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7. Data on some of the factors that reduce the abundance of the brood stock of salmons were obtained in August—September 1987 (A.I. Makhnyr, A.S. Perlov - TINRO)

8. An aerial survey of ice seals of the Bering Sea and the Pacific walrus was carried out in April—May 1987 (G.A. Fedoseyev, Ye.V. Razlivalov, G.G. Bobrova - Magadan branch of TINRO).

9. The 1978—1987 observations on the distribution and abundance of the northern sea-lions on the Commander Isls. were summed up (V.V. Vertyankin, V.S. Nikulin - Kamchatrybvod).

10. The 1982-1987 data on the distribution and abundance of the coastal rookeries of the Pacific walrus on the Kamchatka Peninsula were correlated (A.R. Semenov, V.N. Burkanov, S.A. Mashagin - Kamchatrybvod).

11. The walrus data from the "Zakharovo" expedition in March—April 1985 were correlated (A.A. Kibalchich - VNIRO).

12. The 1982—1987 data on various questions related to the ecology of the walrus from the Anadyr Gulf were correlated (A.I. Grachev - Okhotskrybvod).

13. The walrus rookeries on Russkaya Koshka in the Bering Sea were described (G.P. Smirnov - Okhotskrybvod).

14. Data on the seasonal and diurnal dynamics of walrus abundance were obtained on the basis of a number of coastal rookeries in the Bering Sea (N.I. Mymrin, G.P. Smirnov, A.S. Gayevsky, A.I. Grachev, Yu.V. Klimenko - Okhotskrybvod).

15. Morphometric analysis of the linear size and proportions of the turtles from the waters separating the Commander Isls. and the Kamchatka Peninsula was carried out (A.M. Burdin - Kamchatka branch of TINRO).

16. The results of the tagging of sea otters on the Commander Isls. during 1986—1987 were summed up (V.F. Sevostyanov, N.P. Zimenko, P.A. Ryazanov, I.N. Shevchenko - Commander Scientific Group of KoTINRO).

17. Long-term data on the dynamics of sea-otter abundance and feeding on the Kurile Isls. were correlated (M.K. Maminov - TINRO).

18. The 1984-1987 data on the dynamics of sea-otter abundance in the southern part of Kamchatka were correlated (S.I. Kornev, S.M. Korneva - Kamchatrybvod).

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Distribution and abundance of the ice forms of pinnipeds on the ice of the Bering Sea in April and May 1987

by G.A. Fedoseyev, Ye.V. Razlivalov and G.G. Bobrova (MoTINRO)

Aerovisual surveys of seals and the walrus on the ice of the Bering Sea have been conducted from time to time since the 1960s by Soviet and American researchers. The most recent aerial survey was carried out in 1979. Considering the fact that the distribution of pinnipeds depends to a certain extent on the year-to-year variability of the ice processes and that there is a need to monitor the changes in their abundance, an aerovisual survey of seals and the walrus was again conducted in 1987.

As in previous years, the survey was carried out from an IL—14 aircraft flying at an altitude of mainly 200 m, and in some cases 100 m (with low clouds). The width of the survey strip was equal to the flight altitude. Whales were noted at any distance.

Abundance was determined in the following way. The data of the transect observations were mapped for 5-minute intervals of the flight. Due to the absence of an automatic orientation system, it was impossible to do an accurate survey of each encounter with pinnipeds by coordinates. Therefore, the data were recorded by 5—minute intervals, and then recalculated for the transects. Using the points where animals were spotted, the rookeries were outlined, their areas were calculated, and the density per sq. kilometre was estimated for each separate rookery.

The seal breeding grounds were first surveyed in April, then again in May; the length of the transects amounted to 20,750 km (Fig. 1, a) and 21,5000 km (Fig. 1, b) respectively.

In the principal seal habitats, the ice masses were surveyed quite thoroughly, except in the Karaginski Gulf and south of it, where it was technically impossible to conduct a survey. The ice off the American coast and west of it was not surveyed entirely either.

The distribution and abundance of some species are characterized below.

Ringed seal. As we know, this species spends a long time in snowy dens during the breeding period and, therefore, is inacessible for observation. Because of this, the range of the ringed seal (Fig. 2, a) in April was incomplete. Nevertheless, the data show that the zone inhabited by this species has expanded in comparison with past years. The tendency towards an increase in the abundance of this species on the pack ice in the Bering Sea has been noted since 1974; it was perhaps the highest in 1987. In May (Fig. 2, b), when the dens thaw and the animals emerge on the surface, the ringed seal formed a nearly continuous range on the greater part of the ice mass in the Bering Sea. Three areas of concentration of this species can be singled out, namely the Karaginski Gulf, the Anadyr Gulf and the area south of it, and the area east of St. Lawrence Is. Apart from the ringed seal on the pack ice, we did not survey the population of this species on the fast ice, with the exception of fragmentary observations in the Karaginski Gulf.

Data on the abundance of the ringed seal are given in table 1. Approximately 1400 ringed seals were counted in the Karaginski and Olyutorski gulfs, and 75,000 in the Anadyr Gulf and central part of the Bering Sea.

The largest number of ringed seals emerge from their dens onto the ice of the Bering Sea at the end of May—beginning of June. This is why the abundance given for the ringed seal is so low. Furthermore, we did not survey the fast ice which, according to past data, is inhabited by up to 40—50% of the ringed seals. This gives grounds for assuming that the total abundance of the ringed seal, including those on the fast ice of the Asian mainland from the western coast of the Anadyr Gulf to the Bering Strait,

amounts to about 125,000—130,000 with the past data taken into account (Fedoseyev, 1979).

