000	1076920	538.5

Table 24. NAFO 2J 2002-2004 September TL *Sebastes mentella*
 Female (2003-2004): weight 210-875 g; average length 35.24 cm
 Male (2003-2004): weight 215-1040 g; average length 34.50 cm
 Total: weight 210-1040 g; average length 34.73 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26				1	230	230.0	1	230	230.0
27	3	660	220.0	7	1600	228.6	11	2530	230.0
28	6	1535	255.8	9	2315	257.2	16	4120	257.5
29	7	1935	276.4	7	1945	277.9	14	3880	277.1
30	8	2325	290.6	5	1540	308.0	17	5160	303.5
31	9	3005	333.9	18	5950	330.6	30	10025	334.2
32	13	4735	364.2	25	8870	354.8	53	19660	370.9
33	20	8510	425.5	27	10740	397.8	57	23830	418.1
34	15	6655	443.7	49	22000	449.0	79	36160	457.7
35	25	12375	495.0	51	24630	482.9	97	48345	498.4
36	32	17585	549.5	46	24400	530.4	96	52880	550.8
37	34	20605	606.0	45	26095	579.9	86	51195	595.3
38	20	12705	635.3	19	11905	626.6	41	25940	632.7
39	17	12125	713.2	8	5600	700.0	28	19940	712.1
40	11	8225	747.7	3	2845	748.3	14	10470	747.9
41	4	3045	761.3	2	1585	792.5	6	4630	771.7
42	1	820	820.0	0	0	0	1	820	820.0
43	1	875	875.0	2	1890	945.0	3	2765	921.7
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/Average	226	117720	520.9	324	152540	473.9	650	322580	496.3

Table 25. NAFO 2H 2006-2007 TL July *Sebastes mentella*
 Female: weight 280-1040 g; average length 36.00 cm
 Male: weight 265-760 g; average length 34.63 cm
 Total: weight 265-1040 g; average length 35.15 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27									
28	1	305	305.0	1	280	280.0	2	585	292.5
29	1	315	315.0	2	575	287.5	3	890	296.7
30	1	280	280.0	1	335	335.0	2	615	307.5
31	2	785	392.5	10	3740	374.0	12	4525	377.1
32	5	1985	397.0	6	2535	422.5	11	4520	410.9
33	3	1395	465.0	18	7905	439.2	21	9300	442.9
34	8	3635	454.4	20	9915	495.8	28	13550	483.9
35	8	4275	534.4	19	10175	535.5	27	14450	535.2
36	9	5385	598.3	21	12245	583.1	30	17630	587.7
37	19	11715	616.6	15	9355	623.7	34	21070	619.7
38	6	3985	664.2	10	6335	633.5	16	10320	645.0
39	8	5370	671.3	0	0	0	8	5370	671.3
40	4	2760	690.0	1	715	715.0	5	3475	695.0
41	0	0	0				0	0	0
42	0	0	0				0	0	0
43	0	0	0				0	0	0
44	0	0	0				0	0	0
45	1	1040	1040.0				1	1040	1040.0
46									
47									
48									
49									
50									
51									
52									
Total/ Average	76	43230	568.8	124	64110	517.0	200	107340	536.7

Table 26.NAFO 2003 Total TL *Sebastes mentlla*
 Female: weight 210-1175 g; average length 35.77 cm
 Male: weight 215-865 g; average length 34.86 cm
 Total: weight 210-1175 g; average length 35.22 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26	1	245	245.0	1	230	230.0	2	475	237.5
27	3	660	220.0	8	1875	234.4	12*	2760	230.0
28	9	2260	251.1	9	2315	257.2	18	4575	254.2
29	13	3590	276.2	14	3820	272.9	27	7410	274.4
30	18	5320	295.6	20	5890	294.5	38	11210	295.0
31	21	6950	331.0	42	13835	329.4	63	20785	329.9
32	37	13240	357.8	57	20645	362.2	94	33885	360.5
33	44	17975	408.5	84	34585	411.7	128	52560	410.6
34	68	30465	448.0	159	71455	449.4	227	101920	449.0
35	71	34995	492.9	211	103945	492.6	282	138940	492.7
36	95	51435	541.4	188	100030	532.1	283	151465	532.2
37	113	66965	592.6	114	66440	582.8	227	133405	587.7
38	89	57040	640.9	61	38810	636.2	150	95850	639.0
39	54	36905	683.4	28	19030	679.6	82	55935	682.1
40	31	23200	748.4	6	4545	757.5	37	27745	749.9
41	12	9320	776.7	5	3930	786.0	17	13250	779.4
42	7	5665	809.3	2	1680	840.0	9	7345	816.1
43	2	1805	902.5	1	850	850.0	3	2655	885.0
44	0	0	0				0	0	0
45	1	1175	1175.0				1	1175	1175.0
46									
47									
48									
49									
50									
51									
52									
Total/Average	689	369210	535.9	1010	493910	489.0	1700*	863345	507.9

