

Knowledge Base and Catalogue of Salmons Abundance in the Okhotsk Sea

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Abstract

In order to improve informational provision of the Okhotsk Sea nekton resource investigations database of a lot of trawl stations, performed in this region from 80th to the present time, was developed. On its basis informational product of higher level was prepared. It can be named as knowledge bases of hydrobionts resources, as this base contains not raw primary data, but the results of their statistical and cartographic treatment. The calculations are made on the data of 45 scientific-research cruises in the Okhotsk Sea within the period from September 16, 1984 to January 19, 2003 (5761 trawl stations). The abundance and biomass information is summarized for 14 biostatistical regions, for different seasons and vertical zones of the sea, and grouped into three periods (1984-1990, 1991-1995 and 1996-2003), which differ in climate-oceanological conditions and status of biological resources. A catalogue of tables entitled "Abundance, biomass and species ratio of nekton of Okhotsk Sea" will soon be published in Russian language. 336 tables of unabridged edition of it contain information on 360 species and groups of nekton, inhabiting in the sea pelagial.

This document is prepared with use of the same base and same methods, but it contains only the data on pink, chum, cockeye, chinook, coho and cherry salmons (190 tables). That is why it can be considered as a "Tabular Catalogue of Salmon Abundance in the Okhotsk Sea". Materials of the included tables enable to estimate not only density of the population, but also total stock of any salmon species in this sea.

In order to improve informational provision of bioresource investigations in the Far-Eastern seas of Russia, a database of trawl stations, performed in this region from 1980 to the present time, was developed in the Laboratory of the Applied Biocenology, TINRO-Center (Dulepova, Volvenko, 2002; Volvenko, 2003a). Later on it is planned to prepare informational products of higher level on its basis. They can be named as knowledge bases of hydrobionts resources, as these bases will contain not raw primary data, but the results of their statistical and cartographic treatment. This work has been conducted in two directions: 1) description of peculiarities of animal spatial-temporal distribution; 2) estimation of species composition, occurrence, population density and total stock of biological resources.

At present the first block of this project, describing nekton of the Okhotsk Sea, is ready. In accordance with the first direction a GIS, containing more than 5000 electronic charts of nekton distribution in the Okhotsk Sea (Volvenko, 2003b), is prepared, and the "Atlas of quantitative distribution of nekton species in the Okhotsk Sea" (2003) is in press. In accordance with the second direction a knowledge base with statistical tables of different parameters of all nekton species abundance was created. A catalogue of tables entitled "Abundance, biomass and species ratio of nekton of Okhotsk Sea" (2003) will soon be published.

Materials and methods, used for creation of the Tables, are almost identical to those, used for creation of GIS and the Atlas (see Volvenko, 2003b). At the same time, these informational products describe nekton resources of the Okhotsk Sea in different ways. The Atlas shows peculiarities of spatial distribution of commercial and the most abundant species throughout the sea area. The tables contain detailed information on composition and abundance of the all nekton. Information like that cannot be integrated by 1x1 degree quadrangles, used for Atlas preparation, firstly, because of the limited capacity of the book – it will not hold tens of thousands of tables, and, secondly, because of the lack of initial data – small samples sizes in many quadrangles would have made estimation of most species abundance statistically unreliable. That is why information in the tables is integrated by the following 14 regions (Fig. 1):

- | | |
|-----------------------------|--------------------------------|
| 1 – Shelikhov Bay, | 8 – southwestern Kamchatka, |
| 2 – Yamsko-Taujsky, | 9 – central depression, |
| 3 – Okhotsko-Lisiansky, | 10 – eastern Sakhalin shelf, |
| 4 – Ajano-Shantarsky, | 11 – Terpenija and Aniva Bays, |
| 5 – Iono-Kashevarovsky, | 12 – southern depression, |
| 6 – TINRO depression, | 13 – middle northern Kurils, |
| 7 – northwestern Kamchatka, | 14 – south Kurils. |

This zoning of the Sea of Okhotsk (the scheme was published for the first time: Shuntov, 1986; Shuntov et al., 1986) was performed taking into account general scheme of the surface water circulation, bottom relief and location of water mass modifications, identified by temperature-salinity characteristics. Borders of these regions are marked on every chart of the Atlas. Their morphometric characteristics are described in detail in a special work (Volvenko, 2003c).

Another feature of the tables is more careful, in comparison with Atlas, selection of initial data. The data of 68 scientific-research and fishery-research cruises in the Okhotsk Sea within the period from 1980 to 2003, during which at least one valuable pelagic trawling was made, were used when creating the maps. The following trawlings were not considered as valuable: 1) emergency, 2) technical or adjustment, 3) purely fishery, 4) lasting for more than 3.5 hours or not more than 10 minutes (if in the latter case the trawl was taken out without a catch), and 5) conducted in epipelagic water layers (the depth of headrope towing is down to 200 m) with a speed not less than 3 knots. After quality control the number of sampling was equal to 6151 trawl stations. In order to make the tables, we had to exclude additionally fishery-research trawlings and aiming trawlings by echo records. The matter is that the majority of them contain reliable information only on the most abundant commercial objects, which substantially distorts the real ratio of species abundance. So, sampling amount reduced to 5761 stations (Fig. 2), conducted during 45 trips, and the considered period of time reduced by 4 years (Table 1).

Number and biomass of every species or group of animals per caught area unit – a square

kilometer – (in ind./km² and kg/ km²) for every trawl station were calculated by formula, described in detail and justified by Volvenko (2003b), and then summarized by the 14 above-mentioned regions. Besides, in order to reveal peculiarities of spatial-temporal distribution of hydrobionts, three more classification and basic data selection principles were introduced:

A) According to the trawled water layers they are subdivided into:

- 1) epipelagic - the depth of headrope towing down to 200 m,
- 2) upper epipelagic - the depth of headrope towing down to 25 m,
- 3) mesopelagic - the depth of headrope towing down not less than 200 m.

B) According to seasons¹ they are subdivided into:

- 1) summer - sampled from June 1 to September 15,
- 2) autumn - sampled from September 16 to November 31,
- 3) winter - sampled from December 1 to March 31,
- 4) spring - sampled from April 1 to May 31.

C) According to years they are subdivided into three long-term periods:

- 1) the eighties - 1980-1990,
- 2) the first half of the nineties - 1991-1995,
- 3) from the second half of the nineties to the present - 1996-2003.

In accordance with this classification 336 tables were obtained. Those of them, calculated on the basis of data of less than 10 trawling stations, are not published. Sampling sizes for the rest 254 tables are given in their titles.

The materials of these tables enable to estimate total stock of any nekton bioresource in the Okhotsk Sea. Using the area method, applied in this work, values of absolute hydrobionts abundance can be calculated approximately² by multiplication of mean density (ind./km² and kg/ km²) by a region area (thousand km²). The result is obtained in thousands individuals and in tons, respectively. For this it is necessary to use Table 2. It gives areas of the regions, calculated (Volvenko, 2003c) using ArcView GIS 3.2 in four equal-area cartographic projections: Albers conic, Lambert cylindrical, Lambert azimuthal and Sanson-Flamsteed sinusoidal (see, for example, Map projections..., 1994). Peculiarities of these projections poorly affect the result of these calculations, that is why Table 3 gives only average values of four calculation variants.

336 tables of unabridged edition of the tabular guide "Abundance, biomass and species ratio of nekton of the Okhotsk Sea" (2003) contain information on 360 species and groups of nekton, inhabiting in the sea pelagial. This document contains only the data on pink, chum, cockeye, chinook, coho and cherry salmons. That is why it can be considered as a "Tabular Catalogue of Salmon Abundance in the Okhotsk Sea".

In the conclusion I shall notice, that the numerous opponents of catchability coefficient application easily can recount the given here data on their own manners, as in third columns of each line of the tables 3-192 the meaning of coefficient is given. For this purpose there is enough multiplication on it any of density parameters - number or biomass. Others, who basically does not deny necessity of catchability coefficient introduction, but disagree with the accepted here meanings of it, also easily can recount density, multiplying it on our coefficient, and then having divided on their own.

¹ In this case not calendar but biological seasons of the Okhotsk Sea are meant (see Shuntov, 2001).

² About limitations of the area method see Volvenko (2000).

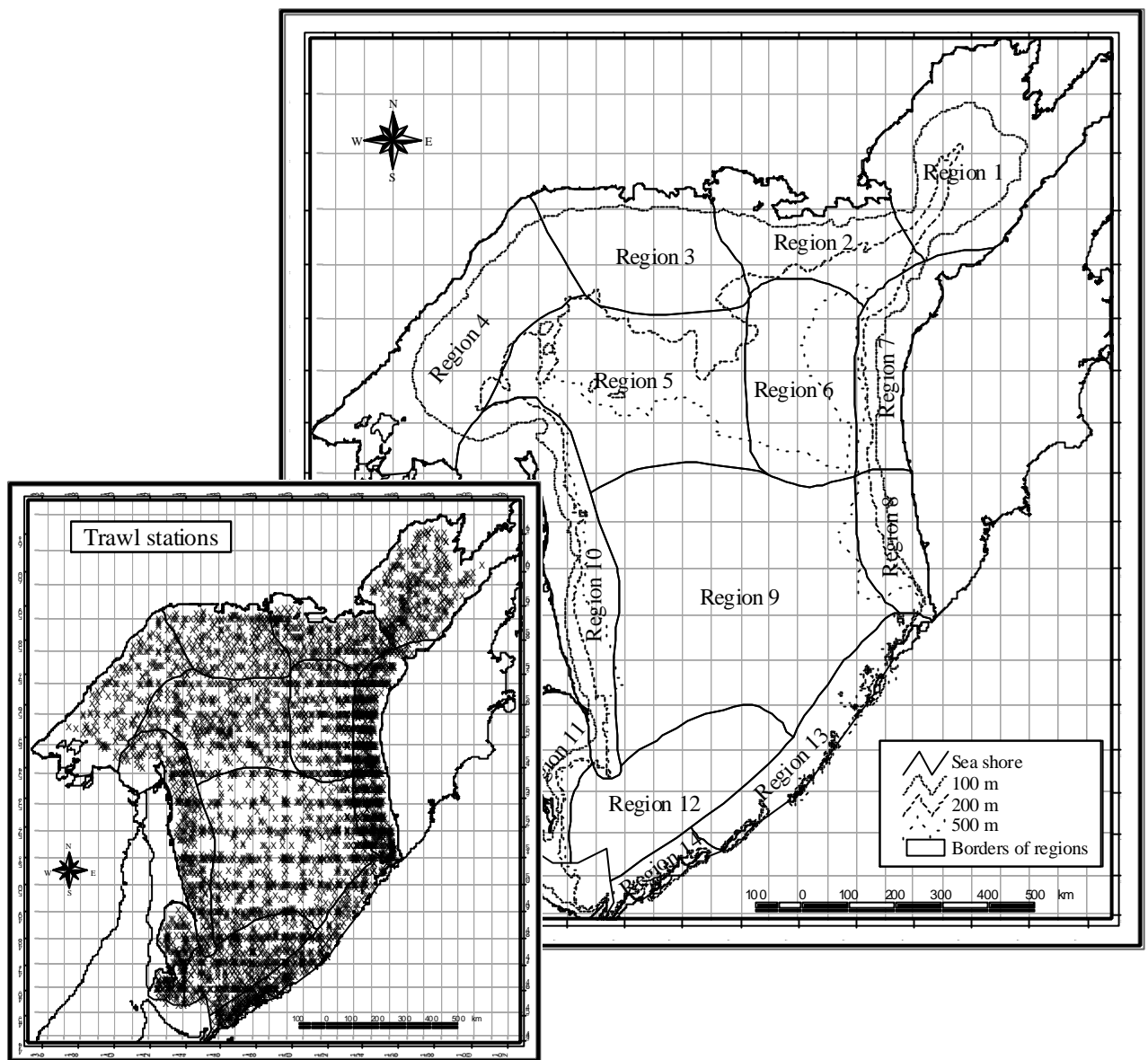


Fig. 1. Standard regions of averaging biostatistical information in the Okhotsk Sea and spatial distribution of 5761 trawl stations made in 45 research cruises during 16-apr-84 – 19-jan-03

Table 1

A list of selected cruises, with indication of a sampling size, conducted in the Sea of Okhotsk from 1984 till 2003

Date		Trawler	Number of stations
starting	ending		
16-sep-84	26-oct-84	RTMS "Novoulyanovsk"	76
30-sep-84	16-nov-84	RTMS "Novokotovsk"	98
17-sep-85	10-dec-85	RTMS "Gissar"	247
08-jul-86	17-sep-86	RTMS "Novokotovsk"	213
14-apr-87	14-jul-87	RTMS "Novoulyanovsk"	3
10-jun-87	30-oct-87	RTMS "Novodrutsk"	292
12-jun-88	19-aug-88	RTMS "Mlechny Put"	202
03-aug-89	30-aug-89	RTMS "Gissar"	88
10-aug-89	02-sep-89	STM "Prof. Soldatov"	37
01-mar-90	06-apr-90	RTMS "Mlechny Put"	109
20-nov-90	24-jan-91	RTMS "Novokotovsk"	162
11-jul-91	14-aug-91	STM "Prof. Levanidov"	38
13-jul-91	13-aug-91	STM "Prof. Kaganovsky"	76
21-oct-91	03-dec-91	RTMS "Darvin"	107
03-jan-92	12-mar-92	STM "TINRO"	193
14-jul-92	03-aug-92	RTMS "Novoulyanovsk"	79
14-jul-92	14-aug-92	STM "Prof. Kaganovsky"	94
08-aug-92	10-aug-92	STM "Prof. Levanidov"	3
02-jul-93	14-aug-93	STM "Prof. Soldatov"	93
15-jul-93	03-aug-93	STM "Prof. Kizevetter"	23
21-jul-93	17-aug-93	STM "TINRO"	47
18-nov-93	17-dec-93	STM "Prof. Kaganovsky"	105
08-jul-94	12-aug-94	STM "Prof. Levanidov"	84
06-aug-94	13-oct-94	STM "TINRO"	156
27-nov-94	27-jan-95	STM "Prof. Levanidov"	62
21-jun-95	16-aug-95	STM "TINRO"	137
10-jul-95	29-aug-95	STM "Prof. Kaganovsky"	81
19-jul-95	04-sep-95	STM "Prof. Levanidov"	54
19-nov-95	28-dec-95	STM "Prof. Levanidov"	97
28-jul-96	15-sep-96	STM "Prof. Levanidov"	76
31-jul-96	23-aug-96	STM "Prof. Kizevetter"	53
10-jul-97	31-aug-97	STM "Prof. Levanidov"	179
08-feb-98	13-jun-98	STM "TINRO"	338
26-aug-98	01-nov-98	STM "TINRO"	190
18-mar-99	12-jun-99	STM "TINRO"	226
13-aug-99	27-oct-99	STM "Prof. Kaganovsky"	157
03-mar-00	13-jun-00	STM "TINRO"	287
17-aug-00	31-aug-00	STM "TINRO"	32
03-sep-00	11-nov-00	STM "Prof. Kaganovsky"	174
08-apr-01	30-jun-01	STM "TINRO"	273
17-aug-01	09-nov-01	STM "TINRO"	212
14-mar-02	09-jun-02	STM "Prof. Kaganovsky"	282
11-aug-02	23-aug-02	STM "Prof. Levanidov"	39
18-oct-02	31-oct-02	STM "TINRO"	24
13-nov-02	19-jan-03	STM "Prof. Kaganovsky"	163

Table 2

Water surface area (thousand km²) in standard biostatistical regions of the Okhotsk Sea (see Fig. 1)

Region No	Epipelagic and upper epipelagic water layers (area of the entire region)	Mesopelagic water layers (water surface area above the depths = 200 m)
1	122,61	5,23
2	65,04	18,42
3	83,63	3,54
4	119,98	2,10
5	160,00	134,85
6	98,97	98,24
7	54,10	11,95
8	45,16	20,24
9	352,26	352,26
10	131,31	49,47
11	55,79	9,20
12	133,08	133,08
13	75,90	75,90
14	22,60	22,60

Table 3

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 1 (number of trawl stations 359)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	24	6,69%	6,853	132,967	2,016 ±0,601	14,533	349,537	6,545 ±1,903
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	1,67%	7,541	50,365	0,272 ±0,153	45,258	225,383	1,615 ±0,772
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	1,95%	5,656	2676,659	11,136 ±7,984	0,481	187,002	0,767 ±0,564
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	1,67%	6,920	74,794	0,473 ±0,272	7,647	112,689	0,658 ±0,390
<i>Oncorhynchus keta</i>	= 30 cm	0,40	10	2,79%	6,289	804,336	4,619 ±2,535	0,739	44,583	0,280 ±0,145
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,28%	7,546	7,546	0,021 ±0,021	37,278	37,278	0,104 ±0,104

Table 4

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 2 (number of trawl stations 270)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	25	9,26%	3,125	312,353	5,226 ±1,773	7,500	834,594	14,871 ±4,908
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	4,07%	6,790	178,223	1,157 ±0,689	7,449	276,246	1,599 ±1,045
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	0,37%	8,962	8,962	0,033 ±0,033	78,644	78,644	0,291 ±0,292
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	0,74%	12,166	21,065	0,123 ±0,090	2,360	2,675	0,019 ±0,013
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	1,11%	12,166	13,443	0,143 ±0,083	0,700	2,017	0,014 ±0,009
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	0,37%	12,166	12,166	0,045 ±0,045	0,827	0,827	0,003 ±0,003

Table 5

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 3 (number of trawl stations 248)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	30	12,10%	8,390	488,323	7,812 ±2,450	17,401	1706,457	26,626 ±8,504
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	1,21%	5,983	16,184	0,123 ±0,077	30,511	110,050	0,801 ±0,516
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	0,81%	38,738	1170,890	4,878 ±4,733	2,169	186,757	0,762 ±0,755
<i>Oncorhynchus keta</i>	= 30 cm	0,40	2	0,81%	33,609	169,129	0,817 ±0,696	3,354	23,496	0,108 ±0,096
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	1,21%	6,722	13,010	0,130 ±0,078	0,739	4,142	0,035 ±0,023
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	0,40%	17,324	17,324	0,070 ±0,070	0,953	0,953	0,004 ±0,004

Table 6

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 4 (number of trawl stations 197)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	7,61%	9,358	117,873	3,086 ±0,987	39,880	524,537	11,344 ±3,788
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	2,54%	8,889	73,394	0,935 ±0,520	13,049	97,859	1,282 ±0,701

<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	1,02%	7,488	14,502	0,112 ±0,083	80,866	88,461	0,860 ±0,608
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,51%	28,979	28,979	0,147 ±0,147	110,120	110,120	0,559 ±0,560
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	0,51%	5,394	5,394	0,027 ±0,027	0,162	0,162	0,001 ±0,001

Table 7

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 5 (number of trawl stations 339)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	31	9,15%	6,611	399,323	4,789 ±1,650	5,516	1227,110	12,673 ±4,704
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	24	7,08%	5,952	3183,458	34,941 ±14,234	0,653	432,685	4,795 ±2,035
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	10	2,95%	3,145	61,325	0,513 ±0,223	21,388	238,556	2,139 ±0,887
<i>Oncorhynchus keta</i>	= 30 cm	0,40	26	7,67%	5,479	1392,763	13,913 ±5,206	0,170	245,723	2,021 ±0,865
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	3,25%	6,611	48,278	0,662 ±0,231	7,602	59,945	0,889 ±0,312
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	5	1,48%	7,615	34,064	0,200 ±0,112	3,609	31,637	0,224 ±0,122
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	0,59%	7,770	39,242	0,139 ±0,118	5,983	19,032	0,074 ±0,059
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	0,59%	5,988	6,722	0,037 ±0,027	1,344	1,377	0,008 ±0,006

Table 8

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 6 (number of trawl stations 298)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	52	17,45%	7,399	961,056	10,063 ±3,546	5,946	3459,801	23,624 ±11,897
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	38	12,75%	7,288	243,831	4,890 ±1,285	6,489	306,531	6,588 ±1,662
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	9	3,02%	6,083	4788,685	25,956 ±17,287	0,517	597,678	2,814 ±2,065
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	15	5,03%	7,607	81,108	1,023 ±0,398	7,032	103,994	1,535 ±0,495
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	13	4,36%	7,288	16,516	0,378 ±0,107	5,578	49,847	1,147 ±0,343
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	14	4,70%	6,083	432,092	4,948 ±1,969	1,594	65,315	0,928 ±0,355
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	2,35%	6,083	793,335	6,587 ±3,531	0,493	89,370	0,825 ±0,427
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	1,34%	7,441	8,782	0,112 ±0,056	4,667	15,477	0,124 ±0,069
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	1,01%	5,996	23,981	0,166 ±0,105	0,480	3,118	0,022 ±0,014
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	1,01%	6,204	19,201	0,107 ±0,071	0,441	2,240	0,011 ±0,008
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	0,34%	29,574	29,574	0,099 ±0,099	2,987	2,987	0,010 ±0,010

Table 9

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 7 (number of trawl stations 470)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	74	15,75%	6,964	2572,196	22,327 ±6,490	10,447	7328,188	62,247 ±18,090
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	9,79%	3,945	1994,829	17,818 ±5,968	4,091	2491,596	24,955 ±8,269
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	26	5,53%	3,945	65,757	1,132 ±0,274	11,913	426,976	5,377 ±1,451

<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	18	3,83%	5,749	82,836	1,125 ±0,353	2,070	260,744	2,406 ±0,808
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	2,77%	6,531	4660,437	20,214 ±11,593	0,888	336,942	1,490 ±0,867
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	30	6,38%	6,013	1473,774	10,240 ±4,061	0,259	106,691	1,384 ±0,432
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	31	6,60%	4,729	1001,162	6,267 ±2,648	0,232	292,429	1,010 ±0,634
<i>Oncorhynchus keta</i>	= 30 cm	0,40	26	5,53%	5,128	845,644	6,948 ±2,526	0,294	155,598	0,857 ±0,419
<i>Oncorhynchus masu</i>	= 30 cm	0,40	15	3,19%	5,821	2029,110	4,778 ±4,327	0,433	231,746	0,576 ±0,496
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	0,43%	8,760	531,797	1,150 ±1,133	4,030	233,503	0,505 ±0,497
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,21%	1988,496	1988,496	4,231 ±4,235	175,889	175,889	0,374 ±0,375
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	9	1,92%	15,144	167,470	1,031 ±0,453	2,347	20,327	0,118 ±0,051
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	0,64%	7,762	8,708	0,052 ±0,030	7,296	28,302	0,102 ±0,068

Table 10

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 8 (number of trawl stations 388)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	77	19,85%	7,572	24980,370	208,445 ±76,492	7,572	30718,995	273,295 ±96,739
<i>Oncorhynchus keta</i>	> 30 cm	0,30	82	21,13%	6,720	379,806	9,274 ±1,659	2,957	983,697	22,173 ±4,119
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	38	9,79%	6,834	178,954	3,627 ±0,801	4,701	268,272	7,172 ±1,572
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	43	11,08%	5,899	7158,296	41,712 ±20,339	0,360	465,624	5,702 ±2,075
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	23	5,93%	7,399	201,607	1,348 ±0,557	4,478	269,338	3,745 ±1,060
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	28	7,22%	5,647	2402,277	20,359 ±8,136	0,740	301,148	3,489 ±1,209
<i>Oncorhynchus keta</i>	= 30 cm	0,40	15	3,87%	9,018	11038,494	33,316 ±28,538	1,058	639,724	2,203 ±1,664
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	22	5,67%	7,185	42,590	0,855 ±0,217	5,356	132,624	1,691 ±0,499
<i>Oncorhynchus masu</i>	> 30 cm	0,30	5	1,29%	25,024	1495,601	4,255 ±3,864	9,509	553,298	1,604 ±1,431
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	14	3,61%	5,785	1641,042	10,121 ±5,821	0,513	219,900	1,233 ±0,684
<i>Oncorhynchus masu</i>	= 30 cm	0,40	9	2,32%	5,621	160,560	1,279 ±0,625	0,601	31,065	0,222 ±0,111
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	1,29%	19,006	103,151	0,627 ±0,334	2,803	11,596	0,082 ±0,041
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	0,26%	8,450	8,450	0,022 ±0,022	8,957	8,957	0,023 ±0,023
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	2	0,52%	30,084	220,709	0,646 ±0,575	1,354	3,289	0,012 ±0,009