Table 1. Aerial survey data on the ringed seal in the Bering Sea

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
			April 1987			
1	10	2	1	0.5	600	300
2	19	3.8	1	0.26	500	130
3	54	10.8	3	0.28	1480	414
4	56	11.2	5	0.45	1200	540
5	65	13	3	0.23	1800	414
6	40	8	2	0.25	1200	300
7	40	8	1	0.125	1500	188
8	94	18.8	6	0.32	5720	1830
9	22	4.4	1	0.23	620	143
10	242	48.4	12	0.25	4040	1010
11	40	8	3	0.38	1100	418
12	16	3.2	1	0.31	320	99
13	18	3.6	1	0.28	400	112
14	20	4.0	1	0.25	440	110
15	152	30.4	7	0.23	1720	396
16	12	2.4	1	0.42	700	294
17	269	53.8	18	0.33	12360	4079
18	10	3.8	1	0.26	640	166
19	43	8.6	3	0.35	2340	819
20	82	16.4	4	0.24	7000	1680
21	62	12.4	4	0.32	3680	1178
22	14	2.8	1	0.36	2020	727
Total						15347
			May 1987			
1	34	3.4	4	1.18	800	944
2	4324	470.06	369	0.79	83280	65791
3	18	1.8	1	0.55	560	308
4	88	7.92	5	0.63	1040	655
5	20	2.0	2	1.0	300	300
6	22	1.1	2	1.82	520	946
7	68	3.84	4	1.04	1800	1872
8	22	1.1	1	0.9	600	540
9	40	2.0	2	1.0	1200	1200
10	336	28.1	20	0.71	11920	8463
11	20	2	2	1.00	320	320
12	8	1.6	1	0.62	200	124
Total						81463

Table 2. Aerial survey data on the harbour seal of the Bering Sea

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
			April 1987			
1	465	93	225	2.42	10960	26523
2	16	3.2	2	0.62	760	471
3	15	3.0	2	0.67	360	241
4	17	3.4	3	0.88	440	387
5	19	3.8	3	0.78	840	655
6	15	3.0	1	0.33	420	139
7	42	8.4	8	0.95	1200	1140
8	18	3.8	1	0.26	320	83
9	20	4.0	2	0.50	480	240
10	18	3.6	1	0.28	480	134
11	312	62.4	75	1.2	5480	6576
12	200	40.0	23	0.58	6500	3770
13	19	3.8	1	0.26	640	166
14	36	7.2	5	0.69	640	442
15	22	4.0	2	0.50	400	200
16	18	3.6	1	0.28	400	112
17	15	3.0	1	0.33	280	92
18	16	3.2	1	0.31	640	198
19	16	3.2	1	0.31	280	87
20	18	3.6	1	0.28	360	101
21	16	3.2	1	0.31	700	217
22	20	4.0	2	0.50	480	240
23	292	58.4	56	0.96	13720	13171
24	16	3.2	3	0.94	960	902
25	18	3.6	3	0.83	1800	1494
26	40	8.0	2	0.25	560	140
27	20	4.0	2	0.50	1520	760
28	20	4.0	1	0.25	1280	320
29	22	4.4	2	0.45	1800	810
Total						58811

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
			May 1987			
1	143	14.3	36	2.52	5840	14717
2	238	36.4	30	0.82	5100	4182
3	20	4.0	1	0.25	960	240
4	20	4.0	2	0.50	920	460
5	575	105.3	43	0.46	16760	7710
6	116	11.6	10	0.86	2400	2064
7	26	2.6	4	1.54	400	616
8	32	3.2	1	0.31	560	174
9	20	2.0	1	0.50	440	220
10	304	30.4	15	0.49	4780	2342
11	56	4.2	5	1.19	840	1000
12	46	3.45	1	0.29	640	186
13	20	1.6	1	0.62	600	372
14	70	7.0	2	0.28	1060	297
15	164	16.4	18	1.1	5240	5764
16	45	4.4	2	0.44	1140	502
17	25	1.5	2	1.33	600	798
18	22	1.1	4	3.64	400	1456
19	21	1.05	1	0.95	640	608
Total						43708

Harbour seal. According to the available literature (Goltsev et al., 1975; Fedoseyev, 1984), the harbour seal forms three local populations in the Bering Sea, namely the Karaginski, the Anadyr and Eastern Bering Sea populations.

The data of the aerial surveys conducted in April—May 1987 (Fig. 3, a), despite a certain discontinuity in the distribution of the ice rookeries, clearly indicate that the harbour seal is confined to the above-mentioned three areas during the breeding period (table 2).

During the first and second ten days of May, the harbour seal rookeries were uniformly distributed in the ice edge zone of the large masses of white ice east of Cape Goven to Bristol Bay (Fig. 3, b).

According to the aerial survey data from the Karaginski Gulf, the numbers of the harbour seal totalled slightly more than 28,000 animals, which is half of the numbers recorded in past years (1976, 1979). This is

due to the fact that the ice in the Ozernovsky and Kamchatsky bays, where the numbers of the harbour seal can be quite high, was not surveyed.

According to the aerial survey of 1987, the largest herd of harbour seals in the Anadyr Gulf numbered 50,000 animals, which is also below that of 1979, when the survey was more complete because of a synchronous Soviet—American survey throughout the entire range.

Not more than 60% of the range of the harbour seal in the Bering Sea was surveyed altogether in 1987. Consequently, the total abundance of this species (60,000) should apparently be increased by 40%, and estimated, as in past years, at a minimum100,000 animals.