*+ 1 juvenile 27 cm/225 g

Table 27. NAFO 2004 Total TL *Sebastes mentlla*
 Female: weight 230-1195 g; average length 35.88 cm
 Male: weight 200-1040 g; average length 35.16 cm
 Total: weight 200-1195 g; average length 35.46 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26				1	200	200.0	1	200	200.0
27	1	230	230.0	3	690	230.0	4	920	230.0
28	5	1370	274.0	6	1495	249.2	11	2865	260.5
29	11	3030	275.5	9	2545	282.8	20	5575	278.8
30	17	5360	315.3	16	4930	308.1	33	10290	311.8
31	31	10650	343.5	33	11160	338.2	64	21810	340.8
32	41	15950	389.0	70	26150	373.6	111	42100	379.3
33	61	25710	421.5	93	38820	417.4	154	64530	419.0
34	82	37765	460.5	199	91630	460.5	281	129395	460.5
35	80	40745	509.3	250	125700	502.8	330	166445	504.4
36	156	88985	570.4	244	134740	552.2	400	223725	559.3
37	157	96170	612.5	146	88660	607.3	303	184830	610.0
38	125	82615	660.9	91	58830	646.5	216	141445	654.8
39	65	45710	703.2	35	24925	712.1	100	70635	706.4
40	35	26690	762.6	16	12110	756.9	51	38800	760.8
41	10	8080	808.0	4	3270	817.5	14	11350	810.7
42	0	0	0	2	1780	890.0	2	1780	890.0
43	3	2700	900.0	1	1040	1040.0	4	3740	935.0
44	0	0	0				0	0	0
45	1	1195	1195.0				1	1195	1195.0
46									
47									
48									
49									
50									
51									
52									
Total/ Average	881	492955	559.5	1219	628675	515.7	2100	1121630	534.1

Table 28.NAFO 2005 Total TL *Sebastes mentella*
 Female: weight 240-950 g; average length 36.53 cm
 Male: weight 255-835 g; average length 35.85 cm
 Total: weight 240-950 g; average length 36.17 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25									
26									
27									
28	4	1020	255.0	3	780	260.0	7	1800	257.1
29	7	1925	275.0	4	1115	278.8	11	3040	276.4
30	13	3935	302.7	11	3300	300.0	24	7235	301.5
31	28	9295	332.0	27	9040	334.8	55	18335	333.4
32	38	13980	367.9	26	9715	373.7	64	23695	370.2
33	59	24320	412.4	62	25230	406.9	121	49550	409.6
34	89	39955	448.9	152	69970	460.3	241	109925	456.1
35	127	63390	499.1	270	134875	499.5	397	198265	499.4
36	160	89065	556.7	300	163345	544.5	460	252410	548.7
37	235	140505	597.9	215	125605	584.2	450	266110	591.4
38	196	126530	645.6	120	76175	634.8	316	202705	641.5
39	137	94380	688.9	68	46705	686.8	205	141085	688.2
40	68	50600	744.1	33	24615	745.9	101	75215	744.7
41	22	17520	796.4	11	8605	782.3	33	26125	791.7
42	12	10430	869.2	1	835	835.0	13	11265	866.5
43	2	1870	935.0				2	1870	935.0
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	1197	688720	575.4	1303	699910	537.2	2500	1388630	555.5