Table 11

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 9 (number of trawl stations 513)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	163	31,77%	3,070	3870,838	106,726 ±16,912	2,149	4294,551	132,077 ±20,164
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	169	32,94%	5,092	61764,316	805,180 ±158,553	0,062	8831,744	123,646 ±23,563
<i>Oncorhynchus keta</i>	= 30 cm	0,40	176	34,31%	5,278	19652,509	402,320 ±64,400	0,189	2448,214	56,533 ±9,087
<i>Oncorhynchus keta</i>	> 30 cm	0,30	182	35,48%	5,354	504,106	15,147 ±1,827	2,646	1679,344	38,300 ±5,041
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	42	8,19%	3,193	52,570	0,954 ±0,181	4,476	451,047	4,116 ±1,057
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	43	8,38%	6,279	938,523	3,619 ±1,919	2,911	460,333	3,320 ±1,039

<i>Oncorhynchus masu</i>	> 30 cm	0,30	49	9,55%	6,845	141,486	2,355 ±0,454	2,802	47,822	1,138 ±0,201
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	20	3,90%	5,108	691,688	4,260 ±1,611	1,092	127,386	0,688 ±0,285
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	12	2,34%	7,278	15,344	0,221 ±0,066	4,315	44,115	0,414 ±0,137
<i>Oncorhynchus masu</i>	= 30 cm	0,40	36	7,02%	5,250	39,187	0,890 ±0,171	0,297	8,837	0,203 ±0,041
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	12	2,34%	6,355	184,793	0,701 ±0,377	0,583	21,602	0,135 ±0,054
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	5	0,98%	5,588	12,112	0,084 ±0,039	1,632	3,028	0,020 ±0,009

Table 12

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 10 (number of trawl stations 398)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	75	18,84%	6,929	2346,780	41,189 ±9,852	4,705	3337,121	57,349 ±13,839
<i>Oncorhynchus keta</i>	> 30 cm	0,30	64	16,08%	6,852	2036,023	12,565 ±5,294	5,370	10770,562	53,999 ±27,581
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	16	4,02%	5,787	141,113	0,938 ±0,394	37,558	456,500	4,937 ±1,631
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	30	7,54%	4,202	7843,496	39,194 ±20,893	0,185	886,344	4,170 ±2,408
<i>Oncorhynchus keta</i>	= 30 cm	0,40	19	4,77%	6,104	661,743	5,982 ±2,436	0,323	91,457	0,635 ±0,297
<i>Oncorhynchus masu</i>	> 30 cm	0,30	14	3,52%	7,503	103,438	1,127 ±0,407	4,126	39,920	0,591 ±0,197
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	7	1,76%	7,683	61,396	0,331 ±0,175	4,720	45,204	0,406 ±0,174
<i>Onychoteuthis sp.</i>	= 30 cm	0,05	1	0,25%	517,117	517,117	1,299 ±1,301	25,856	25,856	0,065 ±0,065
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	1,01%	4,782	33,050	0,226 ±0,125	0,335	6,844	0,038 ±0,022
<i>Oncorhynchus masu</i>	= 30 cm	0,40	6	1,51%	5,273	13,121	0,136 ±0,058	0,893	3,672	0,030 ±0,014
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,25%	8,244	8,244	0,021 ±0,021	2,803	2,803	0,007 ±0,007
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,25%	6,104	6,104	0,015 ±0,015	0,549	0,549	0,001 ±0,001

Table 13

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 11 (number of trawl stations 240)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	115	47,92%	7,185	3522,778	198,927 ±36,951	6,610	4791,124	253,005 ±47,215
<i>Oncorhynchus keta</i>	> 30 cm	0,30	36	15,00%	6,482	855,922	6,363 ±3,611	19,809	2986,871	22,929 ±12,672
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	11	4,58%	7,143	16,132	0,442 ±0,137	24,107	129,231	2,981 ±0,982
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	3,33%	7,683	61,365	0,648 ±0,300	22,817	71,947	1,152 ±0,440
<i>Oncorhynchus masu</i>	= 30 cm	0,40	18	7,50%	5,059	701,433	6,499 ±3,312	0,472	84,906	1,052 ±0,510
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	5,42%	5,317	3260,566	20,410 ±14,496	0,011	177,020	0,938 ±0,749
<i>Oncorhynchus masu</i>	> 30 cm	0,30	9	3,75%	6,362	337,747	2,130 ±1,451	2,716	124,846	0,824 ±0,540
<i>Oncorhynchus keta</i>	= 30 cm	0,40	18	7,50%	2,930	5263,356	26,828 ±22,173	0,028	93,226	0,805 ±0,501
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	12	5,00%	5,485	60,279	0,724 ±0,298	0,494	7,562	0,117 ±0,043

Table 14

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 12 (number of trawl stations 467)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	166	35,55%	5,406	66364,758	1121,517 ± 204,273	0,049	14880,207	207,678 ± 41,159
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	230	49,25%	6,482	1983,195	120,738 ± 12,963	4,432	3190,226	156,283 ± 16,786
<i>Oncorhynchus keta</i>	> 30 cm	0,30	175	37,47%	5,026	1538,273	25,661 ± 5,072	4,849	5392,472	84,005 ± 16,936
<i>Oncorhynchus keta</i>	= 30 cm	0,40	146	31,26%	5,133	10058,034	225,607 ± 45,216	0,079	1645,468	30,556 ± 6,804
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	28	6,00%	7,000	35,700	0,684 ± 0,145	9,884	129,200	3,450 ± 0,724
<i>Oncorhynchus masu</i>	> 30 cm	0,30	49	10,49%	6,177	560,263	4,271 ± 1,353	2,397	236,644	2,175 ± 0,598
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	22	4,71%	3,164	899,012	7,878 ± 3,143	0,118	118,108	1,045 ± 0,408
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	21	4,50%	7,149	37,227	0,571 ± 0,141	2,664	66,865	0,864 ± 0,247
<i>Oncorhynchus masu</i>	= 30 cm	0,40	39	8,35%	5,008	52,427	1,127 ± 0,225	0,161	16,724	0,286 ± 0,063
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,43%	10,655	15,077	0,055 ± 0,040	9,909	13,042	0,049 ± 0,035
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	1,07%	12,034	80,013	0,324 ± 0,188	1,203	4,409	0,027 ± 0,013

Table 15

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 13 (number of trawl stations 281)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	113	40,21%	5,830	2339,068	101,900 ± 16,575	8,518	3096,926	131,921 ± 20,816
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	66	23,49%	4,696	40852,132	586,101 ± 193,083	0,260	9192,406	126,473 ± 42,835
<i>Oncorhynchus keta</i>	> 30 cm	0,30	121	43,06%	5,623	575,332	32,057 ± 4,638	6,992	2062,163	88,920 ± 13,326
<i>Oncorhynchus keta</i>	= 30 cm	0,40	56	19,93%	3,391	9728,980	171,281 ± 61,309	0,254	1705,717	27,333 ± 9,883
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	34	12,10%	7,384	1268,331	7,543 ± 4,583	4,362	461,673	5,834 ± 1,960
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	2,14%	5,785	2357,145	11,722 ± 8,673	1,302	820,344	4,074 ± 3,019
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	23	8,19%	6,620	40,798	0,906 ± 0,217	12,928	160,907	3,976 ± 0,980
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	12	4,27%	5,882	2563,296	12,637 ± 9,354	1,059	441,412	2,232 ± 1,619
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	15	5,34%	7,607	70,038	0,971 ± 0,338	6,096	172,139	1,861 ± 0,733
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	7	2,49%	6,323	1114,091	5,219 ± 4,038	1,763	240,013	1,157 ± 0,874

Table 16

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 14 (number of trawl stations 152)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	75	49,34%	6,918	2699,991	140,919 ± 29,440	6,468	4229,669	197,254 ± 41,819
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	25	16,45%	6,567	33034,557	647,824 ± 296,344	0,075	7961,291	144,767 ± 68,707
<i>Oncorhynchus keta</i>	> 30 cm	0,30	45	29,61%	4,472	445,944	26,987 ± 6,499	11,219	1519,331	91,060 ± 21,994
<i>Oncorhynchus keta</i>	= 30 cm	0,40	14	9,21%	6,120	6771,900	117,276 ± 62,293	0,106	1139,344	19,478 ± 10,629
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	7	4,61%	3,917	19,847	0,368 ± 0,169	9,568	117,431	1,929 ± 1,024

<i>Oncorhynchus masu</i>	> 30 cm	0,30	4	2,63%	8,022	149,950	2,236 ± 1,304	3,410	77,612	1,226 ± 0,708
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	5,26%	6,714	22,527	0,560 ± 0,213	3,539	38,281	0,604 ± 0,293
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,66%	10,324	10,324	0,068 ± 0,068	25,914	25,914	0,170 ± 0,171
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	3,29%	5,036	7,057	0,205 ± 0,091	0,473	1,799	0,038 ± 0,018
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	1,32%	5,186	8,421	0,090 ± 0,065	0,934	1,381	0,015 ± 0,011
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	1,32%	6,531	9,461	0,105 ± 0,076	0,128	1,633	0,012 ± 0,011

Table 17

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 1 (number of trawl stations 122)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	22	18,03%	6,853	132,967	5,669 ± 1,718	14,533	349,537	18,453 ± 5,436
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	3,28%	8,111	50,365	0,669 ± 0,440	45,258	225,383	3,618 ± 2,121
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	4,92%	6,920	74,794	1,391 ± 0,797	7,647	112,689	1,937 ± 1,144
<i>Oncorhynchus keta</i>	= 30 cm	0,40	8	6,56%	6,289	804,336	10,714 ± 7,179	0,739	44,583	0,595 ± 0,394
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	2,46%	20,558	168,043	1,976 ± 1,454	0,925	3,031	0,046 ± 0,029

Table 18

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 2 (number of trawl stations 60)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	19	31,67%	3,125	312,353	20,241 ± 7,568	7,500	834,594	56,223 ± 20,717
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	18,33%	6,790	178,223	5,206 ± 3,083	7,449	276,246	7,193 ± 4,691
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	1,67%	8,962	8,962	0,149 ± 0,151	78,644	78,644	1,311 ± 1,322
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	5,00%	12,166	13,443	0,646 ± 0,370	0,700	2,017	0,065 ± 0,041
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,67%	12,166	12,166	0,203 ± 0,204	2,360	2,360	0,039 ± 0,040
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,67%	12,166	12,166	0,203 ± 0,204	0,827	0,827	0,014 ± 0,014

Table 19

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 3 (number of trawl stations 46)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	45,65%	8,390	488,323	35,626 ± 12,303	17,401	1706,457	123,654 ± 42,991
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	4,35%	8,303	16,184	0,532 ± 0,396	58,121	110,050	3,656 ± 2,710
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	4,35%	6,722	12,550	0,419 ± 0,310	0,739	4,142	0,106 ± 0,092
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	2,17%	33,609	33,609	0,731 ± 0,739	3,354	3,354	0,073 ± 0,074
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	2,17%	38,738	38,738	0,842 ± 0,851	2,169	2,169	0,047 ± 0,048

Table 20

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 4 (number of trawl stations 51)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	13	25,49%	9,358	117,873	10,750 ± 3,558	39,880	524,537	40,064 ± 13,800
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	9,80%	8,889	73,394	3,612 ± 1,991	13,049	97,859	4,953 ± 2,681
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	1,96%	14,502	14,502	0,284 ± 0,287	88,461	88,461	1,735 ± 1,752
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,96%	5,394	5,394	0,106 ± 0,107	0,162	0,162	0,003 ± 0,003

Table 21

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 5 (number of trawl stations 67)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	25	37,31%	6,611	399,323	18,263 ± 6,921	6,162	1227,110	48,203 ± 19,753
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	12	17,91%	5,952	2406,905	104,180 ± 52,167	0,653	387,512	14,705 ± 7,809
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	8,96%	6,942	18,892	0,969 ± 0,420	23,177	80,858	4,456 ± 1,909
<i>Oncorhynchus keta</i>	= 30 cm	0,40	12	17,91%	6,223	732,103	26,908 ± 13,188	0,471	120,424	3,737 ± 2,025
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	8	11,94%	6,611	33,485	1,957 ± 0,781	7,602	39,599	2,368 ± 0,951
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	5,97%	7,615	8,962	0,504 ± 0,248	3,609	31,637	0,876 ± 0,560
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	1,49%	7,770	7,770	0,116 ± 0,117	5,983	5,983	0,089 ± 0,090
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	2,99%	5,988	6,722	0,190 ± 0,134	1,344	1,377	0,041 ± 0,029

Table 22

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 6 (number of trawl stations 96)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	50	52,08%	7,399	961,056	30,407 ± 10,766	5,946	3459,801	71,727 ± 36,673
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	37	38,54%	7,288	243,831	13,814 ± 3,604	6,489	306,531	19,321 ± 4,811
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	6,25%	6,083	4788,685	70,846 ± 52,974	0,517	597,678	7,489 ± 6,317
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	15	15,63%	7,607	81,108	3,176 ± 1,214	7,032	103,994	4,764 ± 1,494
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	13	13,54%	7,288	16,516	1,173 ± 0,318	5,578	49,847	3,561 ± 1,028
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	12	12,50%	6,083	432,092	13,164 ± 5,695	1,594	65,315	2,467 ± 1,026
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	5,21%	6,083	793,335	15,118 ± 9,704	0,493	89,370	1,893 ± 1,167
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	4,17%	7,441	8,782	0,346 ± 0,172	4,667	15,477	0,384 ± 0,212
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,08%	5,996	19,447	0,265 ± 0,212	0,480	2,917	0,035 ± 0,031
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,13%	6,204	19,201	0,331 ± 0,220	0,441	2,240	0,033 ± 0,024

Table 23

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 7 (number of trawl stations 164)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	70	42,68%	6,964	2572,196	60,326 ± 18,097	10,447	7328,188	164,900 ± 49,972
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	28,05%	3,945	1994,829	51,064 ± 16,864	4,091	2491,596	71,518 ± 23,356
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	18	10,98%	3,945	50,680	1,964 ± 0,575	11,913	426,976	9,530 ± 3,290
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	14	8,54%	7,751	82,836	2,484 ± 0,874	17,425	260,744	6,077 ± 2,233
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	28	17,07%	6,013	1473,774	27,799 ± 11,491	0,259	106,691	3,518 ± 1,165
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	25	15,24%	5,401	1001,162	17,037 ± 7,531	0,232	292,429	2,722 ± 1,815
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	3,66%	6,531	2532,949	26,854 ± 17,192	0,888	220,890	1,937 ± 1,393
<i>Oncorhynchus masu</i>	= 30 cm	0,40	13	7,93%	5,821	2029,110	13,546 ± 12,419	0,433	231,746	1,624 ± 1,422
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,61%	1988,496	1988,496	12,125 ± 12,162	175,889	175,889	1,072 ± 1,076
<i>Oncorhynchus keta</i>	= 30 cm	0,40	17	10,37%	5,821	309,199	8,212 ± 3,165	0,294	38,608	0,589 ± 0,269
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	1,83%	7,762	8,708	0,149 ± 0,086	7,296	28,302	0,293 ± 0,193
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	3,05%	16,202	76,976	1,474 ± 0,748	2,652	6,323	0,140 ± 0,065
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	0,61%	8,760	8,760	0,053 ± 0,054	4,030	4,030	0,025 ± 0,025

Table 24

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 8 (number of trawl stations 165)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	75	45,46%	7,572	24980,370	486,370 ± 178,170	7,572	30718,995	637,445 ± 225,108
<i>Oncorhynchus keta</i>	> 30 cm	0,30	80	48,49%	6,754	379,806	21,645 ± 3,699	4,141	983,697	51,990 ± 9,218
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	33	20,00%	6,834	178,954	6,717 ± 1,630	4,701	268,272	15,400 ± 3,499
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	25	15,15%	5,899	7158,296	68,928 ± 45,348	0,360	465,624	8,109 ± 4,089
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	20	12,12%	7,399	201,607	2,846 ± 1,290	4,478	269,338	7,645 ± 2,350
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	18	10,91%	5,647	2402,277	40,062 ± 18,606	0,740	301,148	5,768 ± 2,511
<i>Oncorhynchus keta</i>	= 30 cm	0,40	11	6,67%	9,018	11038,494	73,586 ± 67,130	1,058	639,724	4,549 ± 3,896
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	22	13,33%	7,185	42,590	2,010 ± 0,499	5,356	132,624	3,978 ± 1,154
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	11	6,67%	5,785	1641,042	21,343 ± 13,528	0,513	219,900	2,491 ± 1,573
<i>Oncorhynchus masu</i>	= 30 cm	0,40	7	4,24%	5,621	160,560	2,122 ± 1,201	0,601	31,065	0,416 ± 0,243
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	1,82%	19,006	103,151	1,127 ± 0,744	2,803	11,596	0,134 ± 0,086
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	0,61%	25,024	25,024	0,152 ± 0,152	9,509	9,509	0,058 ± 0,058
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	0,61%	8,450	8,450	0,051 ± 0,051	8,957	8,957	0,054 ± 0,054
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	2	1,21%	30,084	220,709	1,520 ± 1,353	1,354	3,289	0,028 ± 0,022

Table 25

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 9 (number of trawl stations 382)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	162	42,41%	3,070	3870,838	143,103 ± 22,424	2,149	4294,551	177,077 ± 26,708
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	152	39,79%	5,092	61764,316	1044,924 ± 210,971	0,062	8831,744	160,323 ± 31,295
<i>Oncorhynchus keta</i>	= 30 cm	0,40	168	43,98%	5,327	19652,509	534,231 ± 85,438	0,189	2448,214	75,094 ± 12,057
<i>Oncorhynchus keta</i>	> 30 cm	0,30	178	46,60%	6,964	504,106	20,254 ± 2,400	2,646	1679,344	51,240 ± 6,645
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	41	10,73%	7,000	938,523	4,774 ± 2,575	2,911	460,333	4,406 ± 1,392
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	39	10,21%	3,193	41,787	1,090 ± 0,196	4,476	157,537	4,106 ± 0,775
<i>Oncorhynchus masu</i>	> 30 cm	0,30	47	12,30%	6,845	141,486	3,101 ± 0,604	2,802	47,822	1,500 ± 0,266
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	18	4,71%	5,108	691,688	5,513 ± 2,154	1,092	127,386	0,892 ± 0,381
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	12	3,14%	7,278	15,344	0,296 ± 0,088	4,315	44,115	0,557 ± 0,183
<i>Oncorhynchus masu</i>	= 30 cm	0,40	35	9,16%	5,250	39,187	1,170 ± 0,226	0,297	8,837	0,265 ± 0,054
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	10	2,62%	6,355	184,793	0,827 ± 0,500	0,583	21,602	0,142 ± 0,068
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	5	1,31%	5,588	12,112	0,113 ± 0,052	1,632	3,028	0,027 ± 0,012

Table 26

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 10 (number of trawl stations 208)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	74	35,58%	6,929	2346,780	78,605 ± 18,514	4,705	3337,121	109,457 ± 26,015
<i>Oncorhynchus keta</i>	> 30 cm	0,30	58	27,89%	6,852	2036,023	23,063 ± 10,086	5,370	10770,562	99,710 ± 52,661
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	25	12,02%	5,273	7843,496	74,586 ± 39,911	0,185	886,344	7,940 ± 4,602
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	13	6,25%	5,787	40,696	0,938 ± 0,305	37,558	252,315	5,708 ± 1,927
<i>Oncorhynchus masu</i>	> 30 cm	0,30	13	6,25%	7,503	103,438	2,114 ± 0,774	4,126	39,920	1,089 ± 0,371
<i>Oncorhynchus keta</i>	= 30 cm	0,40	16	7,69%	6,104	661,743	9,359 ± 4,285	0,323	91,457	0,915 ± 0,503
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	5	2,40%	7,683	10,045	0,212 ± 0,095	4,720	45,204	0,585 ± 0,296
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	2,40%	5,273	13,121	0,216 ± 0,102	0,893	3,672	0,045 ± 0,023
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	0,96%	4,782	33,050	0,182 ± 0,161	0,335	3,580	0,019 ± 0,017
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,48%	8,244	8,244	0,040 ± 0,040	2,803	2,803	0,013 ± 0,014
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,48%	6,104	6,104	0,029 ± 0,029	0,549	0,549	0,003 ± 0,003

Table 27

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 11 (number of trawl stations 228)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	114	50,00%	7,185	3522,778	209,360 ± 38,780	6,610	4791,124	266,283 ± 49,554
<i>Oncorhynchus keta</i>	> 30 cm	0,30	35	15,35%	6,728	855,922	6,669 ± 3,800	19,809	2986,871	24,010 ± 13,337
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	10	4,39%	7,143	16,132	0,431 ± 0,141	24,107	129,231	2,921 ± 1,012

<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	3,51%	7,683	61,365	0,682 ± 0,316	22,817	71,947	1,213 ± 0,463
<i>Oncorhynchus masu</i>	= 30 cm	0,40	18	7,90%	5,059	701,433	6,841 ± 3,485	0,472	84,906	1,107 ± 0,537
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	5,70%	5,317	3260,566	21,484 ± 15,259	0,011	177,020	0,987 ± 0,789
<i>Oncorhynchus keta</i>	= 30 cm	0,40	17	7,46%	3,850	5263,356	28,227 ± 23,341	0,028	93,226	0,847 ± 0,527
<i>Oncorhynchus masu</i>	> 30 cm	0,30	8	3,51%	6,362	66,654	0,761 ± 0,373	2,716	27,828	0,320 ± 0,153
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	11	4,83%	5,485	60,279	0,736 ± 0,313	0,494	7,562	0,121 ± 0,045

Table 28

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 12 (number of trawl stations 379)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	136	35,88%	5,536	66364,758	1289,472 ± 249,846	0,049	14880,207	237,278 ± 50,374
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	226	59,63%	6,678	1983,195	145,706 ± 15,448	4,432	3190,226	191,325 ± 20,241
<i>Oncorhynchus keta</i>	> 30 cm	0,30	171	45,12%	5,026	1538,273	31,392 ± 6,214	4,849	5392,472	102,715 ± 20,756
<i>Oncorhynchus keta</i>	= 30 cm	0,40	133	35,09%	5,133	10058,034	275,066 ± 55,405	0,079	1645,468	37,219 ± 8,345
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	27	7,12%	7,000	35,700	0,805 ± 0,175	9,884	124,594	3,910 ± 0,823
<i>Oncorhynchus masu</i>	> 30 cm	0,30	48	12,67%	6,177	560,263	5,234 ± 1,663	2,397	236,644	2,657 ± 0,735
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	20	5,28%	6,096	899,012	9,678 ± 3,869	0,118	118,108	1,280 ± 0,502
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	20	5,28%	7,149	37,227	0,666 ± 0,170	2,664	66,865	1,046 ± 0,303
<i>Oncorhynchus masu</i>	= 30 cm	0,40	39	10,29%	5,008	52,427	1,388 ± 0,275	0,161	16,724	0,353 ± 0,078
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,53%	10,655	15,077	0,068 ± 0,049	9,909	13,042	0,061 ± 0,043
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	1,32%	12,034	80,013	0,399 ± 0,232	1,203	4,409	0,033 ± 0,016

Table 29

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 13 (number of trawl stations 217)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	112	51,61%	5,830	2339,068	131,812 ± 21,056	8,518	3096,926	170,783 ± 26,405
<i>Oncorhynchus keta</i>	> 30 cm	0,30	115	53,00%	7,128	575,332	40,847 ± 5,857	9,234	2062,163	113,626 ± 16,870
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	50	23,04%	5,476	19587,598	445,890 ± 160,107	0,260	4580,823	94,232 ± 34,764
<i>Oncorhynchus keta</i>	= 30 cm	0,40	47	21,66%	5,480	9728,980	214,554 ± 79,061	0,376	1705,717	34,463 ± 12,754
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	34	15,67%	7,384	1268,331	9,768 ± 5,932	4,362	461,673	7,555 ± 2,529
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	23	10,60%	6,620	40,798	1,174 ± 0,278	12,928	160,907	5,149 ± 1,260
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	5	2,30%	5,785	2357,145	13,640 ± 11,134	1,302	820,344	4,738 ± 3,875
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	12	5,53%	5,882	2563,296	16,364 ± 12,114	1,059	441,412	2,890 ± 2,096
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	15	6,91%	7,607	70,038	1,258 ± 0,436	6,096	172,139	2,410 ± 0,947
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	6	2,77%	6,323	1114,091	6,085 ± 5,190	1,763	240,013	1,366 ± 1,124
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	2,77%	9,042	68,558	0,847 ± 0,413	5,877	27,765	0,440 ± 0,198