Ribbon seal. The breeding grounds of the ribbon seal in the Bering Sea are confined mainly to the ice edge zone. Small breeding grounds are also encountered deep into the ice massif in the zone of open pack ice in the eastern part of the sea (Fig. 4, a). In May, the abundance of ribbon seals on the ice increases, and the range of this species becomes continuous, except in the Karaginski and Olyutorski gulfs, where the distribution of breeding grounds is patchy (Fig. 4, b). This type of distribution of the ribbon seal depends on the ice conditions. As a rule, the ribbon seal forms breeding grounds in the zones of white ice floes alternating with polynyas and fractures. This type of ice is usually found in the ice edge zone which in the Bering Sea is confined to the drop-off zone. Basically, the distribution of the ribbon seal in 1987 did not differ much from that of previous years, with the exception of a slight increase in the area and density of the breeding grounds due to the growth of the herd.

The data in table 3 show that the abundance of the ribbon seal on the ice in May 1987 numbered 117,000 head, i.e. it increased by 15,000 animals as compared with 1979.

Bearded seal. The distribution of the bearded seal on the breeding grounds is shown in Fig. 5, a. Unlike other species of seals, the bearded seal inhabits all types of ice from the sea ice edge up to the shore. However, the main concentrations during the breeding period are confined to the area east of 176° W long. The formation of breeding grounds is influenced to some extent by the ice conditions, particularly the absence of fields of heavy white ice in the eastern part of the Bering Sea. The presence of accessible food organisms (benthos) also plays an important role.

Table 3. Aerial survey data for the ribbon seal of the Bering Sea

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
			April 1987			
1	57	7.99	3	0.38	1160	441
2	6	1.2	1	0.83	320	266
3	10	2.0	3	1.5	560	840
4	22	4.4	1	0.23	1080	248
5	31	6.2	1	0.16	760	122
6	21	4.2	1	0.24	480	115
7	26	5.2	4	0.77	1520	1170
8	14	2.8	1	0.36	320	115
9	977	195.4	131	0.68	25360	17245
10	293	58.6	38	0.78	4600	3588
11	111	22.2	12	0.54	1760	950
12	16	3.2	1	0.31	360	112
13	54	10.8	8	0.74	1200	888
14	326	65.2	22	0.34	18760	6378
15	39	7.8	4	0.51	720	367
16	147	29.4	16	0.54	6880	3715
17	62	12.4	7	0.56	2260	1266
18	23	4.6	1	0.22	1360	299
19	19	3.8	1	0.26	760	198
20	20	4.0	1	0.25	2160	540
21	20	4.0	1	0.25	1400	350
22	22	4.4	1	0.23	440	101
23	23	4.6'	1	0.22	480	106
Total						39420
			May 1987			
1	147	14.7	15	1.02	5800	5916
2	6	1.2	1	0.83	324	269
3	179	34.8	15	0.43	5440	2339
4	40	8.0	2	0.25	1720	430
5	122	22.0	11	0.5	4840	2420
6	3228	326.32	493	1.53	64920	99328
7	17	3.4	1	0.29	800	232
8	103	17	2	0.12	1040	125
9	22	1.1	2	1.8	360	648
10	20	2.0	1	0.5	480	240
11	172	9.7	12	1.24	4340	5382
Total						117329

