

ABUNDANCE AND AGE-SEX COMPOSITION OF WALRUSES AT HAULING-OUT GROUNDS OF THE CHUKCHI PENINSULA

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This paper examines research data on the Pacific walrus, collected during the formation of coastal rookeries on the islets of Kosa [Point] Meyechkin, Kosa Red'kina, Arakamchechen Is. and Cape Inchoun.

The first walrus haul-outs were noted in mid June on the islets of points Meyechkin and Red'kina, in July on Arakamchechen Is., and in August on Cape Inchoun. The rookeries were no longer in use at the end of October—beginning of November. The final walrus survey was carried out on 31 October 1989 on Cape Serdtse-Kamen', where 1100 walruses had hauled out.

The total number of walruses that hauled out at the Meyechkin and Rudder-skoye sites (table 1) was 2-5 times lower than in 1983-1986 (Grachev, 1988; Mymrin et al., 1988), and the number hauling out on Arakamchechen Is. was 1.5-3 times lower. The lowest number of walruses remaining in Anadryr Gulf and in Bering Strait in summer was noted in 1990. On 23 September 1989, G.A. Paramonov observed a walrus rookery in the vicinity of the Cheutakan Lagoon from a helicopter. He estimated that it was occupied by 1000 walruses. When this rookery was revisited in September 1990, twelve walrus carcasses were found on the shore, and traces of resting walruses were observed on the sandy beach*.

Table 1. Maximum abundance of walruses at Chukchi hauling-out grounds according to the months of the year (thou. head)

Rookery	1988					1989					1990				
	VI	VII	VIII	IX	X	VI	VII	VIII	IX	X	VI	VII	VIII	IX	X
Meyechkin	+	1.12	1.14	0.07	-	-	-	-	-	-	-	4.00	2.70	0.85	-
Red'kina	-	8.90	13.00	0	-	-	7.00	-	-	-	+	2.97	3.38	1.72	-
Arakamchechen	-	6.86	14.28	-	-	-	3.75	6.61	6.84	2	-	4.92	7.95	10.35	-
Inchoun	0	0	2.00	2.00	0	-	-	-	-	-	-	-	-	-	-

Note: "+" - walrus numbers not determined; "-" - observations not conducted.

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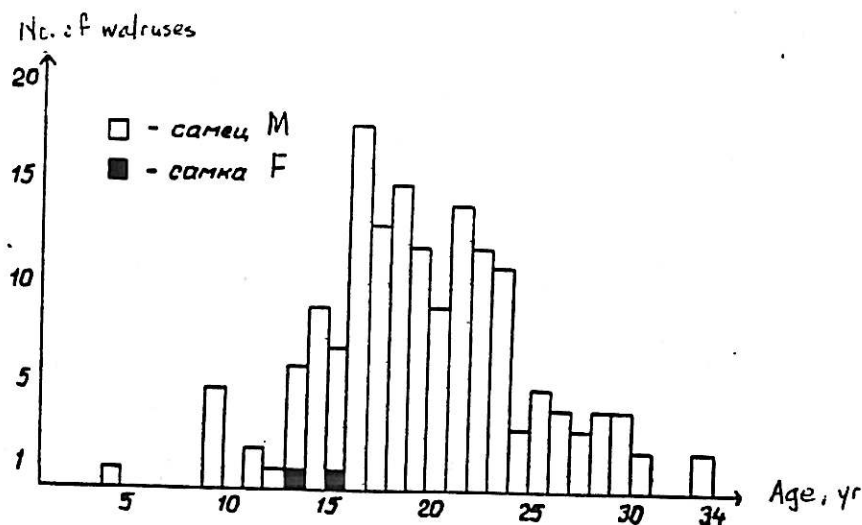
During 1988-1990, the difference in the sex-age structure of the walrus groups inhabiting Anadyr Gulf and Bering Strait remained. In 1989 and during the period from 1985 to 1987, the composition of walruses at the Rudderskoye rookery (Table 2) at the initial stage of their haul-out was approximately the same (Grachev, 1988), i.e. the male/female ratio was 1:1.3. Sexually mature and immature animals constituted 70.7 and 29.3% respectively. The sex composition of the walruses harvested by the hunters of Nunlingran village in 1989 was 34% (18) males and 66% (35) females. In 1988 and 1990, males were more numerous at the Meyechkin and Rudderskoye rookeries (of the total number that hauled out at these rookeries). Based on the results of visual observations, the male/female ratio was 5.4:1 at the Meyechkin rookery in 1988, and 3.9:1 at the Rudderskoye rookery in 1990. Considering the fact that it is much easier to harvest female walruses and preference is given to them during the harvesting season, the sex composition of the walruses harvested in 1988 by the hunters of Enmelen village and in 1990 by the hunters of Nunlingran village [males and females constituted 54.4% (25) - 45.6% (21) and 53.9% (41) - 4.1% (35) respectively] confirms these observations. The surveys on Cape Inchoun and Arakamchechen Is. showed that the age-sex composition of the walruses at the hauling-out grounds was the same as in previous years, i.e. males of different age groups were more numerous. They comprised 100% at the Inchoun rookery in 1988, and 99.3-99.8% on Arakamchechen Is. in 1988-1990. Among the animals harvested by the hunters of Lorino village (see Fig.), sexually mature males predominated in the grouping of walruses inhabiting the Bering Strait during the ice-free period. Females were encountered singly at both rookeries, and their numbers on Arakamchechen Is. varied annually from 0.2 to 0.7%.

Thus, the number of walruses found in the Anadyr Gulf and the Bering Strait during the ice-free period dropped considerably in 1988-1990. This was apparently due to the ice conditions at sea during these years. The regional difference in the age-sex composition of the walruses remained. The fact that the Anadyr Gulf is constantly inhabited by an intermixed grouping of walruses is proof of its local nature. The structure of the Anadyr grouping is affected to some extent by the activity of hunters from the villages of Uel'kal', Konergino, Enmelen and Nunlingran. Because of this, a solution to the problem of limited harvesting of females and limited walrus hunting in this area must be found.

Table 2. Sex-age composition of walrus at the Rudderskoye rookery in 1989

Date	Males	Females	Age				Total
			young of the year to 1 year	1 year	2 years	3-8 years	
17.07	42/35.9	44/37.6	3/2.6	4/3.4	3/2.6	21/17.9	117/100.0
18.07	42/40.4	35/33.6	1/1.0	2/1.9	3/2.9	21/20.2	104/100.0
22.07	57/24.7	116/50.2	4/1.7	4/1.7	2/0.9	48/20.8	231/100.0
23.07	67/31.9	65/31.0	3/1.4	3/1.4	5/2.4	67/31.9	210/100.0
Total	208/31.4	260/39.3	11/1.7	13/2.0	13/2.0	157/23.7	662/100.0

Note: Figure following oblique line denotes percentage of walrus.



Age and sex composition of walrus harvested by hunters from the village of Lorino from July 25th to August 28th 1990

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