Table 30

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-2003. Region # 14 (number of trawl stations 133)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	75	56,39%	6,918	2699,991	161,051 ± 33,308	6,468	4229,669	225,433 ± 47,329
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	23	17,29%	6,567	33034,557	728,609 ± 338,318	0,075	7961,291	162,706 ± 78,450
<i>Oncorhynchus keta</i>	> 30 cm	0,30	43	32,33%	6,836	445,944	30,555 ± 7,378	11,219	1519,331	103,223 ± 24,970
<i>Oncorhynchus keta</i>	= 30 cm	0,40	13	9,77%	6,120	6771,900	129,942 ± 71,077	0,106	1139,344	21,536 ± 12,127
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	6	4,51%	7,475	19,847	0,391 ± 0,191	9,568	117,431	2,004 ± 1,155
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	2,26%	8,022	149,950	1,765 ± 1,268	3,410	77,612	0,952 ± 0,678
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	6,02%	6,714	22,527	0,639 ± 0,243	3,539	38,281	0,690 ± 0,334
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,75%	10,324	10,324	0,078 ± 0,078	25,914	25,914	0,195 ± 0,196
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	3,76%	5,036	7,057	0,234 ± 0,104	0,473	1,799	0,044 ± 0,021
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	1,50%	6,531	9,461	0,120 ± 0,086	0,128	1,633	0,013 ± 0,012
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	0,75%	5,186	5,186	0,039 ± 0,039	0,934	0,934	0,007 ± 0,007

Table 31

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 1 (number of trawl stations 98)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	18	18,37%	6,920	132,967	6,467 ± 2,111	14,533	349,537	20,778 ± 6,641
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	6,12%	6,920	74,794	1,732 ± 0,991	7,647	112,689	2,411 ± 1,422
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	5,10%	6,289	804,336	8,682 ± 8,249	0,739	44,583	0,494 ± 0,457
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	2,04%	52,483	168,043	2,250 ± 1,800	0,925	3,031	0,040 ± 0,032

Table 32

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 2 (number of trawl stations 95)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	19	20,00%	5,613	312,353	13,509 ± 4,896	10,624	834,594	37,780 ± 13,448
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	11,58%	6,790	178,223	3,288 ± 1,952	7,449	276,246	4,543 ± 2,966
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	1	1,05%	8,962	8,962	0,094 ± 0,095	78,644	78,644	0,828 ± 0,832
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	2,11%	13,121	13,443	0,280 ± 0,198	1,187	2,017	0,034 ± 0,025

Table 33

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 3 (number of trawl stations 92)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	24	26,09%	8,390	488,323	18,934 ± 6,396	17,401	1706,457	65,264 ± 22,300

<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	1,09%	16,184	16,184	0,176 ± 0,177	110,050	110,050	1,196 ± 1,203
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	2,17%	6,722	12,550	0,209 ± 0,155	0,739	4,142	0,053 ± 0,046
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,09%	33,609	33,609	0,365 ± 0,367	3,354	3,354	0,036 ± 0,037
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,09%	38,738	38,738	0,421 ± 0,423	2,169	2,169	0,024 ± 0,024
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	1,09%	17,324	17,324	0,188 ± 0,189	0,953	0,953	0,010 ± 0,010

Table 34

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 4 (number of trawl stations 111)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	9,91%	9,358	117,873	4,065 ± 1,540	44,359	524,537	15,165 ± 5,950
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	4,51%	8,889	73,394	1,659 ± 0,921	13,049	97,859	2,276 ± 1,241
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,90%	28,979	28,979	0,261 ± 0,262	110,120	110,120	0,992 ± 0,997
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	0,90%	5,394	5,394	0,049 ± 0,049	0,162	0,162	0,001 ± 0,001

Table 35

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 5 (number of trawl stations 120)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	24	20,00%	6,611	399,323	12,588 ± 4,581	5,516	1227,110	33,631 ± 13,106
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	5,00%	3,145	32,020	0,648 ± 0,329	21,388	121,678	2,777 ± 1,340
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	9,17%	6,611	48,278	1,870 ± 0,642	7,602	59,945	2,510 ± 0,868
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	1,67%	7,615	8,962	0,138 ± 0,098	19,800	31,637	0,429 ± 0,311
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	2,50%	23,241	289,034	3,611 ± 2,619	1,185	10,351	0,133 ± 0,094
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	4,17%	5,479	67,217	1,249 ± 0,689	0,170	2,655	0,058 ± 0,031
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	1,67%	5,988	6,722	0,106 ± 0,075	1,344	1,377	0,023 ± 0,016

Table 36

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 6 (number of trawl stations 93)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	46	49,46%	7,399	961,056	30,642 ± 11,125	5,946	3459,801	73,781 ± 37,866
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	37	39,79%	7,288	243,831	14,260 ± 3,712	6,489	306,531	19,944 ± 4,954
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	11	11,83%	7,607	33,291	1,308 ± 0,458	17,786	103,994	4,156 ± 1,500
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	12	12,90%	7,288	16,516	1,124 ± 0,319	5,578	49,847	3,205 ± 0,965
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	10	10,75%	12,034	432,092	13,192 ± 5,927	2,016	65,315	2,155 ± 0,933
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	4,30%	7,441	8,782	0,358 ± 0,177	4,667	15,477	0,396 ± 0,219
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,23%	6,204	19,201	0,342 ± 0,227	0,441	2,240	0,034 ± 0,025
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	1,08%	29,574	29,574	0,318 ± 0,320	2,987	2,987	0,032 ± 0,032
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,08%	44,801	44,801	0,482 ± 0,484	0,627	0,627	0,007 ± 0,007

<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,08%	5,996	5,996	0,064 ± 0,065	0,480	0,480	0,005 ± 0,005
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Table 37

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 7 (number of trawl stations 138)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	66	47,83%	6,964	2572,196	73,642 ± 21,562	10,447	7328,188	204,541 ± 60,101
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	33,33%	3,945	1994,829	60,684 ± 19,957	4,091	2491,596	84,992 ± 27,637
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	16	11,59%	7,751	82,836	3,245 ± 1,054	17,425	260,744	7,984 ± 2,699
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	11	7,97%	3,945	46,122	1,170 ± 0,450	11,913	121,292	3,985 ± 1,373
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	25	18,12%	6,013	1473,774	24,479 ± 11,730	0,259	99,320	3,154 ± 1,147
<i>Oncorhynchus masu</i>	= 30 cm	0,40	13	9,42%	5,821	2029,110	16,058 ± 14,766	0,433	231,746	1,911 ± 1,690
<i>Oncorhynchus keta</i>	= 30 cm	0,40	19	13,77%	5,821	596,611	13,929 ± 5,662	0,294	110,425	1,498 ± 0,859
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,73%	1988,496	1988,496	14,409 ± 14,462	175,889	175,889	1,275 ± 1,279
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	16	11,59%	5,828	640,771	11,813 ± 5,305	0,232	48,058	0,953 ± 0,399
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	4,35%	6,531	1060,996	13,786 ± 9,028	0,888	47,628	0,737 ± 0,420
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	2,17%	7,762	8,708	0,177 ± 0,102	7,296	28,302	0,348 ± 0,230
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	2,90%	18,669	167,470	2,294 ± 1,394	3,466	20,327	0,251 ± 0,159

Table 38

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 8 (number of trawl stations 128)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	77	60,16%	7,572	24980,370	631,848 ± 228,491	7,572	30718,995	828,424 ± 288,531
<i>Oncorhynchus keta</i>	> 30 cm	0,30	77	60,16%	6,754	379,806	27,447 ± 4,642	4,141	983,697	65,647 ± 11,576
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	32	25,00%	6,834	178,954	8,597 ± 2,074	15,331	268,272	19,815 ± 4,441
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	3,13%	31,391	11038,494	90,334 ± 86,588	1,318	639,724	5,326 ± 5,020
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	22	17,19%	7,185	42,590	2,591 ± 0,635	5,356	132,624	5,127 ± 1,474
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	13	10,16%	7,399	16,282	0,996 ± 0,279	4,478	145,804	3,872 ± 1,461
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	11	8,59%	5,999	7158,296	57,759 ± 56,135	0,360	465,624	3,829 ± 3,651
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	13	10,16%	5,647	1659,119	24,652 ± 13,743	0,740	152,532	2,798 ± 1,353
<i>Oncorhynchus masu</i>	= 30 cm	0,40	6	4,69%	5,621	160,560	2,764 ± 1,679	0,601	24,084	0,359 ± 0,227
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	0,78%	8,450	8,450	0,066 ± 0,066	8,957	8,957	0,070 ± 0,070
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	2	1,56%	30,084	220,709	1,959 ± 1,745	1,354	3,289	0,036 ± 0,028
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	2,34%	5,785	6,462	0,146 ± 0,084	0,513	1,793	0,023 ± 0,015

Table 39

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 9 (number of trawl stations 239)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	153	64,02%	3,070	3870,838	227,941 ± 34,746	2,149	4294,551	282,853 ± 41,256
<i>Oncorhynchus keta</i>	> 30 cm	0,30	129	53,98%	6,964	504,106	26,320 ± 3,287	2,646	1679,344	71,580 ± 9,939
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	31	12,97%	6,751	41,787	1,394 ± 0,283	4,476	157,537	5,228 ± 1,114
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	27	11,30%	7,000	71,958	1,447 ± 0,376	2,911	183,652	4,110 ± 1,019
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	11	4,60%	7,278	15,344	0,422 ± 0,131	4,315	44,115	0,789 ± 0,275
<i>Oncorhynchus keta</i>	= 30 cm	0,40	39	16,32%	5,327	705,758	12,917 ± 4,022	0,189	25,074	0,729 ± 0,194
<i>Oncorhynchus masu</i>	= 30 cm	0,40	20	8,37%	5,250	39,187	0,984 ± 0,264	0,297	5,930	0,169 ± 0,046
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	2,51%	6,845	16,396	0,248 ± 0,105	3,121	14,415	0,150 ± 0,073
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	5,44%	5,884	138,604	2,116 ± 0,838	0,062	6,179	0,065 ± 0,032
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	0,84%	33,218	176,673	0,878 ± 0,753	2,519	12,236	0,062 ± 0,052
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	1,67%	6,669	26,174	0,237 ± 0,133	0,620	6,609	0,045 ± 0,030

Table 40

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 10 (number of trawl stations 299)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	74	24,75%	6,929	2346,780	54,780 ± 13,030	6,357	3337,121	76,322 ± 18,304
<i>Oncorhynchus keta</i>	> 30 cm	0,30	53	17,73%	6,948	2036,023	16,032 ± 7,038	5,370	10770,562	69,706 ± 36,691
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	5	1,67%	8,708	141,113	0,638 ± 0,480	46,962	456,500	2,323 ± 1,579
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	1,34%	7,683	10,045	0,117 ± 0,058	18,910	45,204	0,391 ± 0,206
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	3,01%	6,649	376,912	3,259 ± 1,628	0,323	54,961	0,298 ± 0,194
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	2,01%	6,162	1162,124	10,089 ± 5,738	0,185	19,250	0,164 ± 0,094
<i>Oncorhynchus masu</i>	> 30 cm	0,30	4	1,34%	8,866	12,753	0,144 ± 0,073	4,546	8,689	0,081 ± 0,042
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	1,00%	4,782	26,679	0,190 ± 0,124	0,335	6,844	0,039 ± 0,027
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	1,34%	5,762	13,121	0,133 ± 0,069	0,893	3,672	0,027 ± 0,015

Table 41

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 11 (number of trawl stations 213)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	115	53,99%	7,185	3522,778	224,143 ± 41,334	6,610	4791,124	285,076 ± 52,820
<i>Oncorhynchus keta</i>	> 30 cm	0,30	33	15,49%	6,482	855,922	6,954 ± 4,067	19,809	2986,871	25,237 ± 14,273
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	9	4,23%	7,143	16,132	0,426 ± 0,147	24,107	129,231	2,901 ± 1,060
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	3,76%	7,683	61,365	0,730 ± 0,338	22,817	71,947	1,298 ± 0,495
<i>Oncorhynchus keta</i>	= 30 cm	0,40	14	6,57%	2,930	5263,356	30,073 ± 24,988	0,028	93,226	0,890 ± 0,564
<i>Oncorhynchus masu</i>	= 30 cm	0,40	14	6,57%	5,059	701,433	5,885 ± 3,495	0,472	79,333	0,762 ± 0,417

<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	1,41%	6,362	66,654	0,376 ± 0,317	3,054	27,828	0,166 ± 0,133
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	3,29%	5,317	3260,566	16,894 ± 15,379	0,011	29,005	0,155 ± 0,137
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	10	4,70%	5,485	60,279	0,706 ± 0,325	0,494	7,562	0,109 ± 0,046

Table 42

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 12 (number of trawl stations 274)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	223	81,39%	6,482	1983,195	201,320 ± 20,407	7,187	3190,226	264,316 ± 26,733
<i>Oncorhynchus keta</i>	> 30 cm	0,30	142	51,83%	5,026	1538,273	39,958 ± 8,495	4,849	5392,472	133,842 ± 28,433
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	21	7,66%	7,000	35,700	0,893 ± 0,223	9,884	124,594	4,383 ± 1,042
<i>Oncorhynchus keta</i>	= 30 cm	0,40	50	18,25%	5,133	2364,466	29,348 ± 10,692	0,079	54,433	1,194 ± 0,315
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	12	4,38%	7,149	23,311	0,454 ± 0,142	2,664	66,865	1,159 ± 0,405
<i>Oncorhynchus masu</i>	> 30 cm	0,30	15	5,47%	6,791	129,108	1,483 ± 0,596	2,397	45,867	0,670 ± 0,257
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	24	8,76%	5,536	1275,981	13,988 ± 5,988	0,049	17,229	0,270 ± 0,110
<i>Oncorhynchus masu</i>	= 30 cm	0,40	29	10,58%	5,008	27,542	1,120 ± 0,224	0,161	6,610	0,258 ± 0,057
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,73%	10,655	15,077	0,094 ± 0,067	9,909	13,042	0,084 ± 0,060
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	1,10%	21,172	80,013	0,449 ± 0,312	1,411	3,077	0,025 ± 0,015
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	2,19%	6,096	10,382	0,161 ± 0,067	0,118	2,262	0,023 ± 0,011

Table 43

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 13 (number of trawl stations 152)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	106	69,74%	5,830	2339,068	186,674 ± 28,961	9,761	3096,926	243,003 ± 36,200
<i>Oncorhynchus keta</i>	> 30 cm	0,30	93	61,18%	5,623	574,052	51,191 ± 7,308	13,748	2062,163	150,851 ± 23,022
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	21	13,82%	7,384	70,038	2,370 ± 0,674	13,238	220,154	6,203 ± 1,898
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	17	11,18%	7,226	40,798	1,309 ± 0,369	16,964	160,907	5,619 ± 1,649
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	13	8,55%	7,607	70,038	1,672 ± 0,614	6,096	172,139	3,224 ± 1,340
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	4,61%	5,480	80,726	1,058 ± 0,581	0,376	11,284	0,125 ± 0,077
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	1	0,66%	6,323	6,323	0,042 ± 0,042	2,264	2,264	0,015 ± 0,015
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	1,32%	5,654	34,967	0,267 ± 0,234	0,260	0,699	0,006 ± 0,005

Table 44

Salmon abundance in epipelagic water layer in summer. The data of the years 1984-2003. Region # 14 (number of trawl stations 98)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	70	71,43%	6,918	2699,991	217,590 ± 43,905	6,468	4229,669	305,177 ± 62,420
<i>Oncorhynchus keta</i>	> 30 cm	0,30	29	29,59%	4,472	445,944	37,615 ± 9,882	16,995	1519,331	127,998 ± 33,394
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	6	6,12%	3,917	19,847	0,477 ± 0,245	9,568	92,884	1,793 ± 1,051

<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	2,04%	6,714	11,852	0,189 ± 0,139	10,676	38,281	0,500 ± 0,407
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,02%	10,324	10,324	0,105 ± 0,106	25,914	25,914	0,264 ± 0,266
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	5,10%	5,036	7,057	0,318 ± 0,141	0,473	1,799	0,059 ± 0,028
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	4,08%	6,120	42,141	0,685 ± 0,456	0,106	1,121	0,028 ± 0,016
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	3,06%	6,780	37,644	0,561 ± 0,405	0,075	0,324	0,007 ± 0,004
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,02%	9,461	9,461	0,097 ± 0,097	0,128	0,128	0,001 ± 0,001

Table 45

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 1 (number of trawl stations 57)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	18	31,58%	6,920	132,967	11,118 ± 3,525	14,533	349,537	35,724 ± 11,074
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	10,53%	6,920	74,794	2,978 ± 1,697	7,647	112,689	4,145 ± 2,437
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	8,77%	6,289	804,336	14,927 ± 14,229	0,739	44,583	0,849 ± 0,789
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	3,51%	52,483	168,043	3,869 ± 3,100	0,925	3,031	0,069 ± 0,056

Table 46

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 2 (number of trawl stations 39)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	18	46,15%	5,613	312,353	31,059 ± 11,359	10,624	834,594	86,304 ± 31,061
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	11	28,21%	6,790	178,223	8,010 ± 4,722	7,449	276,246	11,067 ± 7,203
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	2,56%	8,962	8,962	0,230 ± 0,233	78,644	78,644	2,017 ± 2,043
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	5,13%	13,121	13,443	0,681 ± 0,482	1,187	2,017	0,082 ± 0,060

Table 47

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 3 (number of trawl stations 35)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	60,00%	8,390	488,323	46,823 ± 15,789	17,401	1706,457	162,517 ± 55,194
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	2,86%	16,184	16,184	0,462 ± 0,469	110,050	110,050	3,144 ± 3,190
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	5,71%	6,722	12,550	0,551 ± 0,408	0,739	4,142	0,139 ± 0,121
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	2,86%	33,609	33,609	0,960 ± 0,974	3,354	3,354	0,096 ± 0,097
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	2,86%	38,738	38,738	1,107 ± 1,123	2,169	2,169	0,062 ± 0,063

Table 48

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 4 (number of trawl stations 32)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	34,38%	9,358	117,873	14,101 ± 5,014	44,359	524,537	52,602 ± 19,499
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	15,63%	8,889	73,394	5,756 ± 3,146	13,049	97,859	7,894 ± 4,234
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	3,13%	5,394	5,394	0,169 ± 0,171	0,162	0,162	0,005 ± 0,005

Table 49

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 5 (number of trawl stations 42)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	50,00%	6,611	399,323	28,186 ± 10,831	6,162	1227,110	74,698 ± 31,030
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	9,52%	7,023	18,892	1,014 ± 0,547	23,177	80,858	4,529 ± 2,466
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	8	19,05%	6,611	33,485	3,121 ± 1,221	7,602	39,599	3,778 ± 1,486
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	4,76%	7,615	8,962	0,395 ± 0,280	19,800	31,637	1,225 ± 0,889
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	4,76%	120,991	289,034	9,762 ± 7,485	4,369	10,351	0,350 ± 0,268
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	7,14%	13,660	67,217	2,886 ± 1,886	0,471	2,655	0,122 ± 0,080
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	4,76%	5,988	6,722	0,303 ± 0,214	1,344	1,377	0,065 ± 0,046

Table 50

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 6 (number of trawl stations 77)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	45	58,44%	7,399	961,056	36,145 ± 13,352	5,946	3459,801	87,299 ± 45,648
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	37	48,05%	7,288	243,831	17,223 ± 4,417	6,489	306,531	24,089 ± 5,885
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	11	14,29%	7,607	33,291	1,580 ± 0,549	17,786	103,994	5,020 ± 1,800
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	12	15,58%	7,288	16,516	1,357 ± 0,381	5,578	49,847	3,871 ± 1,153
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	9	11,69%	12,034	432,092	13,342 ± 6,710	2,016	65,315	2,136 ± 1,033
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	5,20%	7,441	8,782	0,432 ± 0,214	4,667	15,477	0,478 ± 0,264
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,90%	6,204	19,201	0,413 ± 0,274	0,441	2,240	0,041 ± 0,030
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,30%	44,801	44,801	0,582 ± 0,586	0,627	0,627	0,008 ± 0,008
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,30%	5,996	5,996	0,078 ± 0,078	0,480	0,480	0,006 ± 0,006

Table 51

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 7 (number of trawl stations 112)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	65	58,04%	6,964	2572,196	86,923 ± 26,181	10,447	7328,188	237,003 ± 72,324

<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	41,07%	3,945	1994,829	74,772 ±24,436	4,091	2491,596	104,722 ±33,834
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	14	12,50%	7,751	82,836	3,637 ±1,269	17,425	260,744	8,899 ±3,244
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	9	8,04%	3,945	46,122	1,080 ±0,481	11,913	121,292	3,593 ±1,429
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	24	21,43%	6,013	1473,774	28,385 ±14,345	0,259	99,320	3,337 ±1,307
<i>Oncorhynchus masu</i>	= 30 cm	0,40	12	10,71%	5,821	2029,110	19,692 ±18,207	0,433	231,746	2,339 ±2,084
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,89%	1988,496	1988,496	17,754 ±17,834	175,889	175,889	1,570 ±1,577
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	15	13,39%	5,828	640,771	13,995 ±6,506	0,232	48,058	1,095 ±0,485
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	4,46%	6,531	1060,996	16,706 ±11,121	0,888	47,628	0,863 ±0,516
<i>Oncorhynchus keta</i>	= 30 cm	0,40	16	14,29%	5,821	309,199	11,301 ±4,561	0,294	38,608	0,798 ±0,388
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	2,68%	7,762	8,708	0,219 ±0,126	7,296	28,302	0,429 ±0,283
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	2,68%	18,669	76,976	1,331 ±0,851	3,466	6,323	0,128 ±0,076

Table 52

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 8 (number of trawl stations 111)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	75	67,57%	7,572	24980,370	722,983 ±262,664	7,572	30718,995	947,553 ±331,576
<i>Oncorhynchus keta</i>	> 30 cm	0,30	77	69,37%	6,754	379,806	31,651 ±5,244	4,141	983,697	75,702 ±13,102
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	32	28,83%	6,834	178,954	9,914 ±2,369	15,331	268,272	22,849 ±5,065
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	3,60%	31,391	11038,494	104,169 ±99,904	1,318	639,724	6,142 ±5,792
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	22	19,82%	7,185	42,590	2,987 ±0,726	5,356	132,624	5,913 ±1,690
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	13	11,71%	7,399	16,282	1,148 ±0,320	4,478	145,804	4,465 ±1,679
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	9	8,11%	5,999	7158,296	66,195 ±64,772	0,360	465,624	4,356 ±4,213
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	12	10,81%	5,647	1659,119	28,332 ±15,837	0,740	152,532	3,219 ±1,559
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	4,51%	5,621	160,560	1,926 ±1,478	0,601	24,084	0,271 ±0,220
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	0,90%	8,450	8,450	0,076 ±0,076	8,957	8,957	0,081 ±0,081
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	2	1,80%	30,084	220,709	2,259 ±2,013	1,354	3,289	0,042 ±0,032
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	2,70%	5,785	6,462	0,168 ±0,097	0,513	1,793	0,026 ±0,018

Table 53

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 9 (number of trawl stations 210)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	152	72,38%	3,070	3870,838	259,014 ±39,079	2,149	4294,551	321,381 ±46,348
<i>Oncorhynchus keta</i>	> 30 cm	0,30	129	61,43%	6,964	504,106	29,955 ±3,672	2,646	1679,344	81,465 ±11,146
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	31	14,76%	6,751	41,787	1,587 ±0,320	4,476	157,537	5,950 ±1,260
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	27	12,86%	7,000	71,958	1,647 ±0,427	2,911	183,652	4,678 ±1,155
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	11	5,24%	7,278	15,344	0,481 ±0,149	4,315	44,115	0,898 ±0,312
<i>Oncorhynchus keta</i>	= 30 cm	0,40	39	18,57%	5,327	705,758	14,701 ±4,567	0,189	25,074	0,829 ±0,220
<i>Oncorhynchus masu</i>	= 30 cm	0,40	20	9,52%	5,250	39,187	1,120 ±0,300	0,297	5,930	0,192 ±0,053