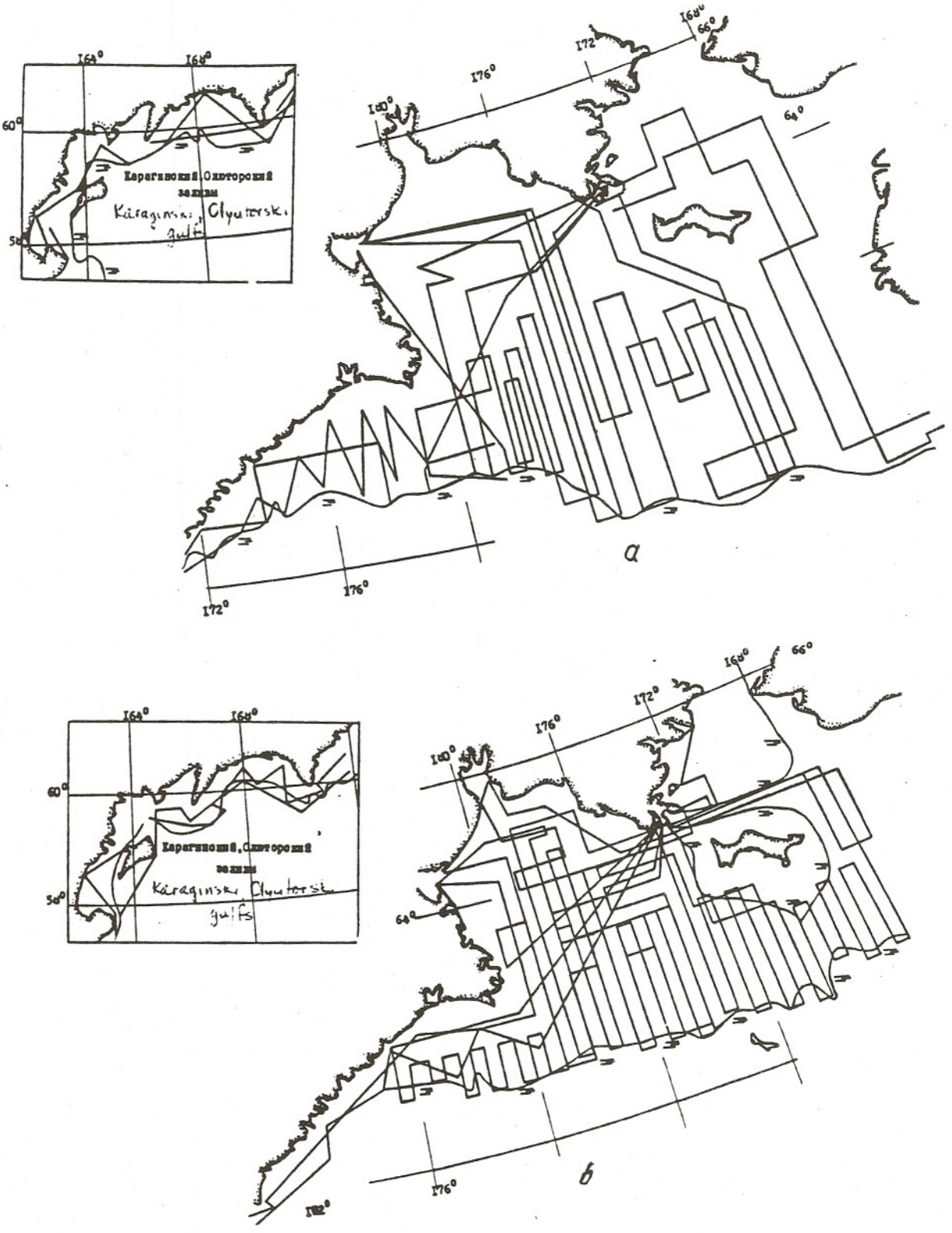

Fig. 1. Map of transects in 1987: a - April, b - May

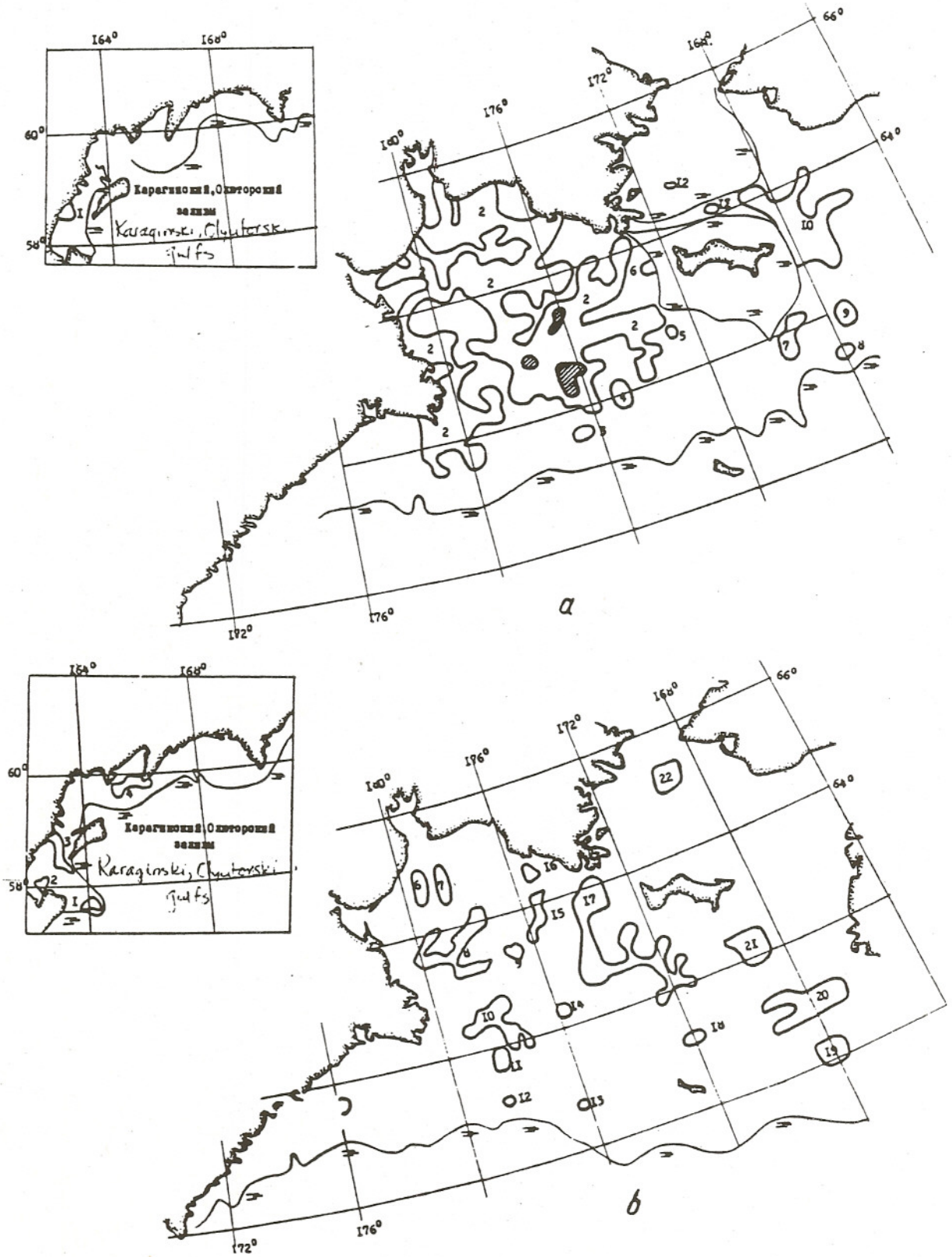

Fig. 2. Distribution of the ringed seal in 1987: a - in April (rookery Nos. as in table 1); b - in May (rookery Nos. as in table 2 (shading signifies absence of animals on the ice)