Table 29. NAFO 2006 Total TL *Sebastes mentella*
 Female: weight 175-1040 g; average length 36.43 cm
 Male: weight 225-885 g; average length 35.74 cm
 Total: weight 175-1040 g; average length 36.02 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22									
23									
24									
25	1	175	175.0				1	175	175.0
26	0	0	0				0	0	0
27	0	0	0	2	450	225.0	2	450	225.0
28	5	1320	264.0	2	535	267.5	7	1855	265.0
29	11	3065	278.6	4	1135	283.8	15	4200	280.0
30	13	4045	311.2	11	3355	305.0	24	7400	308.3
31	14	4760	340.0	31	10350	333.9	45	15110	335.8
32	34	12395	364.6	39	14150	362.8	73	26545	363.6
33	38	15390	405.0	74	29755	402.1	112	45145	403.8
34	93	41460	445.8	129	58440	453.0	222	99900	450.0
35	80	39810	497.6	240	119520	498.0	320	159330	497.9
36	104	57075	548.8	291	159075	546.6	395	216150	547.2
37	155	91280	588.9	186	109520	588.8	341	200800	588.8
38	137	87455	638.4	122	77845	638.1	259	165300	638.2
39	96	65090	678.0	50	33985	679.7	146	99075	678.6
40	67	48445	723.1	33	24025	728.0	100	72470	724.7
41	21	16580	789.5	11	8685	789.5	32	25265	789.5
42	4	3355	838.8	1	875	875.0	5	4230	846.0
43	0	0	0				0	0	0
44	0	0	0				0	0	0
45	1	1040	1040.0				1	1040	1040.0
46									
47									
48									
49									
50									
51									
52									
Total/Average	874	492740	563.8	1226	651700	531.6	2100	1144440	545.0

Table 30. NAFO 2007 Total TL *Sebastes mentella*
 Female: weight 165-895 g; average length 34.54 cm
 Male: weight 125-880 g; average length 33.88 cm
 Total: weight 125-895 g; average length 34.15 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20				1	125	125.0	1	125	125.0
21				0	0	0	0	0	0
22				1	140	140.0	1	140	140.0
23	1	185	185.0	0	0	0	1	185	185.0
24	1	165	165.0	0	0	0	1	165	165.0
25	3	675	225.0	0	0	0	3	675	225.0
26	4	915	228.8	0	0	0	4	915	228.8
27	0	0	0	1	305	305.0	1	305	305.0
28	10	2905	290.5	4	1180	295.0	14	4085	291.8
29	18	5765	320.3	25	7940	317.6	43	13705	318.7
30	35	12590	359.7	53	18940	357.4	88	31530	358.3
31	55	21235	386.1	105	41225	392.6	160	62460	390.4
32	82	35000	426.8	154	67290	436.9	236	102290	433.4
33	97	45290	466.9	275	132235	480.8	372	177525	477.2
34	184	94665	514.5	405	211530	522.3	589	306195	519.9
35	182	103085	566.4	300	170220	567.4	482	273305	567.0
36	202	125965	623.6	186	115185	619.3	388	241150	621.5
37	129	86170	668.0	74	50115	677.2	203	136285	671.4
38	63	45705	725.5	26	19325	743.3	89	65030	730.7
39	14	10730	766.4	1	820	820.0	15	11550	770.0
40	5	4245	849.0	3	2525	841.7	8	6770	846.3
41	1	825	825.0				1	825	825.0
42									
43									
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/ Average	1086	596115	548.9	1614	839100	519.9	2700	1435215	531.6

Table 31.NAFO 2008 Total TL *Sebastes mentella*
 Female: weight 165-900 g; average length 34.13 cm
 Male: weight 160-965 g; average length 33.95 cm
 Total: weight 160-965 g; average length 34.02 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight, g
20									
21									
22	1	165	165.0				1	165	165.0
23	0	0	0	1	160	160.0	1	160	160.0
24	0	0	0	0	0	0	0	0	0
25	1	195	195.0	1	230	230.0	2	425	212.5
26	8	1855	231.9	4	840	210.0	12	2695	224.6
27	9	2455	272.8	6	1560	260.0	15	4015	267.7
28	11	3020	274.5	5	1495	299.0	16	4515	282.2
29	19	6045	318.2	23	7420	322.6	42	13465	320.6
30	33	11650	353.0	39	23795	353.7	72	25445	353.4
31	71	27255	383.9	87	33540	385.5	158	60795	384.8
32	93	39310	422.7	181	77840	430.1	274	117150	427.6
33	112	51880	463.2	292	139110	476.4	404	190990	472.7
34	130	66730	513.3	360	188475	523.5	490	255205	520.8
35	155	88305	569.7	327	185910	568.5	482	274215	568.9
36	148	91850	620.6	195	119325	611.9	343	211175	615.7
37	102	69285	679.3	83	55565	669.5	185	124850	674.9
38	44	32825	746.0	30	22025	734.2	74	54850	741.2
39	13	10085	775.8	8	6320	790.0	21	16405	781.2
40	4	3155	788.8	1	780	780.0	5	3935	787.0
41	0	0	0	2	1805	902.5	2	1805	902.5
42	0	0	0				0	0	0
43	1	900	900.0				1	900	900.0
44									
45									
46									
47									
48									
49									
50									
51									
52									
Total/Average	955	506965	530.9	1645	856195	520.5	2600	1363160	524.3