<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	2,86%	6,845	16,396	0,282 ± 0,120	3,121	14,415	0,171 ± 0,083
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	6,19%	5,884	138,604	2,408 ± 0,953	0,062	6,179	0,074 ± 0,037
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	0,95%	33,218	176,673	0,999 ± 0,857	2,519	12,236	0,070 ± 0,060
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	1,91%	6,669	26,174	0,270 ± 0,151	0,620	6,609	0,051 ± 0,034

Table 54

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 10 (number of trawl stations 153)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	73	47,71%	6,929	2346,780	106,771 ± 24,816	6,357	3337,121	148,773 ± 34,878
<i>Oncorhynchus keta</i>	> 30 cm	0,30	50	32,68%	6,948	2036,023	30,520 ± 13,682	5,370	10770,562	133,193 ± 71,515
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	4	2,61%	8,708	17,147	0,325 ± 0,167	46,962	77,935	1,556 ± 0,788
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	2,61%	7,683	10,045	0,228 ± 0,114	18,910	45,204	0,764 ± 0,401
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	3,27%	6,162	1162,124	19,493 ± 11,195	0,185	19,250	0,315 ± 0,183
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	4,58%	12,325	269,275	3,862 ± 2,017	0,323	15,956	0,219 ± 0,121
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	1,96%	9,117	12,753	0,223 ± 0,130	4,546	5,548	0,102 ± 0,059
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	2,61%	5,762	13,121	0,260 ± 0,135	0,893	3,672	0,053 ± 0,030
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	0,65%	4,782	4,782	0,031 ± 0,031	0,335	0,335	0,002 ± 0,002

Table 55

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 11 (number of trawl stations 204)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	114	55,88%	7,185	3522,778	233,990 ± 43,035	6,610	4791,124	297,610 ± 54,994
<i>Oncorhynchus keta</i>	> 30 cm	0,30	32	15,69%	6,728	855,922	7,229 ± 4,246	19,809	2986,871	26,210 ± 14,902
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	8	3,92%	7,143	16,132	0,406 ± 0,149	24,107	129,231	2,786 ± 1,083
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	3,92%	7,683	61,365	0,762 ± 0,353	22,817	71,947	1,355 ± 0,517
<i>Oncorhynchus keta</i>	= 30 cm	0,40	13	6,37%	3,850	5263,356	31,386 ± 26,092	0,028	93,226	0,928 ± 0,589
<i>Oncorhynchus masu</i>	= 30 cm	0,40	14	6,86%	5,059	701,433	6,145 ± 3,649	0,472	79,333	0,795 ± 0,435
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	1,47%	6,362	66,654	0,393 ± 0,331	3,054	27,828	0,174 ± 0,139
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	3,43%	5,317	3260,566	17,639 ± 16,059	0,011	29,005	0,162 ± 0,143
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	9	4,41%	5,485	60,279	0,708 ± 0,338	0,494	7,562	0,111 ± 0,048

Table 56

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 12 (number of trawl stations 243)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	221	90,95%	6,678	1983,195	226,949 ± 22,492	7,187	3190,226	297,952 ± 29,462
<i>Oncorhynchus keta</i>	> 30 cm	0,30	139	57,20%	5,026	1538,273	44,802 ± 9,538	4,849	5392,472	150,108 ± 31,920
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	21	8,64%	7,000	35,700	1,006 ± 0,250	9,884	124,594	4,942 ± 1,171

<i>Oncorhynchus keta</i>	= 30 cm	0,40	50	20,58%	5,133	2364,466	33,092 ± 12,040	0,079	54,433	1,346 ± 0,354
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	12	4,94%	7,149	23,311	0,512 ± 0,160	2,664	66,865	1,307 ± 0,456
<i>Oncorhynchus masu</i>	> 30 cm	0,30	15	6,17%	6,791	129,108	1,672 ± 0,671	2,397	45,867	0,756 ± 0,290
<i>Oncorhynchus gorbusha</i>	= 30 cm	0,40	24	9,88%	5,536	1275,981	15,773 ± 6,747	0,049	17,229	0,305 ± 0,123
<i>Oncorhynchus masu</i>	= 30 cm	0,40	29	11,93%	5,008	27,542	1,263 ± 0,252	0,161	6,610	0,291 ± 0,064
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,82%	10,655	15,077	0,106 ± 0,076	9,909	13,042	0,094 ± 0,067
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	3	1,24%	21,172	80,013	0,506 ± 0,352	1,411	3,077	0,028 ± 0,017
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	2,47%	6,096	10,382	0,182 ± 0,075	0,118	2,262	0,026 ± 0,013

Table 57

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 13 (number of trawl stations 134)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbusha</i>	> 30 cm	0,30	106	79,10%	5,830	2339,068	211,750 ± 32,263	9,761	3096,926	275,645 ± 40,262
<i>Oncorhynchus keta</i>	> 30 cm	0,30	90	67,16%	7,128	574,052	57,146 ± 8,120	13,748	2062,163	168,823 ± 25,673
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	21	15,67%	7,384	70,038	2,688 ± 0,762	13,238	220,154	7,037 ± 2,145
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	17	12,69%	7,226	40,798	1,485 ± 0,417	16,964	160,907	6,373 ± 1,862
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	13	9,70%	7,607	70,038	1,897 ± 0,695	6,096	172,139	3,657 ± 1,518
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	5,22%	5,480	80,726	1,200 ± 0,658	0,376	11,284	0,142 ± 0,088
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	1	0,75%	6,323	6,323	0,047 ± 0,047	2,264	2,264	0,017 ± 0,017
<i>Oncorhynchus gorbusha</i>	= 30 cm	0,40	2	1,49%	5,654	34,967	0,303 ± 0,265	0,260	0,699	0,007 ± 0,006

Table 58

Salmon abundance in upper epipelagic water layer in summer. The data of the years 1984-2003. Region # 14 (number of trawl stations 92)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbusha</i>	> 30 cm	0,30	70	76,09%	6,918	2699,991	231,781 ± 46,408	6,468	4229,669	325,080 ± 65,994
<i>Oncorhynchus keta</i>	> 30 cm	0,30	28	30,44%	7,705	445,944	40,019 ± 10,483	26,362	1519,331	136,161 ± 35,425
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	5	5,44%	7,475	19,847	0,465 ± 0,258	9,568	92,884	1,621 ± 1,085
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	2,17%	6,714	11,852	0,202 ± 0,148	10,676	38,281	0,532 ± 0,433
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,09%	10,324	10,324	0,112 ± 0,113	25,914	25,914	0,282 ± 0,283
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	5,44%	5,036	7,057	0,339 ± 0,150	0,473	1,799	0,063 ± 0,030
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	4,35%	6,120	42,141	0,730 ± 0,486	0,106	1,121	0,029 ± 0,017
<i>Oncorhynchus gorbusha</i>	= 30 cm	0,40	3	3,26%	6,780	37,644	0,597 ± 0,431	0,075	0,324	0,007 ± 0,004
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,09%	9,461	9,461	0,103 ± 0,103	0,128	0,128	0,001 ± 0,001

Table 59

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 1 (number of trawl stations 136)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	4,41%	7,541	50,365	0,718 ±0,403	45,258	225,383	4,264 ±2,028
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	4,41%	6,853	26,996	0,663 ±0,300	18,817	107,647	2,305 ±1,081
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	3,68%	5,656	2676,659	27,773 ±21,052	0,481	187,002	1,996 ±1,490
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,74%	7,546	7,546	0,055 ±0,056	37,278	37,278	0,274 ±0,275

Table 60

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 2 (number of trawl stations 85)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	7,06%	3,125	67,451	1,502 ±0,894	7,500	239,619	5,013 ±3,093
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,35%	12,166	21,065	0,391 ±0,286	2,360	2,675	0,059 ±0,042
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,18%	12,166	12,166	0,143 ±0,144	0,827	0,827	0,010 ±0,010
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,18%	12,166	12,166	0,143 ±0,144	0,700	0,700	0,008 ±0,008

Table 61

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 3 (number of trawl stations 58)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	6,90%	13,788	81,913	2,518 ±1,561	33,505	192,223	6,725 ±3,974
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,72%	1170,890	1170,890	20,188 ±20,364	186,757	186,757	3,220 ±3,248
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	3,45%	5,983	8,303	0,246 ±0,176	30,511	58,121	1,528 ±1,133
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,72%	169,129	169,129	2,916 ±2,941	23,496	23,496	0,405 ±0,409
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,72%	13,010	13,010	0,224 ±0,226	3,903	3,903	0,067 ±0,068

Table 62

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 4 (number of trawl stations 43)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	9,30%	14,502	82,507	3,645 ±2,160	39,880	320,126	12,828 ±8,091
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	4,65%	7,488	14,502	0,511 ±0,380	80,866	88,461	3,938 ±2,787

Table 63

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 5 (number of trawl stations 126)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	21	16,67%	5,952	3183,458	90,570 ± 37,888	0,653	432,685	12,776 ± 5,426
<i>Oncorhynchus keta</i>	= 30 cm	0,40	21	16,67%	6,103	1392,763	36,243 ± 13,832	0,610	245,723	5,381 ± 2,307
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	3,18%	6,942	61,325	0,762 ± 0,514	43,039	238,556	3,110 ± 2,021
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	4,76%	6,942	39,064	0,762 ± 0,376	16,185	84,769	1,546 ± 0,780
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	1,59%	7,770	39,242	0,373 ± 0,318	5,983	19,032	0,199 ± 0,159
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	2,38%	8,297	34,064	0,407 ± 0,287	3,609	17,202	0,194 ± 0,143

Table 64

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 6 (number of trawl stations 71)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	8	11,27%	6,083	4788,685	108,310 ± 72,459	0,517	597,678	11,803 ± 8,673
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	9,86%	6,083	793,335	27,647 ± 14,696	0,493	89,370	3,463 ± 1,773
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	8,45%	8,111	46,111	2,102 ± 0,939	13,139	87,611	2,512 ± 1,357
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	1,41%	130,996	130,996	1,845 ± 1,858	108,465	108,465	1,528 ± 1,539
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	5,63%	6,083	182,492	3,490 ± 2,668	1,594	58,428	1,072 ± 0,845
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	5,63%	12,965	81,108	2,582 ± 1,556	7,032	29,199	0,997 ± 0,573
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	1,41%	8,111	8,111	0,114 ± 0,115	43,798	43,798	0,617 ± 0,621
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,82%	19,447	23,981	0,612 ± 0,435	2,917	3,118	0,085 ± 0,060

Table 65

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 7 (number of trawl stations 104)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	14	13,46%	7,201	65,757	3,427 ± 1,051	27,577	426,976	18,171 ± 6,120
<i>Oncorhynchus keta</i>	> 30 cm	0,30	8	7,69%	12,767	125,077	3,181 ± 1,458	43,797	390,866	9,899 ± 4,558
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	6,73%	14,001	4660,437	73,059 ± 51,046	1,260	336,942	5,755 ± 3,878
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	15	14,42%	4,729	1001,162	12,646 ± 9,690	0,875	292,429	3,298 ± 2,824
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	1,92%	8,760	531,797	5,198 ± 5,138	4,030	233,503	2,284 ± 2,256
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	5	4,81%	10,801	956,334	13,798 ± 9,672	2,609	106,691	2,069 ± 1,209
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	6,73%	5,128	845,644	12,917 ± 8,579	0,513	155,598	1,887 ± 1,515
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	1,92%	5,749	75,168	0,778 ± 0,728	2,070	27,061	0,280 ± 0,262
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	4,81%	15,144	76,399	1,617 ± 0,875	2,347	6,613	0,198 ± 0,096
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	1,92%	13,734	16,012	0,286 ± 0,203	2,678	4,467	0,069 ± 0,050

Table 66

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 8 (number of trawl stations 79)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	27	34,18%	5,915	2383,614	110,653 ± 41,368	0,506	461,367	21,652 ± 8,144
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	15	18,99%	9,018	2402,277	60,048 ± 33,102	1,758	301,148	12,602 ± 5,450
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	10	12,66%	7,866	201,607	5,006 ± 2,682	17,731	269,338	12,121 ± 4,545
<i>Oncorhynchus masu</i>	> 30 cm	0,30	5	6,33%	25,024	1495,601	20,896 ± 19,055	9,509	553,298	7,876 ± 7,052
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	11	13,92%	7,857	1641,042	49,474 ± 28,442	1,309	219,900	6,021 ± 3,338
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	7,60%	7,835	96,041	3,883 ± 1,862	4,701	133,108	3,118 ± 1,844
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	6,33%	6,720	32,055	1,077 ± 0,533	2,957	130,623	2,536 ± 1,723
<i>Oncorhynchus keta</i>	= 30 cm	0,40	11	13,92%	9,018	526,402	17,262 ± 8,169	1,058	66,552	2,191 ± 1,010
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,80%	6,088	109,191	1,804 ± 1,430	1,461	31,065	0,507 ± 0,406
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	6,33%	19,006	103,151	3,078 ± 1,626	2,803	11,596	0,402 ± 0,197

Table 67

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 9 (number of trawl stations 202)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	150	74,26%	5,092	61764,316	2013,678 ± 387,996	0,662	8831,744	307,658 ± 57,418
<i>Oncorhynchus keta</i>	= 30 cm	0,40	136	67,33%	5,278	19652,509	1006,415 ± 154,525	0,196	2448,214	142,703 ± 21,784
<i>Oncorhynchus keta</i>	> 30 cm	0,30	52	25,74%	5,354	417,676	7,282 ± 2,251	8,406	695,549	12,536 ± 3,733
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	10	4,95%	3,193	52,570	0,732 ± 0,309	10,087	451,047	3,971 ± 2,322
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	16	7,92%	6,279	938,523	7,480 ± 4,855	3,524	460,333	3,570 ± 2,351
<i>Oncorhynchus masu</i>	> 30 cm	0,30	43	21,29%	7,051	141,486	5,689 ± 1,109	2,802	47,822	2,713 ± 0,483
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	18	8,91%	5,108	691,688	9,781 ± 3,974	1,092	127,386	1,674 ± 0,717
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	7	3,47%	7,770	19,755	0,456 ± 0,176	3,536	17,917	0,401 ± 0,161
<i>Oncorhynchus masu</i>	= 30 cm	0,40	16	7,92%	7,271	28,265	1,096 ± 0,299	2,010	8,837	0,316 ± 0,087
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	8	3,96%	6,355	184,793	1,499 ± 0,945	0,583	21,602	0,289 ± 0,133
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,50%	12,233	12,233	0,061 ± 0,061	23,977	23,977	0,119 ± 0,119
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	5	2,48%	5,588	12,112	0,213 ± 0,098	1,632	3,028	0,050 ± 0,023

Table 68

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 10 (number of trawl stations 93)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	24	25,81%	4,202	7843,496	135,296 ± 87,469	0,369	886,344	17,317 ± 10,265
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	11	11,83%	5,787	40,696	1,961 ± 0,681	37,558	252,315	13,661 ± 4,718
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	11,83%	6,852	44,005	2,230 ± 0,728	19,061	167,220	6,983 ± 2,465
<i>Oncorhynchus masu</i>	> 30 cm	0,30	10	10,75%	7,503	103,438	4,362 ± 1,698	4,126	39,920	2,269 ± 0,813

<i>Oncorhynchus keta</i>	= 30 cm	0,40	10	10,75%	6,104	661,743	15,125 ± 9,028	0,402	91,457	1,760 ± 1,109
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	3,23%	9,254	61,396	1,041 ± 0,724	4,720	30,698	0,481 ± 0,349
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	1,08%	13,799	13,799	0,148 ± 0,149	4,705	4,705	0,051 ± 0,051
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	2,15%	5,273	9,094	0,154 ± 0,113	1,292	2,728	0,043 ± 0,032
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,08%	33,050	33,050	0,355 ± 0,357	3,580	3,580	0,038 ± 0,039
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,08%	8,244	8,244	0,089 ± 0,089	2,803	2,803	0,030 ± 0,030
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,08%	6,104	6,104	0,066 ± 0,066	0,549	0,549	0,006 ± 0,006

Table 69

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 11 (number of trawl stations 27)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	22,22%	5,727	1186,584	48,145 ± 44,684	0,584	177,020	7,114 ± 6,668
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	22,22%	6,790	337,747	15,964 ± 12,755	2,716	124,846	6,016 ± 4,715
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	11,11%	8,141	22,248	1,699 ± 1,034	25,725	63,037	4,722 ± 2,861
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	2	7,41%	7,635	7,656	0,566 ± 0,400	42,186	55,357	3,613 ± 2,578
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	14,82%	5,643	283,019	11,340 ± 10,661	1,072	84,906	3,337 ± 3,199
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	7,41%	5,629	17,762	0,866 ± 0,695	1,785	3,120	0,182 ± 0,133
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	14,82%	5,093	13,130	1,226 ± 0,639	0,289	1,838	0,138 ± 0,079

Table 70

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 12 (number of trawl stations 101)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	78	77,23%	6,017	27743,018	3250,772 ± 551,730	0,761	3823,420	515,955 ± 85,422
<i>Oncorhynchus keta</i>	= 30 cm	0,40	71	70,30%	7,146	9175,625	715,882 ± 151,856	1,110	1193,072	102,247 ± 22,498
<i>Oncorhynchus keta</i>	> 30 cm	0,30	30	29,70%	7,492	150,140	9,724 ± 2,571	5,325	365,284	22,979 ± 5,906
<i>Oncorhynchus masu</i>	> 30 cm	0,30	34	33,66%	6,177	560,263	15,725 ± 5,948	3,397	236,644	8,239 ± 2,608
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	15	14,85%	3,164	899,012	35,923 ± 14,294	0,439	118,108	4,763 ± 1,854
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	4	3,96%	7,539	14,356	0,375 ± 0,194	21,064	129,200	2,233 ± 1,395
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	1,98%	13,980	33,900	0,474 ± 0,364	4,432	81,785	0,854 ± 0,815
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	9	8,91%	7,827	37,227	1,408 ± 0,523	4,775	19,613	0,852 ± 0,313
<i>Oncorhynchus masu</i>	= 30 cm	0,40	10	9,90%	7,235	52,427	2,171 ± 0,835	1,736	16,724	0,625 ± 0,246
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	1,98%	12,034	16,329	0,281 ± 0,201	1,203	4,409	0,056 ± 0,045

Table 71

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 13 (number of trawl stations 61)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	29	47,54%	5,476	6886,843	298,124 ± 128,031	0,821	1218,145	50,141 ± 22,569

<i>Oncorhynchus keta</i>	= 30 cm	0,40	28	45,90%	3,391	4951,551	255,558 ±99,902	0,254	824,781	40,252 ± 16,100
<i>Oncorhynchus keta</i>	> 30 cm	0,30	22	36,07%	7,557	575,332	19,334 ±9,656	9,234	661,760	32,226 ± 12,206
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	9,84%	5,785	2357,145	53,996 ±39,992	1,302	820,344	18,766 ± 13,920
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	13	21,31%	10,145	1268,331	28,842 ±21,087	4,362	461,673	11,419 ± 7,727
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	12	19,67%	5,882	2563,296	58,213 ±43,134	1,059	441,412	10,280 ± 7,460
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	6	9,84%	6,531	1114,091	23,936 ±18,641	1,763	240,013	5,294 ±4,031
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	5	8,20%	6,620	11,691	0,773 ±0,345	12,928	59,577	3,423 ± 1,612
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	9,84%	9,042	68,558	3,012 ±1,449	5,877	27,765	1,565 ±0,690
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	3,28%	8,040	8,431	0,270 ±0,191	12,647	21,305	0,557 ±0,407
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	3,28%	8,662	10,145	0,308 ±0,219	13,773	19,072	0,538 ±0,386

Table 72

Salmon abundance in epipelagic water layer in autumn. The data of the years 1984-2003. Region # 14 (number of trawl stations 31)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	16,13%	318,644	7988,938	392,104 ±269,373	58,303	1305,439	67,556 ±44,441
<i>Oncorhynchus keta</i>	> 30 cm	0,30	13	41,94%	6,836	83,164	11,752 ±3,497	28,710	325,097	39,872 ± 12,534
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	12,90%	234,655	1304,316	79,087 ±47,072	33,393	204,950	12,476 ± 7,475
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	9,68%	8,022	149,950	7,571 ±5,443	3,410	77,612	4,086 ±2,906
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	12,90%	7,812	13,261	1,318 ±0,652	7,569	19,030	1,864 ±0,944
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	6,45%	7,812	22,527	0,979 ±0,774	5,468	16,294	0,702 ±0,558
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	6,45%	5,186	8,421	0,439 ±0,319	0,934	1,381	0,075 ±0,054

Table 73

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 1 (number of trawl stations 54)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	7,41%	8,111	50,365	1,512 ±0,993	45,258	225,383	8,174 ±4,767
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	7,41%	6,853	26,996	1,071 ±0,606	18,817	107,647	3,983 ±2,383
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	5,56%	41,116	336,110	8,450 ±6,455	2,344	17,173	0,448 ±0,333
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	1,85%	20,558	20,558	0,381 ±0,384	1,686	1,686	0,031 ±0,032

Table 74

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 2 (number of trawl stations 17)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	5,88%	3,125	3,125	0,184 ±0,189	7,500	7,500	0,441 ±0,455
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	5,88%	12,166	12,166	0,716 ±0,738	2,360	2,360	0,139 ±0,143
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	5,88%	12,166	12,166	0,716 ±0,738	0,827	0,827	0,049 ±0,050
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	5,88%	12,166	12,166	0,716 ±0,738	0,700	0,700	0,041 ±0,042

Table 75

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 4 (number of trawl stations 16)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	2	12,50%	14,502	82,507	6,063 ± 5,346	39,880	320,126	22,500 ± 20,653
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	6,25%	14,502	14,502	0,906 ± 0,936	88,461	88,461	5,529 ± 5,710

Table 76

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 5 (number of trawl stations 25)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	10	40,00%	5,952	2406,905	262,801 ± 136,657	0,653	387,512	38,821 ± 20,510
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	36,00%	6,223	732,103	67,265 ± 34,526	0,610	120,424	9,810 ± 5,334
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	8,00%	6,942	15,365	0,892 ± 0,677	43,039	65,302	4,334 ± 3,131
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	16,00%	6,942	17,417	1,594 ± 0,842	16,185	33,875	3,691 ± 1,846
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	8,00%	8,297	8,874	0,687 ± 0,486	3,609	3,638	0,290 ± 0,205
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	4,00%	7,770	7,770	0,311 ± 0,317	5,983	5,983	0,239 ± 0,244

Table 77

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 6 (number of trawl stations 19)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	26,32%	6,083	4788,685	355,603 ± 268,765	0,517	597,678	37,808 ± 32,314
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	26,32%	6,083	793,335	76,384 ± 48,461	0,493	89,370	9,566 ± 5,797
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	26,32%	8,111	46,111	7,152 ± 3,279	13,139	87,611	8,621 ± 4,921
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	15,79%	6,083	182,492	12,440 ± 10,044	1,594	58,428	3,811 ± 3,188
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	21,05%	12,965	81,108	9,647 ± 5,712	7,032	29,199	3,727 ± 2,091
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	5,26%	8,111	8,111	0,427 ± 0,439	43,798	43,798	2,305 ± 2,368
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	5,26%	19,447	19,447	1,024 ± 1,052	2,917	2,917	0,154 ± 0,158

Table 78

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 7 (number of trawl stations 32)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	9	28,13%	7,201	50,680	6,284 ± 2,317	27,577	426,976	36,267 ± 15,598
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	15,63%	14,128	62,140	4,942 ± 2,454	43,797	183,313	15,601 ± 7,891
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	10	31,25%	5,401	1001,162	38,329 ± 31,671	0,875	292,429	10,119 ± 9,260
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	3,13%	2532,949	2532,949	79,155 ± 80,421	220,890	220,890	6,903 ± 7,013