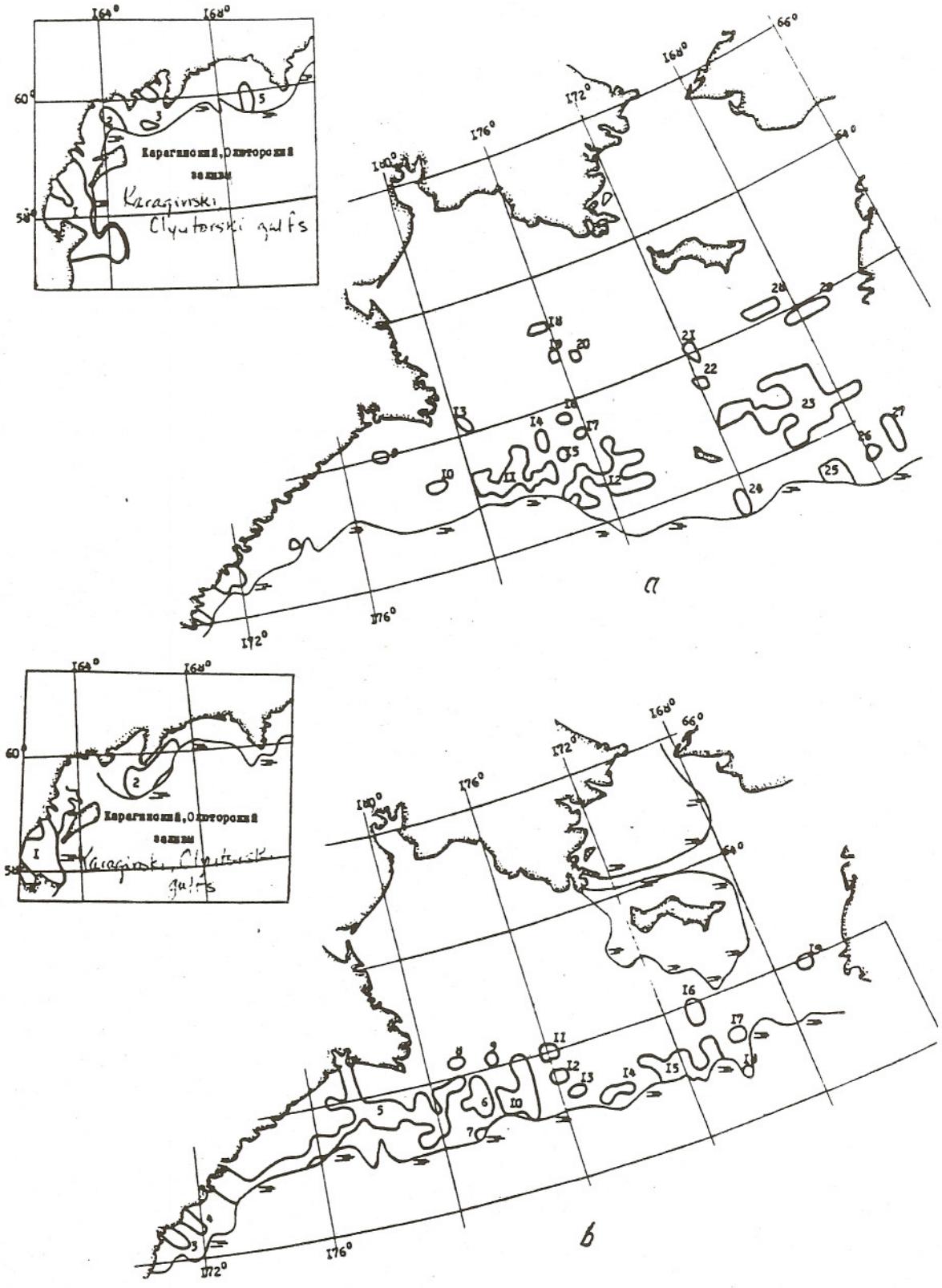

Fig. 3. Distribution of the harbour seal in 1987: a - in April (rookery Nos. as in table 3); b - in May (rookery Nos. as in table 4)