Table 32. NEAFC IIA 2006-2008 September TL *Sebastes mentella*
 Female: weight 255-1065 g; average length 36.32 cm
 Male: weight 315-990 g; average length 35.48 cm
 Total: weight 255-1065 g; average length 35.78 cm

Length, cm (TL)	Female			Male			Total		
	Total number	Total weight, g	Average weight, g	Total number	Total weight, g	Average weight g	Total number	Total weight, g	Average weight,g
20									
21									
22									
23									
24									
25									
26									
27	1	255	255.0				1	255	255.0
28	0	0	0				0	0	0
29	1	330	330.0				1	330	330.0
30	1	325	325.0	3	1060	353.3	4	1385	346.3
31	8	3055	381.9	27	9960	368.9	35	13015	371.9
32	36	14980	416.1	138	56915	412.4	174	71895	413.2
33	94	41775	444.4	323	143535	447.4	417	185310	444.4
34	221	109105	493.7	524	251200	479.4	745	360305	483.6
35	277	147050	530.9	565	296425	524.6	842	443475	526.7
36	328	189700	578.4	528	301505	571.0	856	491205	573.8
37	263	165195	628.1	413	254370	615.9	676	419565	620.7
38	207	138500	669.1	251	165540	659.5	458	304040	663.8
39	120	85765	714.7	111	78025	702.9	231	163790	709.0
40	81	63230	780.6	48	36085	751.8	129	99315	769.9
41	29	23620	802.1	16	12375	773.4	45	35635	791.9
42	17	14980	881.2	9	7325	813.9	26	22305	857.9
43	7	6550	935.7	2	1945	972.5	9	8495	943.9
44	0	0	0				0	0	0
45	1	1065	1065.0				1	1065	1065.0
46									
47									
48									
49									
50									
51									
52									
Total/ Average	1692	1005120	594.0	2958	1616265	546.4	4650	2621385	563.7

Table 33. Seasonal variability of size and weight of beaked redfish in different regions of Northeast Atlantic

Division	Month	Female			Male		
		Average length, cm	Bulk	Average weight, g	Average length, cm	Bulk	Average weight, g
XIVB	March	41.71	43-45	922.3	40.66	41-43	814.1
XIVB	April	40.29	43-44	832.4	39.80	41-42	781.6
XIVB	May	39.54	42-43	776.5	39.25	40-42	758.2
XIVB	June	39.13	38-43	748.7	39.31	40-42	760.9
XIVB	July	37.62	36-40	690.6	38.34	39-42	734.7
XIVB	August	37.74	37-39	701.2	38.14	36-39	712.4
XII	September	36.31	36-38	571.5	35.63	34-36	522.0
IIA	September	36.32	35-37	594.0	35.48	34-36	546.4

Table 34. Inter annual variability of size and weight of beaked redfish in different regions of Northeast Atlantic

Division	Year	Female			Male		
		Average length, cm	Bulk	Average weight, g	Average length, cm	Bulk	Average weight, g
XIVB-XII	2003	40.80	43-45	831.4	40.05	41-43	769.4
XIVB	2004	40.63	42-45	815.8	40.17	40-43	777.9
XIVB	2005	41.49	42-45	835.1	40.89	41-43	797.7
XIVB	2006	41.27	43-45	832.3	40.69	40-44	787.3
XIVB	2007	37.79	36-42	727.4	37.81	36-42	722.3
XIVB	2008	37.74	36-40	700.3	38.34	36-42	742.3
IIA	2006	37.48	35-39	576.4	36.73	32-43	546.2
IIA	2007	35.79	34-37	572.5	34.91	33-36	522.1
IIA	2008	36.47	35-37	619.2	35.58	34-36	560.6

Table 35. Seasonal variability of size and weight of beaked redfish in different regions of Northwest Atlantic