<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	12,50%	10,801	956,334	43,121 ± 31,438	2,609	106,691	6,349 ± 3,886
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	6,25%	16,202	76,399	2,894 ± 2,463	2,652	5,959	0,269 ± 0,205
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	3,13%	81,011	81,011	2,532 ± 2,572	7,224	7,224	0,226 ± 0,229
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	3,13%	16,012	16,012	0,500 ± 0,508	4,467	4,467	0,140 ± 0,142
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	3,13%	8,760	8,760	0,274 ± 0,278	4,030	4,030	0,126 ± 0,128

Table 79

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 8 (number of trawl stations 35)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	13	37,14%	5,915	1988,005	114,504 ± 61,580	0,506	461,367	24,280 ± 13,891
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	7	20,00%	7,866	201,607	9,775 ± 5,982	47,194	269,338	21,879 ± 9,534
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	17,14%	9,018	2402,277	99,011 ± 72,695	1,758	301,148	16,985 ± 10,781
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	8	22,86%	7,857	1641,042	100,083 ± 63,400	1,309	219,900	11,659 ± 7,371
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	8,57%	12,024	32,055	1,662 ± 1,050	19,886	130,623	5,011 ± 3,857
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	20,00%	9,018	290,699	16,541 ± 10,148	1,058	34,424	1,963 ± 1,138
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	5,71%	27,229	109,191	3,898 ± 3,240	7,488	31,065	1,102 ± 0,920
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	8,57%	19,006	103,151	5,315 ± 3,491	2,803	11,596	0,631 ± 0,403
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	2,86%	25,024	25,024	0,715 ± 0,725	9,509	9,509	0,272 ± 0,276
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	2,86%	7,835	7,835	0,224 ± 0,227	4,701	4,701	0,134 ± 0,136

Table 80

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 9 (number of trawl stations 163)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	136	83,44%	5,092	61764,316	2440,897 ± 474,409	0,662	8831,744	374,621 ± 70,136
<i>Oncorhynchus keta</i>	= 30 cm	0,40	128	78,53%	5,387	19652,509	1233,019 ± 187,218	0,196	2448,214	174,912 ± 26,383
<i>Oncorhynchus keta</i>	> 30 cm	0,30	48	29,45%	7,198	417,676	8,822 ± 2,777	8,406	695,549	15,080 ± 4,602
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	14	8,59%	7,171	938,523	9,066 ± 6,015	3,524	460,333	4,298 ± 2,913
<i>Oncorhynchus masu</i>	> 30 cm	0,30	41	25,15%	7,051	141,486	6,903 ± 1,355	2,802	47,822	3,295 ± 0,588
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	16	9,82%	5,108	691,688	11,633 ± 4,902	1,092	127,386	2,000 ± 0,886
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	7	4,29%	3,193	18,054	0,458 ± 0,189	10,087	72,218	1,589 ± 0,698
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	7	4,29%	7,770	19,755	0,564 ± 0,218	3,536	17,917	0,497 ± 0,199
<i>Oncorhynchus masu</i>	= 30 cm	0,40	15	9,20%	7,271	28,265	1,299 ± 0,365	2,010	8,837	0,373 ± 0,106
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	3,68%	6,355	184,793	1,592 ± 1,158	0,583	21,602	0,268 ± 0,153
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,61%	12,233	12,233	0,075 ± 0,075	23,977	23,977	0,147 ± 0,148
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	5	3,07%	5,588	12,112	0,264 ± 0,122	1,632	3,028	0,062 ± 0,029

Table 81

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 10 (number of trawl stations 55)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	20	36,36%	5,273	7843,496	227,844 ± 147,688	0,369	886,344	29,150 ± 17,303
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	9	16,36%	5,787	40,696	2,640 ± 1,036	37,558	252,315	17,259 ± 6,797
<i>Oncorhynchus keta</i>	> 30 cm	0,30	8	14,55%	6,852	25,319	2,320 ± 0,844	19,061	75,956	6,569 ± 2,479
<i>Oncorhynchus masu</i>	> 30 cm	0,30	10	18,18%	7,503	103,438	7,375 ± 2,820	4,126	39,920	3,837 ± 1,343
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	16,36%	6,104	661,743	24,650 ± 15,216	0,402	91,457	2,853 ± 1,871
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	1,82%	9,254	9,254	0,168 ± 0,170	4,720	4,720	0,086 ± 0,087
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	1,82%	13,799	13,799	0,251 ± 0,253	4,705	4,705	0,086 ± 0,086
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,82%	33,050	33,050	0,601 ± 0,606	3,580	3,580	0,065 ± 0,066
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,82%	8,244	8,244	0,150 ± 0,151	2,803	2,803	0,051 ± 0,051
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	1,82%	5,273	5,273	0,096 ± 0,097	1,292	1,292	0,023 ± 0,024
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,82%	6,104	6,104	0,111 ± 0,112	0,549	0,549	0,010 ± 0,010

Table 82

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 11 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	25,00%	5,727	1186,584	54,163 ± 50,366	0,584	177,020	8,003 ± 7,516
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	12,50%	8,141	22,248	1,912 ± 1,161	25,725	63,037	5,312 ± 3,212
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	2	8,33%	7,635	7,656	0,637 ± 0,450	42,186	55,357	4,064 ± 2,900
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	16,67%	5,643	283,019	12,757 ± 12,017	1,072	84,906	3,754 ± 3,607
<i>Oncorhynchus masu</i>	> 30 cm	0,30	5	20,83%	6,790	45,141	3,887 ± 2,138	2,716	16,778	1,566 ± 0,826
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	8,33%	5,629	17,762	0,975 ± 0,783	1,785	3,120	0,204 ± 0,150
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	16,67%	5,093	13,130	1,379 ± 0,716	0,289	1,838	0,156 ± 0,089

Table 83

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 12 (number of trawl stations 88)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	72	81,82%	6,017	27743,018	3624,643 ± 621,676	0,761	3823,420	577,460 ± 96,114
<i>Oncorhynchus keta</i>	= 30 cm	0,40	66	75,00%	7,146	9175,625	811,015 ± 172,043	1,110	1193,072	115,774 ± 25,512
<i>Oncorhynchus keta</i>	> 30 cm	0,30	30	34,09%	7,492	150,140	11,161 ± 2,924	5,325	365,284	26,373 ± 6,712
<i>Oncorhynchus masu</i>	> 30 cm	0,30	33	37,50%	6,177	560,263	17,925 ± 6,804	3,397	236,644	9,358 ± 2,977
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	13	14,77%	6,269	899,012	41,108 ± 16,355	0,439	118,108	5,430 ± 2,121
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	3	3,41%	7,539	8,310	0,267 ± 0,153	21,064	39,051	1,095 ± 0,648
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	2,27%	13,980	33,900	0,544 ± 0,417	4,432	81,785	0,980 ± 0,935
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	9,09%	7,827	37,227	1,453 ± 0,579	4,775	19,613	0,896 ± 0,350

<i>Oncorhynchus masu</i>	= 30 cm	0,40	10	11,36%	7,235	52,427	2,492 ± 0,955	1,736	16,724	0,717 ± 0,282
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,27%	12,034	16,329	0,322 ± 0,231	1,203	4,409	0,064 ± 0,052

Table 84

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 13 (number of trawl stations 51)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	28	54,90%	5,476	6886,843	340,831 ± 152,135	0,821	1218,145	58,108 ± 26,877
<i>Oncorhynchus keta</i>	= 30 cm	0,40	26	50,98%	12,647	4951,551	283,429 ± 117,538	1,751	824,781	45,446 ± 19,055
<i>Oncorhynchus keta</i>	> 30 cm	0,30	22	43,14%	7,557	575,332	23,125 ± 11,510	9,234	661,760	38,545 ± 14,476
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	5	9,80%	5,785	2357,145	58,037 ± 47,549	1,302	820,344	20,160 ± 16,550
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	13	25,49%	10,145	1268,331	34,498 ± 25,225	4,362	461,673	13,658 ± 9,239
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	12	23,53%	5,882	2563,296	69,627 ± 51,604	1,059	441,412	12,296 ± 8,924
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	5	9,80%	6,531	1114,091	25,765 ± 22,187	1,763	240,013	5,768 ± 4,803
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	5	9,80%	6,620	11,691	0,925 ± 0,411	12,928	59,577	4,094 ± 1,919
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	11,77%	9,042	68,558	3,603 ± 1,727	5,877	27,765	1,872 ± 0,821
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	3,92%	8,040	8,431	0,323 ± 0,228	12,647	21,305	0,666 ± 0,486
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	3,92%	8,662	10,145	0,369 ± 0,262	13,773	19,072	0,644 ± 0,461

Table 85

Salmon abundance in upper epipelagic water layer in autumn. The data of the years 1984-2003. Region # 14 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	16,67%	318,644	7988,938	470,874 ± 347,882	58,303	1305,439	79,125 ± 57,197
<i>Oncorhynchus keta</i>	> 30 cm	0,30	12	50,00%	6,836	83,164	13,776 ± 4,259	28,710	325,097	47,525 ± 15,517
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	12,50%	234,655	1304,316	79,504 ± 57,366	33,393	204,950	12,103 ± 8,944
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	12,50%	8,022	149,950	9,779 ± 7,030	3,410	77,612	5,278 ± 3,753
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	16,67%	7,812	13,261	1,703 ± 0,833	7,569	19,030	2,408 ± 1,207
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	8,33%	7,812	22,527	1,264 ± 1,001	5,468	16,294	0,907 ± 0,722
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	4,17%	5,186	5,186	0,216 ± 0,221	0,934	0,934	0,039 ± 0,040

Table 86

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 1 (number of trawl stations 35)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 87

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 2 (number of trawl stations 35)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 88

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 3 (number of trawl stations 21)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	4,76%	30,660	30,660	1,460 ± 1,496	137,662	137,662	6,555 ± 6,717

Table 89

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 5 (number of trawl stations 23)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 90

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 6 (number of trawl stations 49)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 91

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 7 (number of trawl stations 101)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	0,99%	14,026	14,026	0,139 ± 0,140	87,381	87,381	0,865 ± 0,869

Table 92

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 8 (number of trawl stations 97)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	5	5,16%	5,899	21,505	0,511 ± 0,265	1,175	4,946	0,123 ± 0,062

Table 93

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 9 (number of trawl stations 62)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	9,68%	27,305	4595,451	93,362 ± 75,023	6,007	1026,479	20,452 ± 16,740
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	3	4,84%	8,476	88,130	2,910 ± 1,963	10,171	34,371	1,169 ± 0,730
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	1,61%	8,476	8,476	0,137 ± 0,138	60,180	60,180	0,971 ± 0,979
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	1,61%	8,674	8,674	0,140 ± 0,141	7,807	7,807	0,126 ± 0,127
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,61%	6,985	6,985	0,113 ± 0,114	1,187	1,187	0,019 ± 0,019

Table 94

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 12 (number of trawl stations 92)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	64	69,57%	5,406	66364,758	2082,475 ± 787,511	1,000	14880,207	486,957 ± 179,343
<i>Oncorhynchus keta</i>	= 30 cm	0,40	25	27,17%	5,406	10058,034	271,881 ± 143,204	0,757	1645,468	39,301 ± 22,576
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	5,44%	8,518	1072,633	12,773 ± 11,741	7,117	427,103	5,168 ± 4,672
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	3,26%	11,326	24,459	0,578 ± 0,347	52,551	105,174	2,576 ± 1,534
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	3	3,26%	8,765	17,417	0,403 ± 0,242	31,555	91,001	2,006 ± 1,241
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,09%	6,372	6,372	0,069 ± 0,070	0,765	0,765	0,008 ± 0,008

Table 95

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 13 (number of trawl stations 66)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	35	53,03%	4,696	40852,132	2219,215 ± 788,961	1,141	9192,406	492,112 ± 175,665
<i>Oncorhynchus keta</i>	= 30 cm	0,40	21	31,82%	6,233	9728,980	490,611 ± 241,852	0,846	1705,717	78,880 ± 38,995
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	7,58%	8,518	186,267	3,683 ± 2,877	8,518	60,909	1,506 ± 0,965
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	9,09%	6,703	9,313	0,723 ± 0,288	6,992	29,803	1,383 ± 0,664
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	1,52%	8,518	8,518	0,129 ± 0,130	54,515	54,515	0,826 ± 0,832

Table 96

Salmon abundance in epipelagic water layer in winter. The data of the years 1984-2003. Region # 14 (number of trawl stations 23)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	17	73,91%	6,567	33034,557	3750,396 ± 1858,969	0,978	7961,291	865,639 ± 435,197
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	26,09%	6,531	6771,900	665,528 ± 401,931	0,980	1139,344	111,788 ± 68,800
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	4,35%	9,174	9,174	0,399 ± 0,408	117,431	117,431	5,106 ± 5,220
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	13,04%	8,311	26,125	2,236 ± 1,383	11,219	32,656	2,665 ± 1,659

<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	4,35%	105,198	105,198	4,574 ± 4,677	59,612	59,612	2,592 ± 2,650
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	17,39%	8,708	9,313	1,572 ± 0,747	3,539	9,518	0,917 ± 0,490
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	4,35%	55,046	55,046	2,393 ± 2,447	17,431	17,431	0,758 ± 0,775
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	4,35%	6,531	6,531	0,284 ± 0,290	1,633	1,633	0,071 ± 0,073

Table 97

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 1 (number of trawl stations 11)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 98

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 7 (number of trawl stations 11)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 99

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 8 (number of trawl stations 13)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	3	23,08%	5,899	6,024	1,372 ± 0,753	1,175	2,011	0,363 ± 0,205

Table 100

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 12 (number of trawl stations 48)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	40	83,33%	8,802	66364,758	3456,428 ± 1488,122	1,584	14880,207	813,284 ± 338,353
<i>Oncorhynchus keta</i>	= 30 cm	0,40	17	35,42%	6,365	10058,034	517,486 ± 272,274	0,904	1645,468	74,808 ± 43,050
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	6,25%	8,765	17,417	0,772 ± 0,461	31,555	91,001	3,845 ± 2,371
<i>Oncorhynchus keta</i>	> 30 cm	0,30	2	4,17%	11,326	17,417	0,599 ± 0,433	52,551	79,245	2,746 ± 1,982
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	3	6,25%	8,518	8,896	0,544 ± 0,311	7,117	8,273	0,489 ± 0,280
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	2,08%	6,372	6,372	0,133 ± 0,134	0,765	0,765	0,016 ± 0,016

Table 101

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 13 (number of trawl stations 32)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	20	62,50%	8,928	19587,598	2479,221 ± 1009,142	1,607	4580,823	546,372 ± 220,636
<i>Oncorhynchus keta</i>	= 30 cm	0,40	14	43,75%	6,233	9728,980	998,207 ± 490,377	0,846	1705,717	160,677 ± 79,069
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	12,50%	8,518	186,267	6,635 ± 5,905	8,518	60,909	2,800 ± 1,972
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	9,38%	8,708	9,313	0,839 ± 0,476	10,159	29,803	2,147 ± 1,318
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	3,13%	8,518	8,518	0,266 ± 0,270	54,515	54,515	1,704 ± 1,731

Table 102

Salmon abundance in upper epipelagic water layer in winter. The data of the years 1984-2003. Region # 14 (number of trawl stations 17)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	16	94,12%	6,567	33034,557	5032,295 ± 2472,571	0,978	7961,291	1161,196 ± 579,438
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	35,29%	6,531	6771,900	900,420 ± 539,799	0,980	1139,344	151,243 ± 92,482
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	5,88%	9,174	9,174	0,540 ± 0,556	117,431	117,431	6,908 ± 7,120
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	17,65%	8,311	26,125	3,025 ± 1,859	11,219	32,656	3,605 ± 2,231
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	23,53%	8,708	9,313	2,126 ± 0,988	3,539	9,518	1,241 ± 0,653
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	5,88%	55,046	55,046	3,238 ± 3,338	17,431	17,431	1,025 ± 1,057
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	5,88%	6,531	6,531	0,384 ± 0,396	1,633	1,633	0,096 ± 0,099

Table 103

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 1 (number of trawl stations 90)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 104

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 2 (number of trawl stations 55)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ± 0,000	0,000	0,000	0,000 ± 0,000

Table 105

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 3 (number of trawl stations 77)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	1,30%	18,880	18,880	0,245 ± 0,247	71,178	71,178	0,924 ± 0,930

Table 106

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 4 (number of trawl stations 37)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ±0,000	0,000	0,000	0,000 ±0,000

Table 107

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 5 (number of trawl stations 70)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	1,43%	16,990	16,990	0,243 ±0,244	65,651	65,651	0,938 ±0,945

Table 108

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 6 (number of trawl stations 85)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ±0,000	0,000	0,000	0,000 ±0,000

Table 109

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 7 (number of trawl stations 127)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ±0,000	0,000	0,000	0,000 ±0,000

Table 110

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 8 (number of trawl stations 84)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ±0,000	0,000	0,000	0,000 ±0,000

Table 111

Salmon abundance in epipelagic water layer in spring. The data of the years 1984-2003. Region # 9 (number of trawl stations 10)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
are not found out			0	0,00%	0,000	0,000	0,000 ±0,000	0,000	0,000	0,000 ±0,000

Table 112

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 1 (number of trawl stations 110)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	3,64%	9,104	72,055	0,961 ± 0,680	27,313	209,537	3,000 ± 2,015
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	1,82%	7,541	8,417	0,145 ± 0,103	55,555	82,955	1,259 ± 0,908
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	2,73%	6,289	804,336	7,554 ± 7,346	0,755	44,583	0,421 ± 0,407
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,91%	7,546	7,546	0,069 ± 0,069	37,278	37,278	0,339 ± 0,340
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	1,82%	5,656	67,915	0,669 ± 0,622	0,481	4,980	0,050 ± 0,046

Table 113

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 2 (number of trawl stations 82)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	4,88%	3,125	11,572	0,297 ± 0,169	7,500	37,030	0,887 ± 0,527

Table 114

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 3 (number of trawl stations 58)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	13	22,41%	8,699	103,068	10,200 ± 3,310	17,401	412,273	34,504 ± 11,318
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	5,17%	5,983	16,184	0,525 ± 0,329	30,511	110,050	3,426 ± 2,201
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,72%	12,550	12,550	0,216 ± 0,218	4,142	4,142	0,071 ± 0,072
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	1,72%	17,324	17,324	0,299 ± 0,301	0,953	0,953	0,016 ± 0,017

Table 115

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 4 (number of trawl stations 52)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	9	17,31%	14,502	117,873	7,902 ± 3,181	39,880	524,537	28,751 ± 12,268
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	3,85%	7,488	14,502	0,423 ± 0,314	80,866	88,461	3,256 ± 2,305
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	1,92%	5,394	5,394	0,104 ± 0,105	0,162	0,162	0,003 ± 0,003

Table 116

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 5 (number of trawl stations 84)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	7,14%	6,942	53,023	1,090 ± 0,661	11,912	150,231	2,948 ± 1,861
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	4,76%	3,145	15,365	0,387 ± 0,219	21,388	65,302	1,820 ± 0,996

Table 117

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 6 (number of trawl stations 48)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	2,08%	13,759	13,759	0,287 ± 0,290	48,502	48,502	1,010 ± 1,021
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	2,08%	12,965	12,965	0,270 ± 0,273	7,779	7,779	0,162 ± 0,164
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	2,08%	19,447	19,447	0,405 ± 0,409	2,917	2,917	0,061 ± 0,061

Table 118

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 7 (number of trawl stations 89)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	10	11,24%	14,783	587,008	21,254 ± 9,617	53,217	1886,811	71,542 ± 32,866
<i>Oncorhynchus gorbusha</i>	> 30 cm	0,30	8	8,99%	3,945	1009,762	16,599 ± 11,882	6,373	1496,467	24,490 ± 17,600
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	5	5,62%	3,945	46,122	1,155 ± 0,641	11,913	127,853	3,006 ± 1,701
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	1,12%	2029,110	2029,110	22,799 ± 22,928	231,746	231,746	2,604 ± 2,619
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	3,37%	5,749	82,836	1,231 ± 0,964	2,070	83,858	1,431 ± 1,052
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	6,74%	21,488	1473,774	18,478 ± 16,657	0,998	99,320	1,304 ± 1,124
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	8	8,99%	4,729	640,771	10,562 ± 7,423	0,865	48,058	0,835 ± 0,566
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	5,62%	5,128	234,950	3,458 ± 2,691	0,513	11,897	0,235 ± 0,151
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	1,12%	8,760	8,760	0,098 ± 0,099	4,030	4,030	0,045 ± 0,046

Table 119

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 8 (number of trawl stations 65)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbusha</i>	> 30 cm	0,30	9	13,85%	17,840	1109,852	53,524 ± 25,549	35,515	1532,606	72,474 ± 34,359
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	4,62%	227,976	11038,494	177,405 ± 171,110	17,105	639,724	10,469 ± 9,919
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	13	20,00%	5,999	7158,296	124,109 ± 110,920	0,360	465,624	9,889 ± 7,277
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	9,23%	6,720	90,559	2,691 ± 1,522	2,957	249,491	7,201 ± 4,277
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	4	6,15%	13,440	201,607	4,110 ± 3,176	48,799	102,148	4,525 ± 2,337
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	6,15%	11,775	1659,119	29,720 ± 25,939	3,549	152,532	3,779 ± 2,691
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	4,62%	7,835	41,146	0,943 ± 0,672	4,701	133,108	2,213 ± 2,065
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	3,08%	139,991	160,560	4,624 ± 3,277	15,924	24,084	0,616 ± 0,444
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	1,54%	60,607	60,607	0,932 ± 0,940	27,612	27,612	0,425 ± 0,428
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	6,15%	7,857	88,141	1,774 ± 1,381	1,309	14,102	0,297 ± 0,223
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	1,54%	220,709	220,709	3,396 ± 3,422	3,289	3,289	0,051 ± 0,051

Table 120

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 9 (number of trawl stations 128)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	28	21,88%	5,092	4534,101	107,907 ± 47,372	0,662	501,018	12,624 ± 5,337
<i>Oncorhynchus keta</i>	= 30 cm	0,40	20	15,63%	5,278	2787,860	45,881 ± 24,395	0,633	294,410	5,788 ± 2,686
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	3	2,34%	13,796	298,318	3,102 ± 2,429	15,176	412,935	4,218 ± 3,350
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	6	4,69%	3,193	18,054	0,532 ± 0,237	17,560	72,218	2,331 ± 0,999
<i>Oncorhynchus keta</i>	> 30 cm	0,30	10	7,81%	5,354	21,514	0,868 ± 0,294	10,130	68,128	2,009 ± 0,782
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	4,69%	6,279	229,746	3,579 ± 2,219	3,586	94,655	1,497 ± 0,889
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	7	5,47%	5,108	159,306	2,828 ± 1,549	1,092	18,167	0,365 ± 0,184
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	2,34%	19,690	28,658	0,563 ± 0,328	6,695	10,030	0,193 ± 0,112
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	2,34%	8,030	15,881	0,255 ± 0,154	2,944	7,940	0,112 ± 0,071
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	1,56%	9,581	12,254	0,171 ± 0,122	2,874	4,075	0,054 ± 0,039
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	1	0,78%	12,112	12,112	0,095 ± 0,095	3,028	3,028	0,024 ± 0,024

Table 121

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 10 (number of trawl stations 103)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	8	7,77%	6,852	2036,023	20,796 ± 19,858	24,667	10770,562	107,581 ± 105,057
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	10	9,71%	5,787	40,696	1,749 ± 0,622	37,558	252,315	12,010 ± 4,272
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	2,91%	12,118	88,615	1,376 ± 0,955	8,240	37,661	0,636 ± 0,419
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	10	9,71%	4,202	142,417	3,703 ± 1,833	0,420	16,549	0,444 ± 0,206
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	5,83%	6,104	68,360	1,821 ± 0,912	0,494	7,178	0,208 ± 0,105
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	0,97%	9,094	9,094	0,088 ± 0,089	2,728	2,728	0,026 ± 0,027
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,97%	6,104	6,104	0,059 ± 0,060	0,549	0,549	0,005 ± 0,005