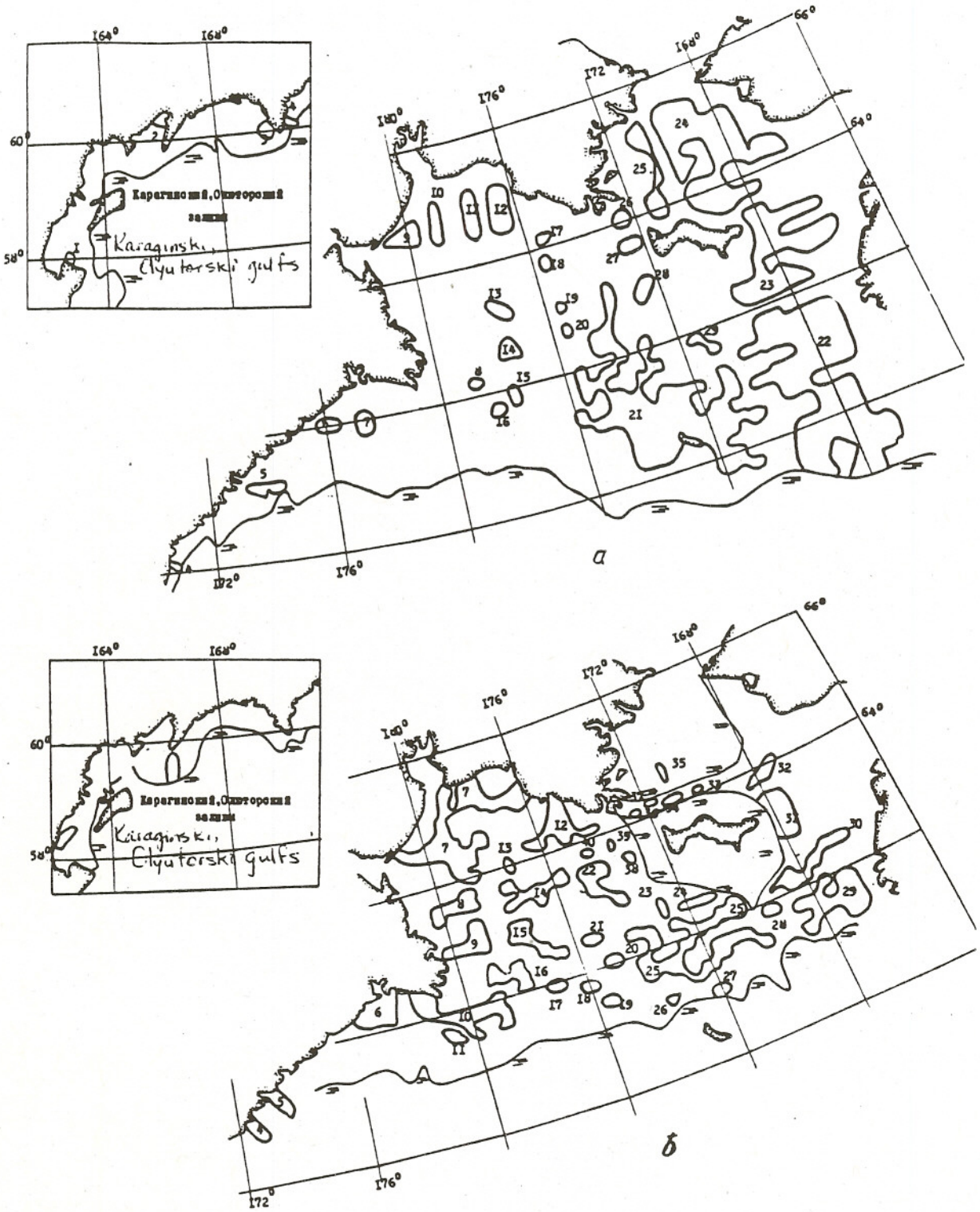

Fig. 5. Distribution of the bearded seal in 1987: a - in April (rookery Nos. as in table 7); b - in May (rookery Nos. as in table 8)