Division	Month	Female			Male		
		Average length, cm	Bulk	Average weight, g	Average length, cm	Bulk	Average weight, g
1F	June	36.17	36-37	561.2	35.75	36-38	547.1
1F	July	35.22	34-37	542.1	34.68	34-36	518.5
1F	August	35.71	35-37	565.5	34.82	34-36	526.1
1F	September	36.74	36-38	606.2	35.71	35-37	553.1
2J	July	35.70	36-38	548.6	34.84	34-36	518.5
2J	August	35.74	35-38	565.3	34.93	34-36	520.1
2J	September	35.24	36-37	520.9	34.50	34-37	496.3
2H	July	36.00	36-37	568.8	34.63	33-36	536.7

Table 36. Inter annual variability of size and weight of beaked redfish in different regions of Northwest Atlantic

Division	Year	Female			Male		
		Average length, cm	Bulk	Average weight, g	Average length, cm	Bulk	Average weight, g
1F,2J	2003	35.77	36-38	535.9	34.86	34-36	489.0
1F,2J	2004	35.88	36-38	559.5	35.16	34-36	515.7
1F,2J	2005	36.53	36-38	575.4	35.85	35-37	537.2
1F,2J,2H	2006	36.43	36-38	563.8	35.74	35-37	531.6
1F,2J,2H	2007	34.54	34-36	548.9	33.88	33-35	519.9
1F	2008	34.13	34-36	530.9	33.95	33-35	520.5