Table 122

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 11 (number of trawl stations 49)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	10,20%	6,482	77,102	2,642 ± 1,673	25,725	401,699	11,382 ± 8,384
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	4,08%	8,557	337,747	7,067 ± 6,963	4,279	124,846	2,635 ± 2,574
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	8,16%	6,253	283,019	8,308 ± 6,189	1,313	84,906	1,956 ± 1,753
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	2,04%	14,211	14,211	0,290 ± 0,293	10,516	10,516	0,215 ± 0,217
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	10,20%	5,447	95,923	4,316 ± 2,655	0,289	2,878	0,142 ± 0,074
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	4,08%	5,629	17,762	0,477 ± 0,382	1,785	3,120	0,100 ± 0,073
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	4,08%	6,418	10,894	0,353 ± 0,258	0,584	0,812	0,028 ± 0,020

Table 123

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 12 (number of trawl stations 66)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	10,61%	13,221	4897,278	142,010 ± 82,316	1,395	689,247	19,642 ± 11,568
<i>Oncorhynchus keta</i>	> 30 cm	0,30	8	12,12%	6,433	27,530	2,175 ± 0,822	19,300	105,174	7,166 ± 2,763
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	7,58%	26,917	652,970	14,163 ± 10,171	3,365	105,201	2,104 ± 1,624
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	1,52%	14,356	14,356	0,218 ± 0,219	129,200	129,200	1,958 ± 1,973
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	6,06%	6,482	64,332	1,636 ± 1,087	8,297	55,390	1,645 ± 0,995
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	4,55%	10,836	26,443	0,954 ± 0,579	8,669	17,628	0,651 ± 0,388
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	3,03%	8,456	14,356	0,346 ± 0,253	5,970	7,178	0,199 ± 0,141
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	3,03%	3,164	7,636	0,164 ± 0,126	0,949	2,291	0,049 ± 0,038

Table 124

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 13 (number of trawl stations 48)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	4,17%	333,889	2357,145	56,063 ± 49,974	116,569	820,344	19,519 ± 17,393
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	2,08%	1268,331	1268,331	26,424 ± 26,703	461,673	461,673	9,618 ± 9,720
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	8,33%	5,623	100,199	3,119 ± 2,227	22,493	240,477	8,447 ± 5,560
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	3	6,25%	36,307	1114,091	27,010 ± 23,586	9,062	240,013	5,789 ± 5,076
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	6,25%	109,225	803,147	28,374 ± 19,272	14,894	98,233	4,338 ± 2,856
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	6,25%	3,391	1130,746	25,490 ± 23,839	0,254	137,380	3,281 ± 2,913
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	4,17%	35,515	71,858	2,237 ± 1,673	50,716	93,656	3,008 ± 2,222
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	2	4,17%	6,620	14,206	0,434 ± 0,327	45,957	59,577	2,199 ± 1,568
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	2,08%	21,784	21,784	0,454 ± 0,459	2,832	2,832	0,059 ± 0,060

Table 125

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 14 (number of trawl stations 37)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	29,73%	4,472	83,164	8,693 ± 2,988	16,995	325,097	29,722 ± 10,736
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	2,70%	854,229	854,229	23,087 ± 23,406	195,230	195,230	5,276 ± 5,349
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	2,70%	543,600	543,600	14,692 ± 14,895	96,295	96,295	2,603 ± 2,638
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	10,81%	7,812	13,261	1,104 ± 0,550	7,569	19,030	1,562 ± 0,795
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	1	2,70%	3,917	3,917	0,106 ± 0,107	26,636	26,636	0,720 ± 0,730
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	2,70%	7,812	7,812	0,211 ± 0,214	5,468	5,468	0,148 ± 0,150
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	5,41%	5,186	8,421	0,368 ± 0,268	0,934	1,381	0,063 ± 0,045

Table 126

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 1 (number of trawl stations 49)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	8,16%	9,104	72,055	2,158 ± 1,525	27,313	209,537	6,736 ± 4,516
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	6,12%	6,289	804,336	16,959 ± 16,579	0,755	44,583	0,946 ± 0,919

Table 127

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 2 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	2	8,33%	3,125	11,572	0,612 ± 0,505	7,500	37,030	1,855 ± 1,594

Table 128

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 3 (number of trawl stations 25)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	10	40,00%	8,699	103,068	19,470 ± 6,626	17,401	412,273	67,389 ± 23,118
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	8,00%	8,303	16,184	0,979 ± 0,730	58,121	110,050	6,727 ± 4,993
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	4,00%	12,550	12,550	0,502 ± 0,512	4,142	4,142	0,166 ± 0,169

Table 129

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 4 (number of trawl stations 27)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	9	33,33%	14,502	117,873	15,219 ± 5,873	39,880	524,537	55,372 ± 22,808
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	3,70%	14,502	14,502	0,537 ± 0,547	88,461	88,461	3,276 ± 3,339
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	3,70%	5,394	5,394	0,200 ± 0,204	0,162	0,162	0,006 ± 0,006

Table 130

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 5 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	25,00%	6,942	53,023	3,814 ± 2,284	11,912	150,231	10,318 ± 6,456
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	12,50%	6,942	15,365	1,222 ± 0,750	23,177	65,302	5,480 ± 3,349

Table 131

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 6 (number of trawl stations 17)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	5,88%	13,759	13,759	0,809 ± 0,834	48,502	48,502	2,853 ± 2,941
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	5,88%	12,965	12,965	0,763 ± 0,786	7,779	7,779	0,458 ± 0,472
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	5,88%	19,447	19,447	1,144 ± 1,179	2,917	2,917	0,172 ± 0,177

Table 132

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 7 (number of trawl stations 43)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	9	20,93%	14,783	587,008	34,054 ± 17,234	53,217	1886,811	108,952 ± 55,735
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	8	18,61%	3,945	1009,762	34,356 ± 24,596	6,373	1496,467	50,689 ± 36,435
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	2,33%	2029,110	2029,110	47,189 ± 47,747	231,746	231,746	5,389 ± 5,453
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	4	9,30%	3,945	46,122	2,061 ± 1,286	11,913	127,853	4,573 ± 3,129
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	4,65%	20,965	82,836	2,414 ± 1,999	41,418	83,858	2,913 ± 2,180
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	13,95%	21,488	1473,774	38,245 ± 34,635	0,998	99,320	2,699 ± 2,336
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	7	16,28%	6,570	640,771	21,750 ± 15,362	0,865	48,058	1,704 ± 1,170
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	6,98%	11,087	234,950	6,161 ± 5,535	0,865	11,897	0,333 ± 0,282
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	2,33%	8,760	8,760	0,204 ± 0,206	4,030	4,030	0,094 ± 0,095

Table 133

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 8 (number of trawl stations 27)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	7	25,93%	17,840	1109,852	105,690 ± 57,321	35,515	1532,606	142,623 ± 77,029
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	11,11%	227,976	11038,494	427,086 ± 416,106	17,105	639,724	25,202 ± 24,110
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	7	25,93%	5,999	7158,296	279,131 ± 269,764	0,360	465,624	20,191 ± 17,566
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	18,52%	10,565	90,559	6,228 ± 3,621	20,892	249,491	17,226 ± 10,196
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	11,11%	15,250	201,607	9,396 ± 7,678	48,799	102,148	7,582 ± 4,576
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	3,70%	1659,119	1659,119	61,449 ± 62,619	152,532	152,532	5,649 ± 5,757
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	3,70%	160,560	160,560	5,947 ± 6,060	24,084	24,084	0,892 ± 0,909
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	14,82%	7,857	88,141	4,270 ± 3,336	1,309	14,102	0,716 ± 0,537
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	3,70%	7,835	7,835	0,290 ± 0,296	4,701	4,701	0,174 ± 0,177
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	3,70%	220,709	220,709	8,174 ± 8,330	3,289	3,289	0,122 ± 0,124

Table 134

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 9 (number of trawl stations 49)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	16	32,65%	5,092	4534,101	165,479 ± 99,879	0,662	501,018	19,487 ± 11,309
<i>Oncorhynchus keta</i>	= 30 cm	0,40	14	28,57%	5,327	2787,860	103,547 ± 62,492	0,716	294,410	12,920 ± 6,835
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	4,08%	13,796	298,318	6,370 ± 6,152	15,176	412,935	8,737 ± 8,514
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	4	8,16%	3,193	18,054	0,967 ± 0,539	17,560	72,218	4,210 ± 2,243
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	12,25%	7,850	21,514	1,594 ± 0,679	10,130	68,128	3,735 ± 1,865
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	5	10,20%	7,171	229,746	9,222 ± 5,776	3,586	94,655	3,712 ± 2,307
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	10,20%	5,108	159,306	5,766 ± 3,809	1,092	18,167	0,704 ± 0,440
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	2,04%	28,658	28,658	0,585 ± 0,591	10,030	10,030	0,205 ± 0,207
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	2,04%	12,254	12,254	0,250 ± 0,253	4,075	4,075	0,083 ± 0,084
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	2,04%	8,736	8,736	0,178 ± 0,180	3,495	3,495	0,071 ± 0,072
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	1	2,04%	12,112	12,112	0,247 ± 0,250	3,028	3,028	0,062 ± 0,062

Table 135

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 10 (number of trawl stations 54)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	11,11%	6,852	2036,023	39,198 ± 38,037	24,667	10770,562	203,872 ± 201,255
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	8	14,82%	5,787	40,696	2,648 ± 1,065	37,558	252,315	16,959 ± 6,921
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	5,56%	12,118	88,615	2,624 ± 1,820	8,240	37,661	1,213 ± 0,798
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	11,11%	6,626	142,417	6,116 ± 3,456	1,193	16,549	0,712 ± 0,385
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	9,26%	6,104	68,360	2,532 ± 1,468	0,494	7,178	0,270 ± 0,158
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	1,85%	6,104	6,104	0,113 ± 0,114	0,549	0,549	0,010 ± 0,010

Table 136

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 11 (number of trawl stations 39)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	10,26%	8,141	77,102	3,153 ± 2,098	25,725	401,699	13,569 ± 10,537
<i>Oncorhynchus masu</i>	= 30 cm	0,40	4	10,26%	6,253	283,019	10,439 ± 7,779	1,313	84,906	2,458 ± 2,206
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	1	2,56%	14,211	14,211	0,364 ± 0,369	10,516	10,516	0,270 ± 0,273
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	12,82%	5,447	95,923	5,423 ± 3,330	0,289	2,878	0,178 ± 0,093
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	5,13%	5,629	17,762	0,600 ± 0,480	1,785	3,120	0,126 ± 0,092
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	2,56%	8,557	8,557	0,219 ± 0,222	4,279	4,279	0,110 ± 0,111

<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	5,13%	6,418	10,894	0,444 ± 0,325	0,584	0,812	0,036 ± 0,026
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Table 137

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 12 (number of trawl stations 16)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	25,00%	6,433	25,672	3,597 ± 1,961	19,300	61,699	10,706 ± 5,501
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	12,50%	30,708	64,332	5,940 ± 4,481	32,857	55,390	5,515 ± 4,034
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	12,50%	25,672	26,443	3,257 ± 2,298	16,687	17,628	2,145 ± 1,514
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	6,25%	8,456	8,456	0,529 ± 0,546	5,970	5,970	0,373 ± 0,385
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	6,25%	13,221	13,221	0,826 ± 0,853	1,395	1,395	0,087 ± 0,090

Table 138

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 13 (number of trawl stations 12)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	8,33%	2357,145	2357,145	196,429 ± 205,163	820,344	820,344	68,362 ± 71,402
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	8,33%	1268,331	1268,331	105,694 ± 110,394	461,673	461,673	38,473 ± 40,183
<i>Oncorhynchus keta</i>	> 30 cm	0,30	2	16,67%	35,929	100,199	11,344 ± 8,993	111,381	240,477	29,321 ± 22,253
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	2	16,67%	36,307	1114,091	95,867 ± 96,733	9,062	240,013	20,756 ± 20,834
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	16,67%	35,515	71,858	8,948 ± 6,720	50,716	93,656	12,031 ± 8,910
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	2	16,67%	6,620	14,206	1,735 ± 1,316	45,957	59,577	8,795 ± 6,255
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	8,33%	89,366	89,366	7,447 ± 7,778	19,859	19,859	1,655 ± 1,729
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	8,33%	109,225	109,225	9,102 ± 9,507	14,894	14,894	1,241 ± 1,296
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	8,33%	21,784	21,784	1,815 ± 1,896	2,832	2,832	0,236 ± 0,246

Table 139

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1984-1990. Region # 14 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	9	37,50%	6,836	83,164	11,811 ± 4,318	28,710	325,097	41,136 ± 15,800
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	16,67%	7,812	13,261	1,703 ± 0,833	7,569	19,030	2,408 ± 1,207
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	4,17%	7,812	7,812	0,325 ± 0,332	5,468	5,468	0,228 ± 0,233
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	4,17%	5,186	5,186	0,216 ± 0,221	0,934	0,934	0,039 ± 0,040

Table 140

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 1 (number of trawl stations 62)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	16	25,81%	6,853	132,967	7,993 ± 2,970	14,533	349,537	25,184 ± 9,049
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	4,84%	20,558	2676,659	59,735 ± 46,241	1,686	187,002	4,291 ± 3,271
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	9,68%	6,920	74,794	2,738 ± 1,561	7,647	112,689	3,811 ± 2,242
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	3,23%	8,111	8,111	0,262 ± 0,185	45,258	82,243	2,056 ± 1,516
<i>Oncorhynchus keta</i>	= 30 cm	0,40	5	8,07%	41,116	336,110	13,024 ± 6,826	2,344	17,173	0,841 ± 0,430

Table 141

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 2 (number of trawl stations 44)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	16	36,36%	5,613	312,353	27,493 ± 10,209	10,624	834,594	77,174 ± 28,061
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	9	20,46%	6,790	178,223	6,684 ± 4,197	7,449	276,246	9,223 ± 6,393
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	2,27%	12,166	12,166	0,277 ± 0,280	2,360	2,360	0,054 ± 0,054
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	2,27%	12,166	12,166	0,277 ± 0,280	0,827	0,827	0,019 ± 0,019
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	2,27%	12,166	12,166	0,277 ± 0,280	0,700	0,700	0,016 ± 0,016

Table 142

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 3 (number of trawl stations 19)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	5,26%	1170,890	1170,890	61,626 ± 63,314	186,757	186,757	9,829 ± 10,099
<i>Oncorhynchus keta</i>	> 30 cm	0,30	1	5,26%	17,347	17,347	0,913 ± 0,938	47,876	47,876	2,520 ± 2,589
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	5,26%	169,129	169,129	8,902 ± 9,145	23,496	23,496	1,237 ± 1,271
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	5,26%	13,010	13,010	0,685 ± 0,703	3,903	3,903	0,205 ± 0,211

Table 143

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 5 (number of trawl stations 45)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	24,44%	6,611	399,323	17,575 ± 10,041	11,238	1227,110	42,966 ± 28,134
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	14	31,11%	5,952	2406,905	174,952 ± 78,384	0,653	387,512	25,251 ± 11,676
<i>Oncorhynchus keta</i>	= 30 cm	0,40	12	26,67%	6,223	732,103	59,025 ± 22,434	0,610	120,424	8,381 ± 3,379
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	13,33%	6,611	33,485	2,324 ± 1,086	7,602	39,599	2,787 ± 1,317
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	2,22%	8,708	8,708	0,194 ± 0,196	55,297	55,297	1,229 ± 1,243
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	8,89%	7,615	34,064	1,308 ± 0,816	3,609	19,800	0,983 ± 0,589

<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	2,22%	7,770	7,770	0,173 ±0,175	5,983	5,983	0,133 ±0,134
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Table 144

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 6 (number of trawl stations 96)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	34	35,42%	7,399	961,056	22,319 ±10,581	9,302	3459,801	57,525 ±36,594
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	35	36,46%	7,288	243,831	13,374 ±3,607	6,489	306,531	18,589 ±4,806
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	4,17%	6,083	4788,685	67,498 ±52,939	0,517	597,678	7,115 ±6,310
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	8,33%	7,607	81,108	2,268 ±1,161	7,032	66,413	2,154 ±0,886
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	7	7,29%	7,288	8,485	0,570 ±0,210	5,578	43,798	1,762 ±0,709
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	4,17%	6,083	793,335	13,587 ±9,604	0,493	89,370	1,675 ±1,149
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	3,13%	6,083	182,492	2,462 ±1,970	1,594	58,428	0,754 ±0,624
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	4,17%	7,441	8,782	0,346 ±0,172	4,667	15,477	0,384 ±0,212
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	1,04%	6,204	6,204	0,065 ±0,065	0,441	0,441	0,005 ±0,005

Table 145

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 7 (number of trawl stations 118)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	46	38,98%	6,964	2572,196	64,890 ±24,409	10,447	7328,188	168,692 ±66,596
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	34	28,81%	7,224	1994,829	58,099 ±21,735	6,357	2491,596	80,401 ±29,750
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	8	6,78%	7,201	26,125	0,794 ±0,319	27,577	128,447	4,277 ±1,723
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	4,24%	6,531	2532,949	23,204 ±21,585	0,888	220,890	2,128 ±1,888
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	5	4,24%	7,751	39,393	0,725 ±0,389	17,425	115,738	1,873 ±1,079
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,85%	1988,496	1988,496	16,852 ±16,924	175,889	175,889	1,491 ±1,497
<i>Oncorhynchus keta</i>	= 30 cm	0,40	8	6,78%	5,821	596,611	10,121 ±5,768	0,582	110,425	1,455 ±0,996
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	8	6,78%	6,013	198,870	5,109 ±2,480	0,259	61,545	1,417 ±0,754
<i>Oncorhynchus tschawytscha</i>	= 30 cm	0,40	8	6,78%	5,401	98,969	2,842 ±1,253	0,875	12,432	0,386 ±0,170
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	5	4,24%	16,202	167,470	2,820 ±1,633	2,652	20,327	0,316 ±0,187
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	1,70%	7,762	8,708	0,140 ±0,099	7,296	28,302	0,302 ±0,248
<i>Oncorhynchus masu</i>	= 30 cm	0,40	7	5,93%	5,821	98,969	1,252 ±0,857	0,611	20,344	0,240 ±0,175

Table 146

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 8 (number of trawl stations 114)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	40,35%	7,572	24980,370	552,133 ±253,210	7,572	30718,995	713,100 ±317,650
<i>Oncorhynchus keta</i>	> 30 cm	0,30	50	43,86%	6,754	323,682	19,843 ±3,996	4,141	713,377	46,361 ±9,715

<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	19	16,67%	7,138	86,468	4,787 ± 1,376	15,331	268,272	11,711 ± 3,410
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	14	12,28%	7,185	42,590	1,903 ± 0,600	6,618	132,624	4,499 ± 1,600
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	5,26%	7,399	15,756	0,479 ± 0,203	28,858	83,193	2,308 ± 1,010
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	7	6,14%	5,899	453,932	4,435 ± 4,001	1,175	112,575	1,101 ± 0,992
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	1,75%	5,647	11,208	0,148 ± 0,110	0,740	2,802	0,031 ± 0,025
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	0,88%	30,084	30,084	0,264 ± 0,265	1,354	1,354	0,012 ± 0,012

Table 147

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 9 (number of trawl stations 208)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	113	54,33%	3,070	3870,838	224,058 ± 39,522	2,149	4294,551	275,777 ± 46,894
<i>Oncorhynchus keta</i>	> 30 cm	0,30	100	48,08%	6,964	504,106	19,030 ± 3,136	2,646	1679,344	49,018 ± 9,440
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	37	17,79%	5,604	24725,684	249,384 ± 124,559	0,062	4707,773	45,854 ± 23,595
<i>Oncorhynchus keta</i>	= 30 cm	0,40	46	22,12%	5,387	1839,771	59,488 ± 16,128	0,189	287,372	9,004 ± 2,689
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	25	12,02%	6,751	41,787	1,375 ± 0,314	6,201	157,537	5,406 ± 1,249
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	18	8,65%	7,382	22,821	0,974 ± 0,240	9,723	61,460	2,954 ± 0,718
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	9	4,33%	7,278	15,344	0,410 ± 0,142	9,450	44,115	0,848 ± 0,313
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	1,92%	33,218	176,673	1,783 ± 1,069	2,519	22,071	0,206 ± 0,125
<i>Oncorhynchus masu</i>	> 30 cm	0,30	8	3,85%	7,051	16,045	0,347 ± 0,127	2,802	9,237	0,181 ± 0,069
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	2,89%	6,669	184,793	1,194 ± 0,903	0,583	21,602	0,158 ± 0,109
<i>Oncorhynchus masu</i>	= 30 cm	0,40	11	5,29%	5,326	39,187	0,718 ± 0,269	0,297	5,499	0,122 ± 0,046
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	2	0,96%	5,588	6,167	0,057 ± 0,040	1,648	1,665	0,016 ± 0,011

Table 148

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 10 (number of trawl stations 89)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	52	58,43%	6,929	2346,780	159,361 ± 41,458	6,357	3337,121	223,834 ± 58,301
<i>Oncorhynchus keta</i>	> 30 cm	0,30	32	35,96%	6,948	235,212	17,665 ± 4,690	5,370	971,833	65,071 ± 19,114
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	3,37%	7,031	8,708	0,269 ± 0,155	37,676	60,958	1,589 ± 0,933
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	6,74%	5,273	457,189	5,458 ± 5,164	0,185	69,630	0,817 ± 0,787
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	3,37%	7,683	8,674	0,279 ± 0,160	18,910	27,113	0,806 ± 0,468
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	2,25%	7,503	44,066	0,579 ± 0,504	4,126	15,570	0,221 ± 0,181
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,37%	5,273	12,446	0,264 ± 0,165	0,893	3,672	0,066 ± 0,045
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,12%	33,050	33,050	0,371 ± 0,373	3,580	3,580	0,040 ± 0,040
<i>Oncorhynchus keta</i>	= 30 cm	0,40	2	2,25%	12,325	44,483	0,638 ± 0,520	0,690	2,555	0,036 ± 0,030
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,12%	8,244	8,244	0,093 ± 0,093	2,803	2,803	0,031 ± 0,032

Table 149

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 11 (number of trawl stations 145)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	89	61,38%	7,185	3522,778	288,524 ± 56,424	6,610	4791,124	367,439 ± 72,853
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	10,35%	6,746	855,922	7,095 ± 5,930	19,809	2986,871	24,378 ± 20,680
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	9	6,21%	7,143	16,132	0,548 ± 0,187	24,107	129,231	4,328 ± 1,552
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	4,14%	7,683	24,197	0,585 ± 0,255	22,817	71,947	1,516 ± 0,675
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	4,83%	5,317	1186,584	10,509 ± 8,360	0,098	177,020	1,333 ± 1,226
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	2,07%	6,790	45,141	0,516 ± 0,352	2,716	16,778	0,202 ± 0,135
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	4,83%	2,930	77,283	1,474 ± 0,746	0,193	5,913	0,115 ± 0,059
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	4,14%	5,680	21,881	0,394 ± 0,188	0,674	2,697	0,065 ± 0,029
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	3,45%	5,059	8,296	0,222 ± 0,100	0,620	1,542	0,038 ± 0,017

Table 150

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 12 (number of trawl stations 241)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	94	39,00%	5,406	66364,758	1311,286 ± 335,380	0,049	14880,207	280,268 ± 73,947
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	139	57,68%	7,770	1983,195	168,819 ± 20,625	7,117	3190,226	218,725 ± 26,986
<i>Oncorhynchus keta</i>	> 30 cm	0,30	74	30,71%	5,026	427,815	10,690 ± 2,263	4,849	1441,738	34,512 ± 7,619
<i>Oncorhynchus keta</i>	= 30 cm	0,40	70	29,05%	5,406	10058,034	246,316 ± 72,650	0,079	1645,468	33,104 ± 10,868
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	17	7,05%	7,382	35,700	0,747 ± 0,210	21,064	124,594	3,468 ± 0,925
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	13	5,39%	6,206	899,012	14,894 ± 6,065	0,118	118,108	1,931 ± 0,787
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	10	4,15%	7,298	23,311	0,447 ± 0,154	2,664	66,865	1,165 ± 0,447
<i>Oncorhynchus masu</i>	> 30 cm	0,30	13	5,39%	6,177	84,938	1,434 ± 0,525	3,397	46,931	0,799 ± 0,304
<i>Oncorhynchus masu</i>	= 30 cm	0,40	18	7,47%	5,430	27,542	0,702 ± 0,182	0,161	4,476	0,136 ± 0,037
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,83%	10,655	15,077	0,107 ± 0,077	9,909	13,042	0,095 ± 0,068
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	1,66%	12,034	80,013	0,560 ± 0,358	1,203	3,077	0,034 ± 0,018