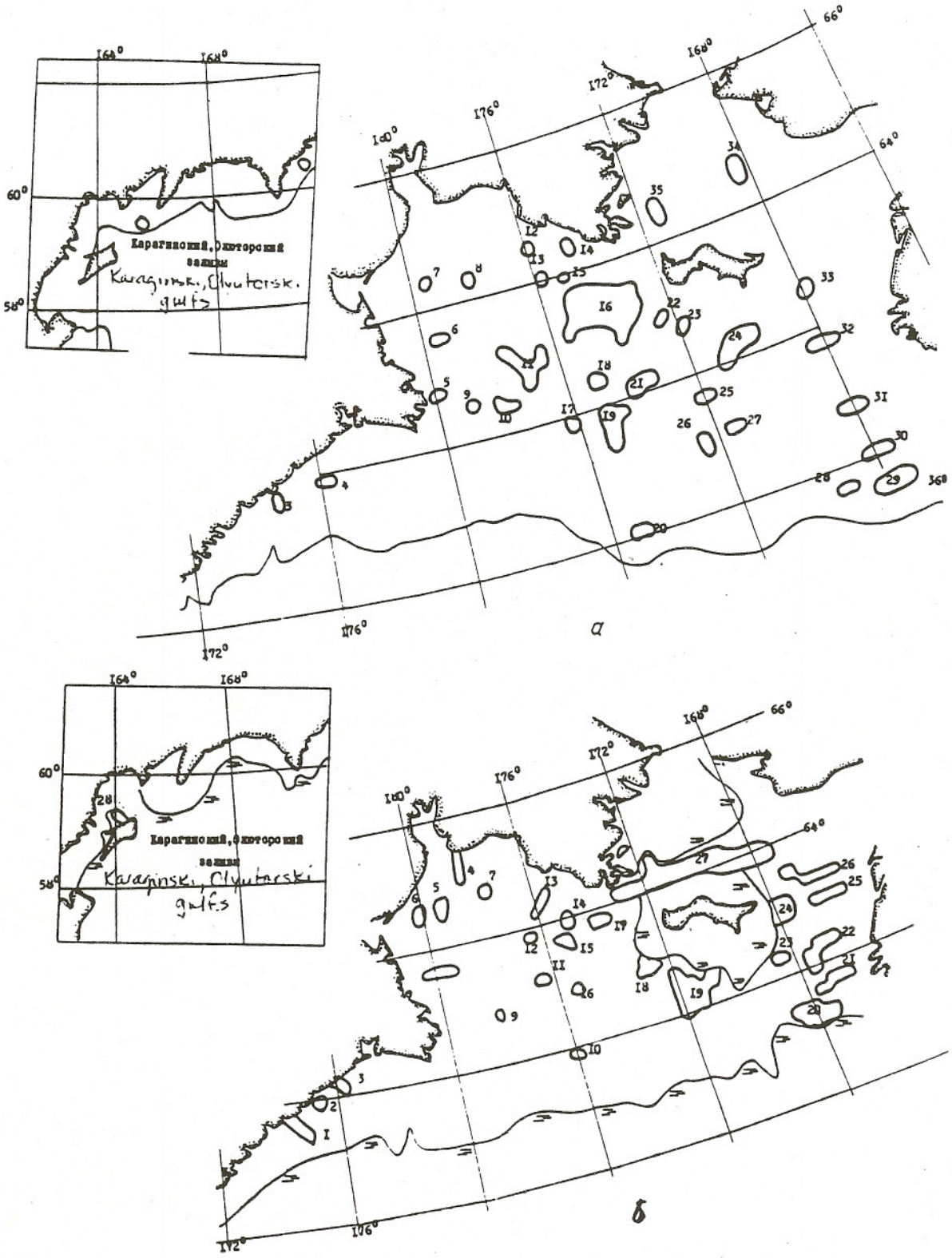

Fig. 6. Distribution of the walrus in 1987: a - in April (rookery Nos. as in table 9); b - in May (rookery Nos. as in table 10)

Table 4. Aerial survey data for the bearded seal of the Bering Sea

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
			April 1987			
1	16	3.2	1	0.31	280	87
2	24	4.8	3	0.62	440	273
3	23	4.6	1	0.22	680	150
4	18	3.6	2	0.56	500	280
5	33	6.6	2	0.30	1100	330
6	22	4.4	1	0.23	780	179
7	40	8.0	2	0.25	1200	300
8	19	3.8	2	0.53	460	244
9	128	25.6	8	0.31	2000	620
10	36	7.2	1	0.14	1460	204
11	40	8.0	2	0.25	1800	450
12	84	16.8	5	0.3	3840	1152
13	24	4.8	2	0.42	1000	420
14	42	8.4	2	0.24	1200	288
15	34	6.8	4	0.59	500	295
16	21	4.2	1	0.24	600	144
17	20	4.0	2	0.5	448	224
18	64	12.8	2	0.16	440	70
19	20	4.0	1	0.25	360	90
20	20	4.0	1	0.25	360	90
21	942	188.4	77	0.41	37680	15449
22	660	132	40	0.30	40400	12120
23	254	50.8	17	0.33	15200	5016
24	313	62.6	33	0.53	22080	11702
25	80	16.0	6	0.38	3300	1254
26	58	11.6	2	0.17	720	122
27	22	4.4	1	0.23	800	184
28	22	4.4	1	0.23	1000	230
29	39	7.8	1	0.13	740	96
Total						52063
			May 1987			
1	20	2.0	1	0.5	800	400
2	10	2.0	1	0.5	480	240
3	44	6.4	3	0.47	1000	470
4	31	5.0	2	0.4	880	352
5	38	5.6	1	0.18	1000	180
6	56	11.2	5	0.45	3720	1674
7	588	56.3	31	0.55	12760	7018
8	74	13.0	4	0.31	2440	756
9	168	24.6	7	0.28	2720	762
10	285	49.0	17	0.35	5920	2072

(table 4 continued)

Rookery Nos.	Length of tack, km	Survey area, km^2	No. of animals recorded	Density of animals per km^2	Area of rookeries, km^2	Numbers of ringed seal
11	41	8.2	2	0.24	700	168
12	168	16.2	14	0.86	4560	3922
13	32	3.2	1	0.31	400	124
14	273.8	31.26	13	0.42	3680	1546
15	174	21.4	9	0.42	2720	1142
16	202	26.4	7	0.26	2400	624
17	40	4	1	0.25	600	150
18	40	3	4	1.3	560	728
19	18	1.8	2	1.1	560	616
20	40	3.6	2	0.56	600	336
21	56	5.6	2	0.36	640	230
22	134	13.4	7	0.52	2760	1435
23	36	3.2	5	1.56	360	562
24	104	7.0	4	0.57	880	502
25	510	47.0	34	0.72	12960	9331
26	20	2.0	2	1.00	400	400
27	20	2.0	1	0.50	620	310
28	20	1.2	1	0.83	560	465
29	212	10.6	24	2.26	7400	16724
30	116	5.8	10	1.7	3960	6732
31	88	8.8	5	0.57	3720	2120
32	42	4.2	2	0.48	1120	538
33	22	2.2	2	0.91	280	255
34	26	3.6	4	1.11	400	444
35	36	7.2	2	0.28	300	84
36	22	2.2	3	1.36	260	354
37	22	2.2	1	0.45	320	144
38	20	2.0	1	0.5	400	200
39	30	3.0	1	0.33	240	79
40	40	4.0	1	0.25	320	80
41	100	9.1	5	0.55	800	440
Total						64709