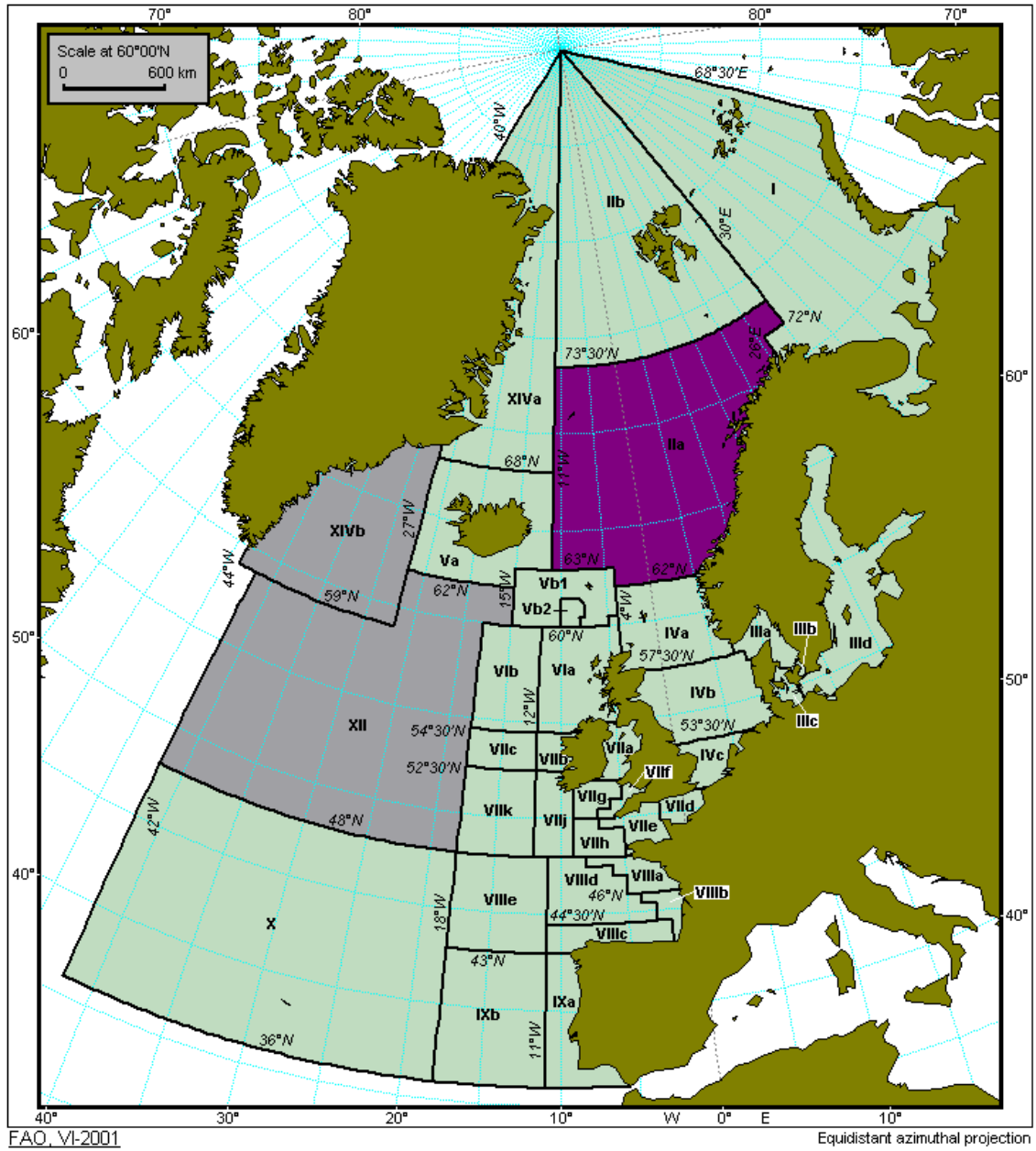


Fig 1. Divisions of redfish fishery in NEAFC region

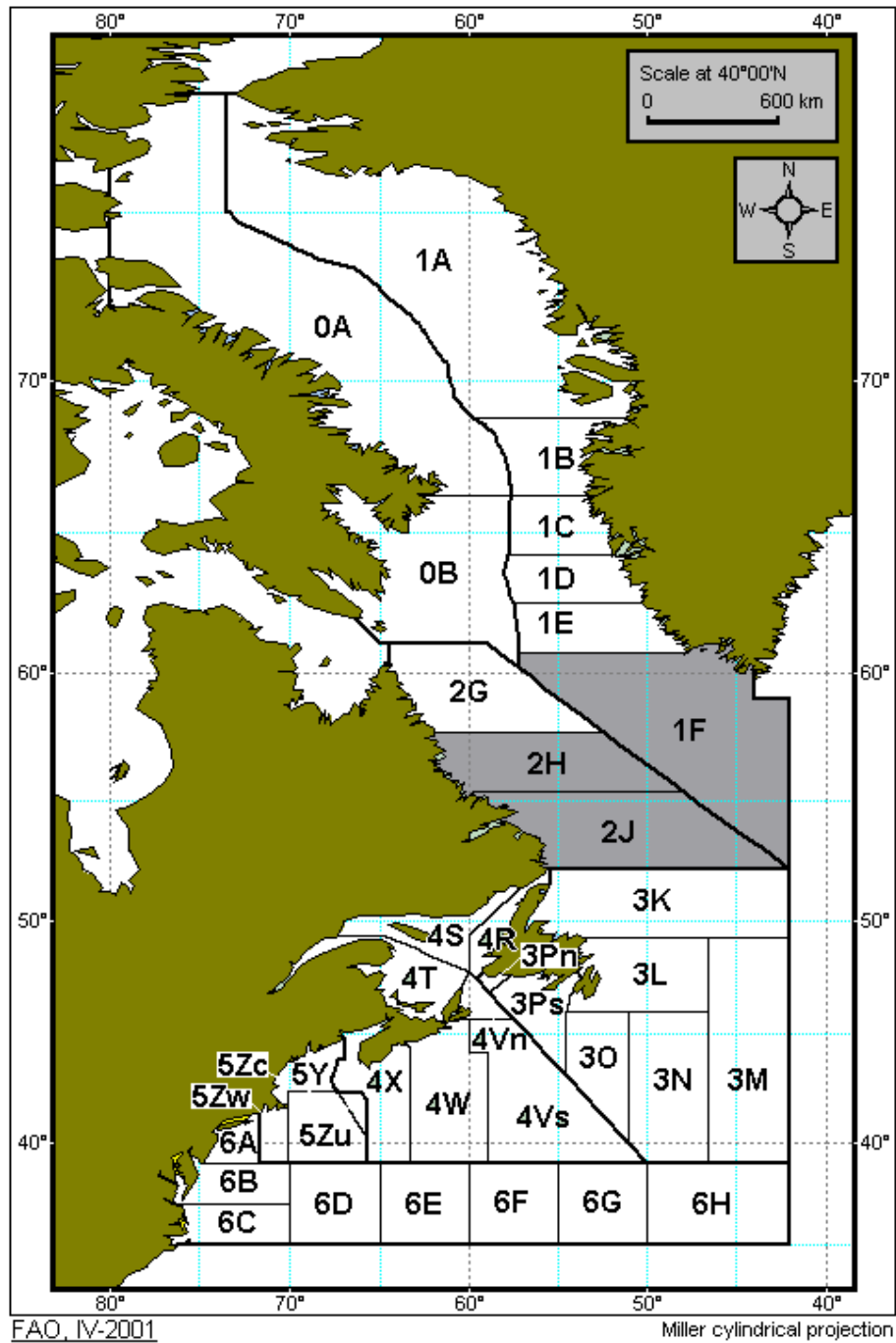