Table 151

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 13 (number of trawl stations 162)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	43	26,54%	4,696	40852,132	920,429 ± 329,921	0,260	9192,406	204,021 ± 73,458
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	87	53,70%	7,538	2339,068	151,876 ± 27,256	8,518	3096,926	195,263 ± 34,079
<i>Oncorhynchus keta</i>	> 30 cm	0,30	72	44,44%	6,703	437,229	31,174 ± 5,629	6,992	1460,040	87,872 ± 16,562

<i>Oncorhynchus keta</i>	= 30 cm	0,40	32	19,75%	5,779	9728,980	229,656 ± 100,971	0,376	1705,717	36,703 ± 16,251
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	17	10,49%	7,384	70,038	2,040 ± 0,641	6,864	220,154	4,817 ± 1,739
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	12	7,41%	7,226	16,413	0,698 ± 0,206	16,964	102,078	3,542 ± 1,162
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	9	5,56%	7,607	70,038	1,035 ± 0,483	6,096	172,139	2,095 ± 1,137
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	3	1,85%	6,323	147,865	0,992 ± 0,917	1,763	40,909	0,277 ± 0,254
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	2,47%	5,882	39,116	0,384 ± 0,256	1,059	8,932	0,082 ± 0,057
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	0,62%	5,785	5,785	0,036 ± 0,036	1,302	1,302	0,008 ± 0,008

Table 152

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 14 (number of trawl stations 82)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	19	23,17%	6,567	33034,557	1088,115 ± 538,762	0,075	7961,291	249,144 ± 125,893
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	45	54,88%	6,918	2699,991	169,566 ± 47,730	6,468	4229,669	227,612 ± 65,731
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	25,61%	7,524	445,944	34,158 ± 10,964	11,219	1519,331	110,387 ± 35,743
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	10,98%	6,531	6771,900	194,122 ± 114,141	0,106	1139,344	32,399 ± 19,505
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	3,66%	8,022	19,847	0,452 ± 0,283	32,892	117,431	2,966 ± 1,863
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	2,44%	8,022	105,198	1,381 ± 1,293	3,410	59,612	0,769 ± 0,732
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	7,32%	6,714	22,527	0,797 ± 0,355	3,539	16,294	0,586 ± 0,272
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,22%	10,324	10,324	0,126 ± 0,127	25,914	25,914	0,316 ± 0,318
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,66%	5,036	7,057	0,233 ± 0,135	0,473	0,966	0,029 ± 0,017
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,44%	6,531	9,461	0,195 ± 0,140	0,128	1,633	0,021 ± 0,020

Table 153

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 1 (number of trawl stations 45)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	33,33%	6,853	132,967	10,800 ± 4,030	14,533	349,537	33,910 ± 12,261
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	13,33%	6,920	74,794	3,772 ± 2,143	7,647	112,689	5,251 ± 3,080
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	4,44%	8,111	8,111	0,360 ± 0,255	45,258	82,243	2,833 ± 2,089
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	6,67%	41,116	336,110	10,140 ± 7,750	2,344	17,173	0,538 ± 0,400
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	2,22%	20,558	20,558	0,457 ± 0,462	1,686	1,686	0,037 ± 0,038

Table 154

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 2 (number of trawl stations 25)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	14	56,00%	5,613	312,353	45,009 ± 17,205	10,624	834,594	123,756 ± 47,026
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	9	36,00%	6,790	178,223	11,765 ± 7,345	7,449	276,246	16,232 ± 11,237
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	4,00%	12,166	12,166	0,487 ± 0,497	2,360	2,360	0,094 ± 0,096

<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	4,00%	12,166	12,166	0,487 ± 0,497	0,827	0,827	0,033 ± 0,034
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	4,00%	12,166	12,166	0,487 ± 0,497	0,700	0,700	0,028 ± 0,029

Table 155

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 5 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	10	41,67%	6,611	399,323	32,244 ± 18,643	11,238	1227,110	79,823 ± 52,575
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	10	41,67%	5,952	2406,905	273,752 ± 142,121	0,653	387,512	40,438 ± 21,332
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	37,50%	6,223	732,103	70,068 ± 35,903	0,610	120,424	10,219 ± 5,548
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	6	25,00%	6,611	33,485	4,357 ± 1,979	7,602	39,599	5,226 ± 2,403
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	1	4,17%	8,708	8,708	0,363 ± 0,371	55,297	55,297	2,304 ± 2,354
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	12,50%	7,615	8,874	1,033 ± 0,583	3,609	19,800	1,127 ± 0,856
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	4,17%	7,770	7,770	0,324 ± 0,331	5,983	5,983	0,249 ± 0,255

Table 156

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 6 (number of trawl stations 60)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	34	56,67%	7,399	961,056	35,711 ± 16,793	9,302	3459,801	92,041 ± 58,456
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	35	58,33%	7,288	243,831	21,399 ± 5,547	6,489	306,531	29,743 ± 7,360
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	6,67%	6,083	4788,685	107,996 ± 84,797	0,517	597,678	11,384 ± 10,119
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	8	13,33%	7,607	81,108	3,628 ± 1,846	7,032	66,413	3,447 ± 1,400
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	7	11,67%	7,288	8,485	0,912 ± 0,330	5,578	43,798	2,819 ± 1,120
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	6,67%	6,083	793,335	21,739 ± 15,365	0,493	89,370	2,680 ± 1,838
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	5,00%	6,083	182,492	3,939 ± 3,157	1,594	58,428	1,207 ± 1,000
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	4	6,67%	7,441	8,782	0,554 ± 0,273	4,667	15,477	0,614 ± 0,338
<i>Oncorhynchus masu</i>	= 30 cm	0,40	1	1,67%	6,204	6,204	0,103 ± 0,104	0,441	0,441	0,007 ± 0,007

Table 157

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 7 (number of trawl stations 72)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	46	63,89%	6,964	2572,196	106,347 ± 39,432	10,447	7328,188	276,468 ± 107,786
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	34	47,22%	7,224	1994,829	95,218 ± 35,105	6,357	2491,596	131,769 ± 48,029
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	8	11,11%	7,201	26,125	1,301 ± 0,517	27,577	128,447	7,009 ± 2,791
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	5,56%	6,531	2532,949	37,593 ± 35,460	0,888	220,890	3,418 ± 3,101
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	5	6,94%	7,751	39,393	1,188 ± 0,635	17,425	115,738	3,069 ± 1,763
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	1,39%	1988,496	1988,496	27,618 ± 27,812	175,889	175,889	2,443 ± 2,460
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	7	9,72%	6,013	192,915	5,611 ± 3,004	0,259	60,986	1,468 ± 0,899

<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	9,72%	5,821	267,591	8,300 ±4,600	0,582	38,608	0,851 ±0,562
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	7	9,72%	5,401	98,969	3,786 ±1,861	0,875	12,432	0,508 ±0,249
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	2,78%	7,762	8,708	0,229 ±0,162	7,296	28,302	0,494 ±0,407
<i>Oncorhynchus masu</i>	= 30 cm	0,40	6	8,33%	5,821	98,969	1,906 ±1,398	0,611	20,344	0,368 ±0,286
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	5,56%	16,202	76,976	2,295 ±1,337	2,652	6,323	0,235 ±0,122

Table 158

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 8 (number of trawl stations 82)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	46	56,10%	7,572	24980,370	767,600 ±350,306	7,572	30718,995	991,383 ±439,234
<i>Oncorhynchus keta</i>	> 30 cm	0,30	50	60,98%	6,754	323,682	27,587 ±5,330	4,141	713,377	64,453 ±13,004
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	19	23,17%	7,138	86,468	6,655 ±1,879	15,331	268,272	16,281 ±4,658
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	14	17,07%	7,185	42,590	2,645 ±0,822	6,618	132,624	6,255 ±2,202
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	7,32%	7,399	15,756	0,666 ±0,280	28,858	83,193	3,209 ±1,396
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	6	7,32%	5,899	453,932	6,042 ±5,569	1,175	112,575	1,504 ±1,381
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	2,44%	5,647	11,208	0,206 ±0,153	0,740	2,802	0,043 ±0,035
<i>Oncorhynchus sp.</i>	= 30 cm	0,40	1	1,22%	30,084	30,084	0,367 ±0,369	1,354	1,354	0,017 ±0,017

Table 159

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 9 (number of trawl stations 180)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	113	62,78%	3,070	3870,838	258,912 ±45,147	2,149	4294,551	318,676 ±53,516
<i>Oncorhynchus keta</i>	> 30 cm	0,30	100	55,56%	6,964	504,106	21,990 ±3,575	2,646	1679,344	56,643 ±10,805
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	34	18,89%	5,604	24725,684	260,403 ±141,801	0,062	4707,773	46,857 ±26,699
<i>Oncorhynchus keta</i>	= 30 cm	0,40	46	25,56%	5,387	1839,771	68,742 ±18,555	0,189	287,372	10,405 ±3,097
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	25	13,89%	6,751	41,787	1,589 ±0,361	6,201	157,537	6,247 ±1,434
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	18	10,00%	7,382	22,821	1,125 ±0,275	9,723	61,460	3,413 ±0,826
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	9	5,00%	7,278	15,344	0,474 ±0,163	9,450	44,115	0,980 ±0,361
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	2,22%	33,218	176,673	2,060 ±1,235	2,519	22,071	0,238 ±0,144
<i>Oncorhynchus masu</i>	> 30 cm	0,30	8	4,44%	7,051	16,045	0,401 ±0,146	2,802	9,237	0,209 ±0,080
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	6	3,33%	6,669	184,793	1,380 ±1,043	0,583	21,602	0,182 ±0,126
<i>Oncorhynchus masu</i>	= 30 cm	0,40	11	6,11%	5,326	39,187	0,830 ±0,310	0,297	5,499	0,141 ±0,053
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	2	1,11%	5,588	6,167	0,065 ±0,046	1,648	1,665	0,018 ±0,013

Table 160

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 10 (number of trawl stations 82)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	52	63,42%	6,929	2346,780	172,964 ± 44,713	6,357	3337,121	242,942 ± 62,880
<i>Oncorhynchus keta</i>	> 30 cm	0,30	31	37,81%	6,948	235,212	18,944 ± 5,065	5,370	971,833	69,720 ± 20,666
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	3	3,66%	7,031	8,708	0,292 ± 0,168	37,676	60,958	1,724 ± 1,012
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	6	7,32%	5,273	457,189	5,924 ± 5,608	0,185	69,630	0,887 ± 0,854
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	3	3,66%	7,683	8,674	0,303 ± 0,174	18,910	27,113	0,875 ± 0,508
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	2,44%	7,503	44,066	0,629 ± 0,547	4,126	15,570	0,240 ± 0,197
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,66%	5,273	12,446	0,286 ± 0,179	0,893	3,672	0,071 ± 0,049
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,22%	33,050	33,050	0,403 ± 0,406	3,580	3,580	0,044 ± 0,044
<i>Oncorhynchus keta</i>	= 30 cm	0,40	2	2,44%	12,325	44,483	0,693 ± 0,565	0,690	2,555	0,040 ± 0,032
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,22%	8,244	8,244	0,101 ± 0,101	2,803	2,803	0,034 ± 0,034

Table 161

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 11 (number of trawl stations 143)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	88	61,54%	7,185	3522,778	292,501 ± 57,148	6,610	4791,124	372,516 ± 73,789
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	10,49%	6,746	855,922	7,194 ± 6,013	19,809	2986,871	24,719 ± 20,970
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	8	5,59%	7,143	16,132	0,501 ± 0,183	24,107	129,231	4,042 ± 1,540
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	4,20%	7,683	24,197	0,593 ± 0,258	22,817	71,947	1,537 ± 0,684
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	7	4,90%	5,317	1186,584	10,656 ± 8,477	0,098	177,020	1,352 ± 1,243
<i>Oncorhynchus masu</i>	> 30 cm	0,30	3	2,10%	6,790	45,141	0,523 ± 0,357	2,716	16,778	0,205 ± 0,137
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	4,20%	3,850	77,283	1,474 ± 0,757	0,289	5,913	0,115 ± 0,059
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	5	3,50%	5,680	21,881	0,358 ± 0,186	0,744	2,697	0,061 ± 0,029
<i>Oncorhynchus masu</i>	= 30 cm	0,40	5	3,50%	5,059	8,296	0,225 ± 0,102	0,620	1,542	0,039 ± 0,018

Table 162

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 12 (number of trawl stations 206)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	70	33,98%	5,536	66364,758	1409,422 ± 390,691	0,049	14880,207	299,913 ± 86,142
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	137	66,51%	7,770	1983,195	191,924 ± 23,203	7,117	3190,226	253,693 ± 30,865
<i>Oncorhynchus keta</i>	> 30 cm	0,30	74	35,92%	5,026	427,815	12,506 ± 2,628	4,849	1441,738	40,376 ± 8,854
<i>Oncorhynchus keta</i>	= 30 cm	0,40	62	30,10%	6,083	10058,034	287,323 ± 84,719	0,079	1645,468	38,607 ± 12,683
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	17	8,25%	7,382	35,700	0,874 ± 0,244	21,064	124,594	4,058 ± 1,078
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	13	6,31%	6,206	899,012	17,425 ± 7,086	0,118	118,108	2,259 ± 0,919
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	10	4,85%	7,298	23,311	0,523 ± 0,180	2,664	66,865	1,363 ± 0,522

<i>Oncorhynchus masu</i>	> 30 cm	0,30	13	6,31%	6,177	84,938	1,677 ±0,613	3,397	46,931	0,934 ±0,355
<i>Oncorhynchus masu</i>	= 30 cm	0,40	18	8,74%	5,430	27,542	0,821 ±0,212	0,161	4,476	0,159 ±0,043
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	2	0,97%	10,655	15,077	0,125 ±0,090	9,909	13,042	0,111 ±0,080
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	1,94%	12,034	80,013	0,655 ±0,419	1,203	3,077	0,039 ±0,021

Table 163

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 13 (number of trawl stations 135)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	86	63,70%	7,538	2339,068	182,023 ±32,116	8,518	3096,926	234,243 ±40,100
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	29	21,48%	5,476	19587,598	610,562 ±250,748	0,260	4580,823	134,476 ±54,919
<i>Oncorhynchus keta</i>	> 30 cm	0,30	68	50,37%	7,557	437,229	36,441 ±6,622	10,159	1460,040	103,401 ±19,536
<i>Oncorhynchus keta</i>	= 30 cm	0,40	25	18,52%	5,779	9728,980	272,346 ±120,969	0,376	1705,717	43,567 ±19,470
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	17	12,59%	7,384	70,038	2,448 ±0,765	6,864	220,154	5,781 ±2,079
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	12	8,89%	7,226	16,413	0,838 ±0,246	16,964	102,078	4,251 ±1,388
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	9	6,67%	7,607	70,038	1,243 ±0,579	6,096	172,139	2,514 ±1,364
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	3	2,22%	6,323	147,865	1,191 ±1,101	1,763	40,909	0,333 ±0,305
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	2,96%	5,882	39,116	0,461 ±0,307	1,059	8,932	0,099 ±0,069
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	0,74%	5,785	5,785	0,043 ±0,043	1,302	1,302	0,010 ±0,010

Table 164

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1991-1995. Region # 14 (number of trawl stations 78)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	18	23,08%	6,567	33034,557	1134,812 ±566,174	0,075	7961,291	259,749 ±132,305
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	45	57,69%	6,918	2699,991	178,261 ±50,006	6,468	4229,669	239,284 ±68,879
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	26,92%	7,524	445,944	35,909 ±11,498	11,219	1519,331	116,048 ±37,485
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	11,54%	6,531	6771,900	204,077 ±119,959	0,106	1139,344	34,061 ±20,500
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	3,85%	8,022	19,847	0,475 ±0,298	32,892	117,431	3,118 ±1,958
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	7,69%	6,714	22,527	0,838 ±0,373	3,539	16,294	0,616 ±0,286
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	1,28%	10,324	10,324	0,132 ±0,133	25,914	25,914	0,332 ±0,334
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	1,28%	8,022	8,022	0,103 ±0,104	3,410	3,410	0,044 ±0,044
<i>Oncorhynchus masu</i>	= 30 cm	0,40	3	3,85%	5,036	7,057	0,245 ±0,142	0,473	0,966	0,031 ±0,018
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	2,56%	6,531	9,461	0,205 ±0,147	0,128	1,633	0,023 ±0,021

Table 165

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 1 (number of trawl stations 187)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	2,14%	15,893	64,932	0,656 ± 0,390	56,197	273,179	2,451 ± 1,567
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	1,07%	15,057	50,365	0,350 ± 0,281	88,538	225,383	1,679 ± 1,296
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	1,07%	52,483	168,043	1,179 ± 0,943	0,925	3,031	0,021 ± 0,017
<i>Oncorhynchus keta</i>	= 30 cm	0,40	2	1,07%	6,722	13,121	0,106 ± 0,079	0,739	1,325	0,011 ± 0,008

Table 166

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 2 (number of trawl stations 144)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	5	3,47%	8,962	72,021	1,229 ± 0,647	27,604	223,264	3,798 ± 1,992
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	0,69%	8,962	8,962	0,062 ± 0,062	78,644	78,644	0,546 ± 0,548
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	1,39%	8,747	9,525	0,127 ± 0,090	7,610	18,193	0,179 ± 0,137
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	1,39%	13,121	13,443	0,184 ± 0,130	1,187	2,017	0,022 ± 0,016
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,69%	21,065	21,065	0,146 ± 0,147	2,675	2,675	0,019 ± 0,019

Table 167

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 3 (number of trawl stations 171)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	16	9,36%	8,390	488,323	7,769 ± 3,374	33,183	1706,457	26,632 ± 11,734
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	0,59%	33,609	33,609	0,197 ± 0,197	3,354	3,354	0,020 ± 0,020
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	0,59%	38,738	38,738	0,227 ± 0,227	2,169	2,169	0,013 ± 0,013
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	0,59%	6,722	6,722	0,039 ± 0,039	0,739	0,739	0,004 ± 0,004

Table 168

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 4 (number of trawl stations 143)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	6	4,20%	9,358	82,507	1,378 ± 0,686	44,359	320,126	5,174 ± 2,618
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	3,50%	8,889	73,394	1,288 ± 0,716	13,049	97,859	1,766 ± 0,965
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,70%	28,979	28,979	0,203 ± 0,203	110,120	110,120	0,770 ± 0,773

Table 169

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 5 (number of trawl stations 210)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	5	2,38%	7,984	61,325	0,631 ± 0,348	30,897	238,556	2,461 ± 1,353
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	10	4,76%	6,103	3183,458	18,915 ± 15,292	0,799	432,685	2,330 ± 2,069
<i>Oncorhynchus keta</i>	= 30 cm	0,40	14	6,67%	5,479	1392,763	9,812 ± 6,784	0,170	245,723	1,466 ± 1,183
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	2,38%	8,962	48,278	0,570 ± 0,290	11,651	59,945	0,837 ± 0,416
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	0,48%	8,962	8,962	0,043 ± 0,043	31,637	31,637	0,151 ± 0,151
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	0,48%	39,242	39,242	0,187 ± 0,187	19,032	19,032	0,091 ± 0,091
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	0,95%	5,988	6,722	0,061 ± 0,043	1,344	1,377	0,013 ± 0,009

Table 170

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 6 (number of trawl stations 154)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	17	11,04%	8,022	182,214	5,471 ± 1,807	5,946	292,089	9,539 ± 3,147
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	3,90%	7,714	33,291	0,482 ± 0,245	22,102	103,994	1,577 ± 0,783
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	11	7,14%	11,400	432,092	8,041 ± 3,602	2,016	65,315	1,325 ± 0,568
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	3	1,95%	16,890	130,996	1,125 ± 0,874	17,312	108,465	1,161 ± 0,791
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	3,90%	7,922	16,516	0,376 ± 0,159	9,626	49,847	1,121 ± 0,494
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	3,25%	31,603	866,422	8,149 ± 5,923	0,627	114,003	1,010 ± 0,776
<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	1,95%	21,436	490,212	4,277 ± 3,330	3,987	60,114	0,552 ± 0,415
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	2	1,30%	5,996	23,981	0,195 ± 0,161	0,480	3,118	0,023 ± 0,021
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	0,65%	29,574	29,574	0,192 ± 0,193	2,987	2,987	0,019 ± 0,019
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	1,30%	6,416	19,201	0,166 ± 0,132	0,513	2,240	0,018 ± 0,015

Table 171

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 7 (number of trawl stations 263)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	18	6,84%	7,714	195,097	3,593 ± 1,116	18,128	627,602	11,343 ± 3,575
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	13	4,94%	8,747	65,757	1,275 ± 0,417	18,585	426,976	6,672 ± 2,411
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	10	3,80%	8,129	75,168	1,268 ± 0,514	20,982	260,744	2,976 ± 1,316
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	8	3,04%	14,001	4660,437	25,713 ± 18,360	1,260	336,942	1,708 ± 1,301
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	16	6,08%	7,414	956,334	9,755 ± 4,494	0,816	106,691	1,396 ± 0,586
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	15	5,70%	6,262	1001,162	6,350 ± 3,986	0,232	292,429	1,348 ± 1,116
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	0,38%	531,797	531,797	2,022 ± 2,026	233,503	233,503	0,888 ± 0,890
<i>Oncorhynchus keta</i>	= 30 cm	0,40	13	4,94%	6,262	845,644	6,706 ± 3,601	0,294	155,598	0,800 ± 0,600
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	1,52%	8,022	16,844	0,158 ± 0,084	4,091	34,783	0,236 ± 0,147

<i>Oncorhynchus nerka</i>	= 30 cm	0,40	4	1,52%	15,144	76,399	0,578 ± 0,342	2,347	6,613	0,068 ± 0,037
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	0,38%	8,022	8,022	0,031 ± 0,031	12,435	12,435	0,047 ± 0,047
<i>Oncorhynchus masu</i>	= 30 cm	0,40	7	2,66%	6,017	16,012	0,262 ± 0,106	0,433	4,467	0,041 ± 0,021

Table 172

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 8 (number of trawl stations 209)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	22	10,53%	8,220	4905,764	69,159 ± 28,793	9,247	7604,454	95,857 ± 42,216
<i>Oncorhynchus keta</i>	> 30 cm	0,30	26	12,44%	8,445	379,806	5,556 ± 2,043	19,886	983,697	13,636 ± 5,188
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	23	11,01%	6,531	2383,614	36,419 ± 15,765	0,506	461,367	6,910 ± 3,084
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	16	7,66%	6,834	178,954	3,828 ± 1,266	16,376	255,769	6,238 ± 2,149
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	22	10,53%	9,018	2402,277	28,472 ± 12,804	0,792	301,148	5,285 ± 2,081
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	13	6,22%	7,411	36,397	0,962 ± 0,303	4,478	269,338	4,287 ± 1,750
<i>Oncorhynchus masu</i>	> 30 cm	0,30	4	1,91%	25,024	1495,601	7,609 ± 7,176	9,509	553,298	2,845 ± 2,655
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	10	4,79%	5,785	1641,042	18,238 ± 10,791	0,513	219,900	2,197 ± 1,267
<i>Oncorhynchus keta</i>	= 30 cm	0,40	12	5,74%	9,018	526,402	6,675 ± 3,120	1,058	66,552	0,834 ± 0,386
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	8	3,83%	7,543	35,791	0,549 ± 0,230	5,356	40,444	0,686 ± 0,277
<i>Oncorhynchus masu</i>	= 30 cm	0,40	7	3,35%	5,621	109,191	0,936 ± 0,560	0,601	31,065	0,220 ± 0,154
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	2,39%	19,006	103,151	1,164 ± 0,618	2,803	11,596	0,152 ± 0,075
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	0,48%	8,450	8,450	0,040 ± 0,041	8,957	8,957	0,043 ± 0,043