Table 5. Aerial survey data for the walrus of the Bering Sea

Rookery Nos.	Length of tacks, km	Survey area, km^2	No. of animals recorded	No. of groups recorded	Density of walruses km^2	Area of breeding grounds, km^2	Walrus numbers
			April 1987				
1	20	4.0	15	1	3.75	560	2100
2	22	4.4	1	1	0.23	500	115
3	22	4.4	2	1	0.45	800	360
4	20	4.0	1	1	0.25	600	150
5	20	4.0	2	1	0.50	520	260
6	22	4.4	3	1	0.68	520	354
7	18	3.6	4	2	1.10	400	440
8	20	4.0	1	1	0.25	360	90
9	24	4.8	1	1	0.21	360	75
10	36	7.2	23	2	3.19	800	2552
11	84	16.8	17	5	1.01	2560	2586
12	20	4.0	1	1	0.25	360	364
13	22	4.4	1	1	0.23	320	74
14	20	4.0	1	1	0.25	560	140
15	16	3.2	1	1	0.31	320	99
16	168	33.6	82	10	2.44	8920	21765
17	18	3.6	4	1	1.11	380	422
18	22	4.4	1	1	0.23	560	129
19	94	18.8	74	4	3.94	2640	10402
20	24	4.8	1	1	0.21	720	151
21	52	10.4	26	2	2.50	1120	2800
22	22	4.4	20	2	4.54	720	3269
23	20	4.0	3	1	0.75	600	450
24	92	18.4	63	8	3.42	2800	9576
25	22	4.4	1	1	0.23	500	115
26	22	4.4	6	1	1.36	880	1197
27	18	3.6	10	1	2.78	560	1557
28	20	4.0	1	1	0.25	800	200
29	68	13.6	16	5	1.18	1400	1652
30	24	4.8	1	1	0.21	1160	244
31	24	4.8	11	2	2.29	880	2015
32	22	4.4	3	1	0.68	1040	707
33	40	8.0	35	3	4.38	480	2102
34	22	4.4	20	1	4.54	1120	5085
35	16	3.2	51	3	15.94	780	12433
36	20	4.0	16	2	4.0	720	2880
Total							88910

(table 5 continued)

Rookery Nos.	Length of tacks, km	Survey area, km^2	No. of animals recorded	No. of groups recorded	Density of walruses km^2	Area of breeding grounds, km^2	Walrus numbers
			May 1987				
1	20	4.0	3	1	0.75	1200	900
2	24	4.8	2	1	0.42	440	185
3	38	7.6	103	3	13.2	600	8160
4	20	2.0	150	5	75	1120	8400
5	22	4.4	6	2	1.36	800	1088
6	22	4.4	21	2	4.77	600	2862
7	22	2.2	5	1	2.27	480	1090
8	16	3.2	2	1	0.62	1160	719
9	22	4.4	2	1	0.45	400	180
10	18	0.9	2	1	2.22	480	1065
11	19	0.95	17	2	17.89	520	9303
12	18	0.9	3	3	3.3	400	1320
13	18	1.8	1	1	0.56	1080	605
14	30	4.8	2	2	0.48	600	288
15	56	7.3	3	2	0.41	1000	410
16	20	2.0	1	1	0.5	700	350
17	62	6.2	15	3	2.42	800	1936
18	132	18.8	134	8	7.13	1160	8271
19	257	21.8	183	19	8.39	4800	40272
19*	-	-	1709	83	-	-	1709
20	110	5.5	61	7	11.1	2920	32412
21	42	2.1	11	2	5.2	1440	7488
22	66	3.3	22	3	6.67	2280	15208
23	22	1.1	1	1	0.9	600	540
24	46	4.6	8	4	1.74	1960	3410
25	20	2.0	3	2	1.5	1400	2100
26	42	3.1	37	4	11.94	2000	23880
27	744	68.7	228	22	3.32	8920	29614
27*	-	-	1511	28	-	-	1511
28	22	4.4	20	1	4.5	600	2700
Total							207976

*We encountered large congregations of walruses which were not included in the calculation of density, but were recorded nominally.

In May, despite the discontinuous nature of the rookeries, the distribution of the bearded seal was more uniform throughout the ice masses (Fig. 5, b). As the ice melted and underwent dynamic destruction, the bearded seal migrated to the western shore of the Anadyr Gulf.

The numbers of the bearded seal on the ice breeding grounds totalled 52,000 in April, and about 65,000 in May (table 4). It should be said that the numbers of this species on the ice were similar in the preceding years of the aerial survey (Fedoseyev, 1979). There is no doubt that the abundance of the bearded seal at the rookeries does not reflect the entire stock of the population, due to the high diurnal activity of the species and its well-defined spring migration from the Bering Sea to the Chukchi Sea. On the other hand, the constancy of its numbers on the ice throughout the years of the aerial survey indirectly indicates that the bearded seal stocks in the Bering Sea are in good condition. The current abundance figure of 250,000 head for the bearded seal of the Bering Sea is probably acceptable for today's balanced state of the population (Kenyon, 1972).

Walrus. The investigations on the distribution of walruses in the Bering and Chukchi seas have recently been correlated with the seasonal changes of the range taken into account (Fay, 1982; Fedoseyev, 1982). Nevertheless, the areas inhabited by walruses during the winter and early spring have not been studied sufficiently with regard to the annual changes in ice conditions which in many ways determine the distribution of these animals.

Our data on the distribution of walruses in April and May 1987 (Fig. 6) show that the range of this species may extend much farther westward (towards Cape Navarin and the Anadyr estuary) than noted earlier. At the same time, a comparison of the data for April and May shows a clear tendency towards shifting of the main mass of walruses from west to east, despite the fact that some of the animals remain on the Koryak coast.

The numbers of the walrus for the different periods and areas are given in table 5. These data do not reflect the total abundance of this species, since its range in the eastern part of the sea was not surveyed completely.

The maximum abundance of the walrus stock in the areas of ice surveyed amounted to approximately 208,000 head.

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Data on the abundance of the ice forms of seals in the Karaginski Gulf of the Bering Sea in 1986—1987

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At the present time, the ice forms of seals in the Far Eastern seas are being harvested with the structure of their populations taken into account. Off the eastern coast of Kamchatka, local populations are distinguished in two species of seals, the harbour seal and the ringed seal (Goltsev, Popov, Yurakhno, 1975; Fedoseyev, 1984). The populational status of the breeding and moulting congregations of the ribbon seal and bearded seal that form in this area every year has not been studied well enough. The hunting limitation for the seals off Eastern Kamchatka is based on the abundance of