Fig 2. Divisions of redfish fishery in NAFO region

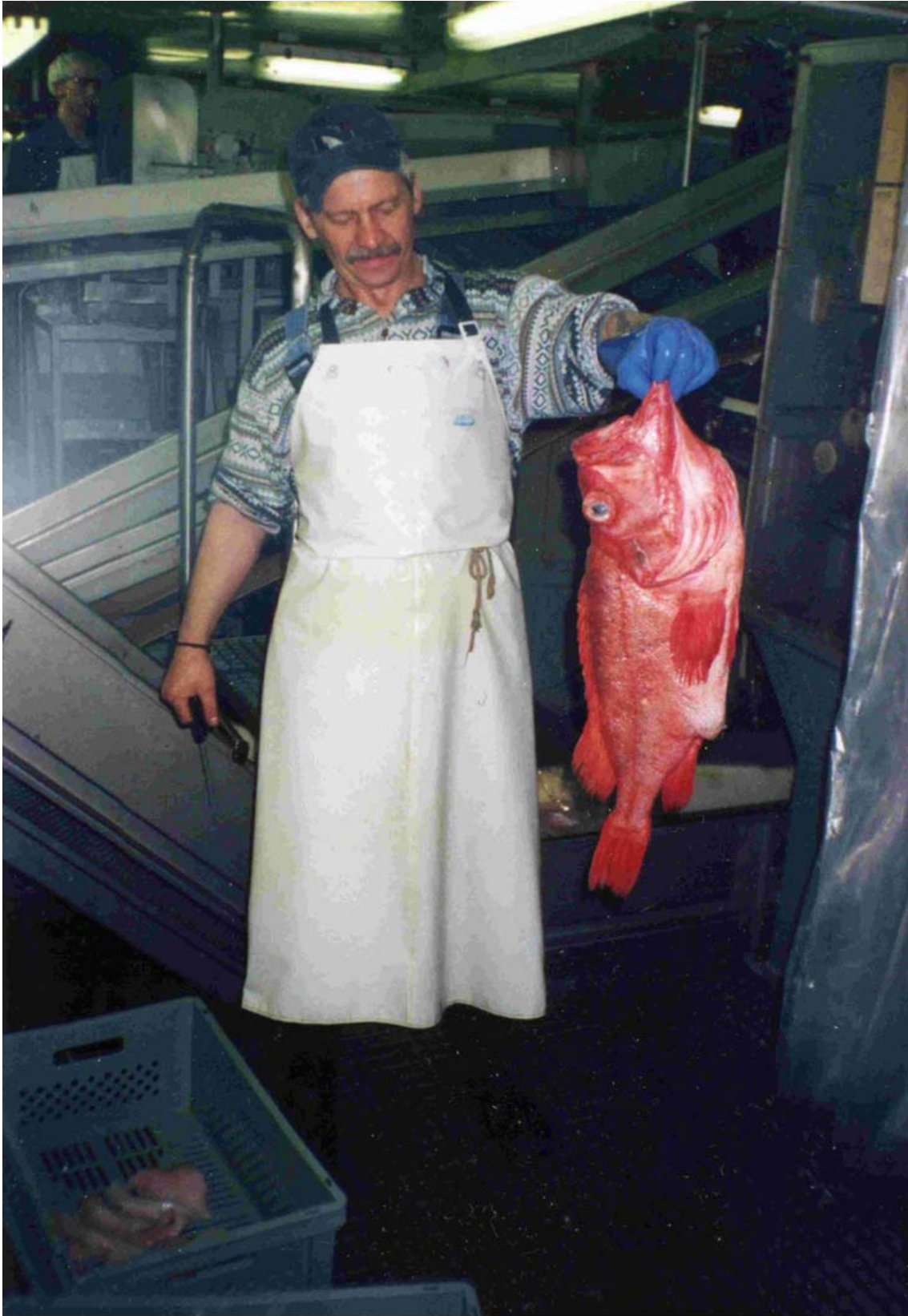


Fig. 3 Big Redfish