Table 173

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 9 (number of trawl stations 177)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	104	58,76%	5,884	61764,316	1962,560 ± 422,349	0,071	8831,744	295,350 ± 60,444
<i>Oncorhynchus keta</i>	= 30 cm	0,40	110	62,15%	5,361	19652,509	1062,959 ± 174,988	0,374	2448,214	149,082 ± 24,705
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	47	26,55%	8,261	879,174	43,781 ± 9,859	7,560	1118,935	55,671 ± 12,397
<i>Oncorhynchus keta</i>	> 30 cm	0,30	72	40,68%	7,149	417,676	20,909 ± 3,671	8,406	842,064	51,948 ± 9,177
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	19	10,73%	7,000	938,523	6,757 ± 5,331	2,911	460,333	5,070 ± 2,825
<i>Oncorhynchus tschawyscha</i>	> 30 cm	0,30	11	6,22%	7,451	52,570	0,765 ± 0,329	4,476	451,047	3,892 ± 2,597
<i>Oncorhynchus masu</i>	> 30 cm	0,30	38	21,47%	6,845	141,486	6,234 ± 1,257	3,354	47,822	3,004 ± 0,549
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	9	5,09%	9,123	691,688	8,208 ± 4,358	1,140	127,386	1,489 ± 0,801
<i>Oncorhynchus masu</i>	= 30 cm	0,40	23	12,99%	5,250	28,265	1,612 ± 0,365	0,481	8,837	0,405 ± 0,100
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	1,70%	7,845	12,233	0,158 ± 0,093	4,315	23,977	0,204 ± 0,145
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	1,70%	6,355	17,782	0,221 ± 0,136	1,004	6,046	0,065 ± 0,043
<i>Oncorhynchus tschawyscha</i>	= 30 cm	0,40	2	1,13%	9,175	9,951	0,108 ± 0,076	1,632	2,202	0,022 ± 0,015

Table 174

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 10 (number of trawl stations 206)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	24	11,65%	7,307	209,101	6,247 ± 1,738	19,061	791,100	22,424 ± 6,412
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	23	11,17%	8,747	308,573	10,728 ± 3,007	4,705	452,368	14,096 ± 4,005
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	14	6,80%	5,294	7843,496	71,515 ± 40,259	0,788	886,344	7,481 ± 4,637
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	3	1,46%	10,882	141,113	0,821 ± 0,693	52,233	456,500	2,848 ± 2,265
<i>Oncorhynchus keta</i>	= 30 cm	0,40	11	5,34%	6,649	661,743	10,372 ± 4,669	0,323	91,457	1,107 ± 0,571
<i>Oncorhynchus masu</i>	> 30 cm	0,30	9	4,37%	8,866	103,438	1,240 ± 0,591	4,546	39,920	0,729 ± 0,308
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	4	1,94%	9,254	61,396	0,519 ± 0,330	4,720	45,204	0,437 ± 0,270
<i>Onychoteuthis sp.</i>	= 30 cm	0,05	1	0,49%	517,117	517,117	2,510 ± 2,516	25,856	25,856	0,126 ± 0,126
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	1,46%	4,782	26,679	0,276 ± 0,180	0,335	6,844	0,057 ± 0,040
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	0,97%	8,385	13,121	0,104 ± 0,076	1,509	2,001	0,017 ± 0,012

Table 175

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 11 (number of trawl stations 46)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	25	54,35%	9,195	2842,651	128,090 ± 65,340	10,758	3232,862	161,566 ± 76,551
<i>Oncorhynchus keta</i>	> 30 cm	0,30	16	34,78%	6,728	49,092	8,017 ± 2,018	24,519	227,418	30,661 ± 8,101
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	13,04%	5,046	5263,356	130,727 ± 116,408	0,028	93,226	3,688 ± 2,606
<i>Oncorhynchus masu</i>	= 30 cm	0,40	9	19,57%	8,007	701,433	24,355 ± 15,985	0,472	79,333	3,282 ± 1,909
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	2	4,35%	12,273	14,201	0,576 ± 0,408	25,704	62,224	1,911 ± 1,468
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	4,35%	9,195	61,365	1,534 ± 1,359	25,896	30,803	1,233 ± 0,875
<i>Oncorhynchus masu</i>	> 30 cm	0,30	4	8,70%	6,362	66,654	1,957 ± 1,483	3,054	27,828	0,857 ± 0,623
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	8,70%	5,606	3260,566	72,982 ± 71,638	0,011	29,005	0,661 ± 0,637
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	8,70%	5,485	60,279	2,025 ± 1,390	0,494	7,562	0,301 ± 0,191

Table 176

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 12 (number of trawl stations 160)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass,kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	93	58,13%	7,307	1538,273	57,900 ± 14,107	5,325	5392,472	190,250 ± 47,118
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	65	40,63%	6,722	27743,018	1239,724 ± 313,184	0,058	3823,420	175,904 ± 43,838
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	87	54,38%	6,678	1967,834	97,445 ± 20,288	4,432	2767,594	126,019 ± 25,605
<i>Oncorhynchus keta</i>	= 30 cm	0,40	71	44,38%	5,133	7492,133	281,634 ± 73,335	0,200	1171,937	38,455 ± 11,202
<i>Oncorhynchus masu</i>	> 30 cm	0,30	33	20,63%	6,791	560,263	9,912 ± 3,837	2,397	236,644	4,877 ± 1,663
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	10	6,25%	7,000	26,887	0,781 ± 0,270	9,884	109,250	4,037 ± 1,374
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	9	5,63%	7,149	37,227	0,851 ± 0,326	5,134	24,999	0,686 ± 0,255

<i>Oncorhynchus masu</i>	= 30 cm	0,40	21	13,13%	5,008	52,427	2,231 ± 0,587	0,701	16,724	0,631 ± 0,173
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	7	4,38%	6,096	30,011	0,491 ± 0,224	1,036	8,903	0,123 ± 0,062
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,63%	16,329	16,329	0,102 ± 0,102	4,409	4,409	0,028 ± 0,028

Table 177

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 13 (number of trawl stations 71)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	45	63,38%	7,128	575,332	53,636 ± 12,620	9,234	2062,163	145,715 ± 35,585
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	24	33,80%	5,830	595,003	55,250 ± 15,910	11,015	797,603	74,546 ± 21,056
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	20	28,17%	8,928	6886,843	200,323 ± 107,825	1,607	1218,145	32,102 ± 18,294
<i>Oncorhynchus keta</i>	= 30 cm	0,40	21	29,58%	5,480	4951,551	136,651 ± 74,932	0,685	824,781	22,211 ± 12,363
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	7	9,86%	6,781	2563,296	48,831 ± 37,069	1,548	441,412	8,604 ± 6,412
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	9	12,68%	7,607	40,798	1,701 ± 0,682	12,928	160,907	6,169 ± 2,650
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	16	22,54%	7,845	144,670	7,335 ± 2,818	4,362	72,236	5,597 ± 1,653
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	4,23%	36,882	514,185	8,408 ± 7,324	12,097	179,230	2,909 ± 2,552
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	6	8,45%	8,390	47,534	1,482 ± 0,758	12,752	79,461	2,586 ± 1,307
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	8,45%	9,042	68,558	2,588 ± 1,249	5,877	27,765	1,345 ± 0,595
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	1,41%	9,220	9,220	0,130 ± 0,131	2,397	2,397	0,034 ± 0,034

Table 178

Salmon abundance in epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 14 (number of trawl stations 33)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	26	78,79%	7,171	1796,549	226,500 ± 60,775	10,639	2845,871	341,229 ± 95,557
<i>Oncorhynchus keta</i>	> 30 cm	0,30	13	39,39%	9,764	325,312	29,680 ± 11,937	26,362	1355,901	111,808 ± 47,542
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	15,15%	10,535	7988,938	254,231 ± 245,656	0,242	1305,439	41,804 ± 40,142
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	12,12%	6,120	1304,316	41,345 ± 40,102	0,704	204,950	6,289 ± 6,305
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	6,06%	76,724	149,950	6,869 ± 5,117	45,651	77,612	3,735 ± 2,733
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	3,03%	11,852	11,852	0,359 ± 0,365	38,281	38,281	1,160 ± 1,178
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	9,09%	7,475	7,475	0,453 ± 0,320	9,568	13,753	0,707 ± 0,508
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	6,06%	5,900	6,120	0,364 ± 0,257	1,622	1,799	0,104 ± 0,073

Table 179

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 1 (number of trawl stations 28)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	10,71%	15,893	64,932	3,567 ± 2,478	56,197	273,179	14,119 ± 10,248
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	7,14%	15,057	50,365	2,337 ± 1,892	88,538	225,383	11,211 ± 8,695
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	7,14%	52,483	168,043	7,876 ± 6,335	0,925	3,031	0,141 ± 0,114

<i>Oncorhynchus keta</i>	= 30 cm	0,40	2	7,14%	6,722	13,121	0,709 ± 0,528	0,739	1,325	0,074 ± 0,054
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Table 180

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 2 (number of trawl stations 11)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	3	27,27%	8,962	47,625	6,774 ± 4,653	27,604	144,255	21,359 ± 14,330
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	1	9,09%	8,962	8,962	0,815 ± 0,855	78,644	78,644	7,149 ± 7,498
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	18,18%	8,747	9,525	1,661 ± 1,170	7,610	18,193	2,346 ± 1,812
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	18,18%	13,121	13,443	2,415 ± 1,699	1,187	2,017	0,291 ± 0,213

Table 181

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 3 (number of trawl stations 18)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	11	61,11%	8,390	488,323	64,003 ± 29,787	34,030	1706,457	222,409 ± 104,140
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	5,56%	33,609	33,609	1,867 ± 1,921	3,354	3,354	0,186 ± 0,192
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	1	5,56%	38,738	38,738	2,152 ± 2,215	2,169	2,169	0,121 ± 0,124
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	5,56%	6,722	6,722	0,373 ± 0,384	0,739	0,739	0,041 ± 0,042

Table 182

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 4 (number of trawl stations 24)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	4	16,67%	9,358	82,507	5,723 ± 3,683	44,359	320,126	22,842 ± 14,486
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	5	20,83%	8,889	73,394	7,675 ± 4,161	13,049	97,859	10,525 ± 5,595

Table 183

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 5 (number of trawl stations 19)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	9	47,37%	8,558	75,568	18,855 ± 6,172	6,162	313,135	56,116 ± 21,920
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	10,53%	7,984	18,892	1,415 ± 1,087	30,897	80,858	5,882 ± 4,593
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	10,53%	8,962	17,569	1,396 ± 1,042	11,651	21,610	1,751 ± 1,296
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	5,26%	8,962	8,962	0,472 ± 0,485	31,637	31,637	1,665 ± 1,711
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	10,53%	120,991	289,034	21,580 ± 16,605	4,369	10,351	0,775 ± 0,595

<i>Oncorhynchus keta</i>	= 30 cm	0,40	3	15,79%	13,660	67,217	6,379 ± 4,142	0,471	2,655	0,271 ± 0,175
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	2	10,53%	5,988	6,722	0,669 ± 0,473	1,344	1,377	0,143 ± 0,101

Table 184

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 6 (number of trawl stations 19)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	78,95%	8,022	182,214	40,141 ± 11,892	5,946	292,089	69,203 ± 20,419
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	6	31,58%	7,714	33,291	3,908 ± 1,887	22,102	103,994	12,779 ± 5,992
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	31,58%	7,922	16,516	3,048 ± 1,164	9,626	49,847	9,089 ± 3,661
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	9	47,37%	12,034	432,092	54,072 ± 25,951	2,016	65,315	8,656 ± 3,965
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	2	10,53%	16,890	25,335	2,222 ± 1,604	17,312	52,949	3,698 ± 2,962
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	10,53%	44,801	276,666	16,919 ± 15,022	0,627	35,335	1,893 ± 1,909
<i>Oncorhynchus keta</i>	= 30 cm	0,40	1	5,26%	146,979	146,979	7,736 ± 7,948	20,975	20,975	1,104 ± 1,134
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	10,53%	6,416	19,201	1,348 ± 1,076	0,513	2,240	0,145 ± 0,123
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	5,26%	5,996	5,996	0,316 ± 0,324	0,480	0,480	0,025 ± 0,026

Table 185

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 7 (number of trawl stations 49)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	15	30,61%	7,714	195,097	15,760 ± 5,088	18,128	627,602	50,060 ± 16,472
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	6	12,25%	8,747	50,680	2,851 ± 1,389	18,585	426,976	17,584 ± 9,912
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	7	14,29%	8,129	74,321	4,448 ± 2,176	20,982	260,744	13,274 ± 6,744
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	15	30,61%	7,414	956,334	51,236 ± 23,565	0,816	106,691	7,247 ± 3,043
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	11	22,45%	6,262	1001,162	32,371 ± 21,327	0,232	292,429	6,869 ± 6,021
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	2	4,08%	636,354	1060,996	34,640 ± 25,275	23,856	47,628	1,459 ± 1,089
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	4	8,16%	8,022	16,844	0,846 ± 0,442	4,091	34,783	1,264 ± 0,785
<i>Oncorhynchus keta</i>	= 30 cm	0,40	7	14,29%	6,262	309,199	9,881 ± 6,752	0,294	12,086	0,429 ± 0,277
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	1	2,04%	8,022	8,022	0,164 ± 0,165	12,435	12,435	0,254 ± 0,256
<i>Oncorhynchus masu</i>	= 30 cm	0,40	6	12,25%	6,017	16,012	1,126 ± 0,482	0,433	4,467	0,166 ± 0,098
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	2,04%	76,399	76,399	1,559 ± 1,575	5,959	5,959	0,122 ± 0,123

Table 186

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 8 (number of trawl stations 56)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	22	39,29%	8,220	4905,764	258,112 ± 104,661	9,247	7604,454	357,751 ± 154,125
<i>Oncorhynchus keta</i>	> 30 cm	0,30	25	44,64%	8,445	379,806	20,377 ± 7,348	19,886	983,697	50,500 ± 18,719
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	13	23,21%	6,834	178,954	9,905 ± 3,922	16,376	255,769	21,451 ± 7,682

<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	15	26,79%	9,018	2402,277	88,113 ±45,955	1,088	301,148	14,209 ±6,813
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	11	19,64%	7,411	36,397	2,880 ±0,970	4,478	269,338	14,170 ±6,234
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	12	21,43%	6,531	1988,005	59,663 ±38,094	0,506	461,367	11,956 ±8,534
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	7	12,50%	5,785	1641,042	60,826 ±39,760	0,513	219,900	6,993 ±4,622
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	8	14,29%	7,543	35,791	2,048 ±0,836	5,356	40,444	2,560 ±1,003
<i>Oncorhynchus keta</i>	= 30 cm	0,40	8	14,29%	9,018	290,699	10,899 ±6,375	1,058	34,424	1,251 ±0,715
<i>Oncorhynchus masu</i>	= 30 cm	0,40	6	10,71%	5,621	109,191	3,386 ±2,080	0,601	31,065	0,795 ±0,575
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	3	5,36%	19,006	103,151	3,322 ±2,187	2,803	11,596	0,394 ±0,252
<i>Oncorhynchus masu</i>	> 30 cm	0,30	1	1,79%	25,024	25,024	0,447 ±0,451	9,509	9,509	0,170 ±0,171
<i>Oncorhynchus sp.</i>	> 30 cm	0,30	1	1,79%	8,450	8,450	0,151 ±0,152	8,957	8,957	0,160 ±0,161

Table 187

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 9 (number of trawl stations 153)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	102	66,67%	5,884	61764,316	2249,542 ±484,478	0,071	8831,744	338,916 ±69,270
<i>Oncorhynchus keta</i>	= 30 cm	0,40	108	70,59%	5,361	19652,509	1219,797 ±199,504	0,374	2448,214	171,112 ±28,171
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	47	30,72%	8,261	879,174	50,648 ±11,315	7,560	1118,935	64,403 ±14,224
<i>Oncorhynchus keta</i>	> 30 cm	0,30	72	47,06%	7,149	417,676	24,189 ±4,188	8,406	842,064	60,097 ±10,472
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	18	11,77%	7,000	938,523	7,641 ±6,167	2,911	460,333	5,795 ±3,266
<i>Oncorhynchus masu</i>	> 30 cm	0,30	38	24,84%	6,845	141,486	7,212 ±1,439	3,354	47,822	3,476 ±0,627
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	9	5,88%	9,123	691,688	9,495 ±5,038	1,140	127,386	1,722 ±0,926
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	10	6,54%	7,451	11,441	0,542 ±0,168	4,476	58,365	1,555 ±0,583
<i>Oncorhynchus masu</i>	= 30 cm	0,40	23	15,03%	5,250	28,265	1,865 ±0,419	0,481	8,837	0,469 ±0,115
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	3	1,96%	7,845	12,233	0,183 ±0,108	4,315	23,977	0,236 ±0,167
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	1,96%	6,355	17,782	0,256 ±0,157	1,004	6,046	0,075 ±0,050
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	2	1,31%	9,175	9,951	0,125 ±0,088	1,632	2,202	0,025 ±0,018

Table 188

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 10 (number of trawl stations 72)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	21	29,17%	7,307	209,101	15,654 ±4,613	19,061	791,100	55,744 ±16,981
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	22	30,56%	8,747	308,573	30,093 ±8,173	4,705	452,368	39,525 ±10,901
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	13	18,06%	5,294	7843,496	204,136 ±114,567	0,939	886,344	21,393 ±13,230
<i>Oncorhynchus keta</i>	= 30 cm	0,40	9	12,50%	10,045	661,743	24,348 ±12,227	0,323	91,457	2,396 ±1,444
<i>Oncorhynchus masu</i>	> 30 cm	0,30	8	11,11%	9,117	103,438	3,424 ±1,670	4,546	39,920	1,964 ±0,862
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	2	2,78%	10,882	17,147	0,389 ±0,282	52,233	77,935	1,808 ±1,304
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	2,78%	9,254	10,045	0,268 ±0,190	4,720	45,204	0,693 ±0,635

<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	2,78%	8,385	13,121	0,299 ± 0,216	1,509	2,001	0,049 ± 0,035
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	1	1,39%	4,782	4,782	0,066 ± 0,067	0,335	0,335	0,005 ± 0,005

Table 189

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 11 (number of trawl stations 46)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	25	54,35%	9,195	2842,651	128,090 ± 65,340	10,758	3232,862	161,566 ± 76,551
<i>Oncorhynchus keta</i>	> 30 cm	0,30	16	34,78%	6,728	49,092	8,017 ± 2,018	24,519	227,418	30,661 ± 8,101
<i>Oncorhynchus keta</i>	= 30 cm	0,40	6	13,04%	5,046	5263,356	130,727 ± 116,408	0,028	93,226	3,688 ± 2,606
<i>Oncorhynchus masu</i>	= 30 cm	0,40	9	19,57%	8,007	701,433	24,355 ± 15,985	0,472	79,333	3,282 ± 1,909
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	2	4,35%	12,273	14,201	0,576 ± 0,408	25,704	62,224	1,911 ± 1,468
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	2	4,35%	9,195	61,365	1,534 ± 1,359	25,896	30,803	1,233 ± 0,875
<i>Oncorhynchus masu</i>	> 30 cm	0,30	4	8,70%	6,362	66,654	1,957 ± 1,483	3,054	27,828	0,857 ± 0,623
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	4	8,70%	5,606	3260,566	72,982 ± 71,638	0,011	29,005	0,661 ± 0,637
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	4	8,70%	5,485	60,279	2,025 ± 1,390	0,494	7,562	0,301 ± 0,191

Table 190

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 12 (number of trawl stations 157)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	93	59,24%	7,307	1538,273	59,006 ± 14,364	5,325	5392,472	193,886 ± 47,977
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	65	41,40%	6,722	27743,018	1263,413 ± 318,904	0,058	3823,420	179,265 ± 44,637
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	87	55,41%	6,678	1967,834	99,307 ± 20,649	4,432	2767,594	128,427 ± 26,059
<i>Oncorhynchus keta</i>	= 30 cm	0,40	71	45,22%	5,133	7492,133	287,015 ± 74,679	0,200	1171,937	39,190 ± 11,409
<i>Oncorhynchus masu</i>	> 30 cm	0,30	33	21,02%	6,791	560,263	10,102 ± 3,910	2,397	236,644	4,970 ± 1,695
<i>Oncorhynchus tschawytscha</i>	> 30 cm	0,30	10	6,37%	7,000	26,887	0,796 ± 0,275	9,884	109,250	4,114 ± 1,400
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	9	5,73%	7,149	37,227	0,867 ± 0,332	5,134	24,999	0,699 ± 0,259
<i>Oncorhynchus masu</i>	= 30 cm	0,40	21	13,38%	5,008	52,427	2,273 ± 0,598	0,701	16,724	0,643 ± 0,177
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	7	4,46%	6,096	30,011	0,500 ± 0,229	1,036	8,903	0,125 ± 0,064
<i>Oncorhynchus nerka</i>	= 30 cm	0,40	1	0,64%	16,329	16,329	0,104 ± 0,104	4,409	4,409	0,028 ± 0,028

Table 191

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 13 (number of trawl stations 70)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus keta</i>	> 30 cm	0,30	45	64,29%	7,128	575,332	54,402 ± 12,779	9,234	2062,163	147,797 ± 36,038
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	24	34,29%	5,830	595,003	56,040 ± 16,120	11,015	797,603	75,611 ± 21,334
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	20	28,57%	8,928	6886,843	203,185 ± 109,349	1,607	1218,145	32,561 ± 18,554
<i>Oncorhynchus keta</i>	= 30 cm	0,40	21	30,00%	5,480	4951,551	138,603 ± 75,992	0,685	824,781	22,529 ± 12,538

<i>Oncorhynchus nerka</i>	= 30 cm	0,40	7	10,00%	6,781	2563,296	49,529 ± 37,600	1,548	441,412	8,727 ± 6,504
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	9	12,86%	7,607	40,798	1,725 ± 0,691	12,928	160,907	6,257 ± 2,687
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	16	22,86%	7,845	144,670	7,440 ± 2,857	4,362	72,236	5,677 ± 1,675
<i>Oncorhynchus kisutch</i>	= 30 cm	0,40	3	4,29%	36,882	514,185	8,528 ± 7,429	12,097	179,230	2,950 ± 2,588
<i>Oncorhynchus nerka</i>	> 30 cm	0,30	6	8,57%	8,390	47,534	1,503 ± 0,769	12,752	79,461	2,622 ± 1,325
<i>Oncorhynchus masu</i>	> 30 cm	0,30	6	8,57%	9,042	68,558	2,625 ± 1,266	5,877	27,765	1,364 ± 0,603
<i>Oncorhynchus tshawytscha</i>	= 30 cm	0,40	1	1,43%	9,220	9,220	0,132 ± 0,133	2,397	2,397	0,034 ± 0,034

Table 192

Salmon abundance in upper epipelagic water layer irrespective of a season. The data of the years 1996-2003. Region # 14 (number of trawl stations 31)

Salmon species	Size group	k	Occurrence stn.		Number, ind./km ²			Biomass, kg/km ²		
			number	share	minimal	maximal	average	minimal	maximal	average
<i>Oncorhynchus gorbuscha</i>	> 30 cm	0,30	26	83,87%	7,171	1796,549	241,113 ± 63,884	10,639	2845,871	363,244 ± 100,567
<i>Oncorhynchus keta</i>	> 30 cm	0,30	13	41,94%	9,764	325,312	31,595 ± 12,651	26,362	1355,901	119,022 ± 50,419
<i>Oncorhynchus gorbuscha</i>	= 30 cm	0,40	5	16,13%	10,535	7988,938	270,633 ± 261,742	0,242	1305,439	44,501 ± 42,770
<i>Oncorhynchus keta</i>	= 30 cm	0,40	4	12,90%	6,120	1304,316	44,012 ± 42,728	0,704	204,950	6,695 ± 6,718
<i>Oncorhynchus masu</i>	> 30 cm	0,30	2	6,45%	76,724	149,950	7,312 ± 5,448	45,651	77,612	3,976 ± 2,909
<i>Oncorhynchus kisutch</i>	> 30 cm	0,30	1	3,23%	11,852	11,852	0,382 ± 0,389	38,281	38,281	1,235 ± 1,255
<i>Oncorhynchus tshawytscha</i>	> 30 cm	0,30	3	9,68%	7,475	7,475	0,482 ± 0,341	9,568	13,753	0,752 ± 0,541
<i>Oncorhynchus masu</i>	= 30 cm	0,40	2	6,45%	5,900	6,120	0,388 ± 0,274	1,622	1,799	0,110 ± 0,078

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