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MEMORANDUM FOR: The Record

FROM: Lowell Fritz, Michael Williams, Rod Towell

SUBJECT: Report of Field Work - Pribilof Islands, July, 2007

Adult male northern fur seals on St. Paul and St. George Islands were counted over the period 8-15 July 2007 and the results are summarized in the attached tables (Tables 1 - 5). Counts of territorial males with females ("harem" males) on St. George increased slightly (3.2%, to 743) compared to 2006, which followed a 20% decrease from 2005. Idle males on St. George decreased 14% (to 559 in 2007), resulting in a 5% decline in total counts of adult male fur seals between 2006 and 2007. On St. Paul the idle males decreased by 16.1% and the "harem" males decreased by 2.8% (Figure 1). Overall, the total number of adult males counted on the Pribilof Islands was 10,140, a decrease of 10.4% from 2006. The total number of territorial males with females decreased slightly (1.8%).

Little Polovina rookery on St. Paul, the smallest rookery on the Pribilof Islands, had only two territorial males with females in 2006 and 2007. This is one less than the three observed in 2005 (two were observed on this rookery in 2004).

On St George, juvenile and sub-adult male haul-outs on the north side of the island (North, East Cliffs, East Reef, and Staraya Artil) were occupied by many more animals than have been observed in recent years, while haul-outs on the south side (South and Zapadni) had similar numbers. Most haul-out males appeared to be 3-5 years old (with some possibly as old as 6). Consequently, increases in males on haul-outs did not affect the 2007 'idle' adult male count, which has declined 65% on St George since 2001 (Figure 1). Interestingly, there were approximately 180 juvenile and sub-adult males hauled out in Zapadni boat harbor (of which 2 would have been included in the 'idle' male category) and a report of others hauled out on Dalnoi Point.

A sample of adult females was counted during the counting of adult males on St. Paul in



2007 to determine the rate of entanglement, following established protocol. This year the results produced an estimated entanglement of <0.001% (Table 6).

Steller sea lions were noted ashore at one location on St. Paul and one location on St. George in 2007. Forty-three were seen on the tip of North East Point between Morjovi and Vostochni fur seal rookeries on St. Paul. Branded animals A418 and A391 were among those observed. Sea lions (N=14) were observed on land between East Cliffs (section 1) and East Reef rookeries on St. George.

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Table 1.--Number of adult male northern fur seals (seals that are seven years old or older) counted, by rookery, St. Paul Island, Alaska, July 2007. Classes of males are: 2-territorial males with no females, 3 - territorial males with females (harem), 5 - non-territorial males.

Rookery	Date (July)	Class of adult male			Total
		2	3	5	
Lukanin	9	45	91	168	304
Kitovi	9	84	150	247	481
Reef	10	211	428	349	988
Gorbatch	10	128	232	312	672
Ardiguen	10	17	48	6	71
Morjovi	12	138	305	463	906
Vostochni	12/13	199	686	530	1415
Little Polovina	15	0	2	157	159
Polovina	15	27	95	200	322
Polovina Cliffs	15	86	350	151	587
Tolstoi	14	146	403	325	874
Zapadni Reef	11/13	55	152	189	396
Little Zapadni	11	117	260	200	577
Zapadni	11/13	183	366	537	1,086
Island total		1,436	3,568	3,834	8,838

Table 2.--Number of adult male northern fur seals counted, by rookery, St. George Island, Alaska, July 2007. See Table 1 for definition of classes of seals.

Rookery	Date (July)	Class of Adult Male			Total
		2	3	5	
East Cliffs	8	63	159	63	285
East Reef	8	13	53	9	75
North	8	110	248	97	455
Staraya Artil	9	16	41	23	80
South	9	44	165	62	271
Zapadni	9/10	19	78	40	137
Island Total		265	744	294	1,303

Table 3.--Number of harem and idle male northern fur seals counted in mid-July, Pribilof Islands, Alaska, 1997-2007. Harem males are class 3 males and Idle males are class 2 and 5 combined (Tables 1 and 2).

Year	St. Paul Island		St. George Island		Total	
	Harem	Idle	Harem	Idle	Harem	Idle
1997	5,064	8,560	910	1,474	5,974	10,034
1998	4,762	8,396	1,116	1,084	5,878	9,480
1999	3,767	7,589	1,052	916	4,819	8,505
2000	3,646	6,998	871	1,300	4,517	8,298
2001	3,388	7,174	843	1,596	4,231	8,770
2002	3,669	7,877	899	1,265	4,568	9,142
2003	3,652	7,572	716	1,158	4,368	8,730
2004	3,286	5,027	760	905	4,046	5,932
2005	3,515	5,811	905	634	4,420	6,445
2006	3,669	6,283	720	650	4,389	6,933
2007	3,568	5,270	744	559	4,312	5,829

Table B-2. – Number of adult male northern fur seals counted (rounded average of two counts), by class^a and rookery section, St. Paul Island, Alaska, 9-15 July, 2007. A dash indicates no section.

Rookery and class of male	Section														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<u>Lukanin</u>															
2	30	15													45
3	56	35													91
5	153	15													168
<u>Kitovi</u>															
2	15	18	13	10	28										84
3	26	26	23	39	36										150
5	81	24	15	15	112										247
<u>Reef</u>															
2	14	41	39	18	15	29	3	19	18	13	2				211
3	45	60	48	41	53	53	0	61	35	27	5				428
5	7	15	34	59	85	11	8	33	8	48	41				349
<u>Gorbatch</u>															
2	31	18	32	11	13	23									128
3	58	34	52	12	34	42									232
5	178	29	40	34	13	18									312
<u>Ardiguin</u>															
2	17														17
3	48														48
5	6														6
<u>Morjovi^b</u>															
2	(19) 21	28	24	12	24	10									138
3	(41) 42	39	38	26	72	47									305
5	(73) 173	19	46	19	55	78									463
<u>Vostochni</u>															
2	9	6	11	13	8	39	12	8	11	7	10	12	44	9	199
3	49	20	27	38	37	62	29	36	30	18	26	65	166	83	686
5	22	7	9	44	55	23	15	20	29	9	26	63	78	130	530
<u>Little Polovina</u>															
2	0														0
3	2														2
5	157														157
<u>Polovina</u>															
2	10	17													27
3	52	43													95
5	140	60													200
<u>Polovina Cliffs</u>															
2	21	5	10	6	16	15	13								86
3	37	33	29	57	50	72	72								350
5	45	19	10	8	13	25	31								151
<u>Tolstoi</u>															
2	11	11	6	9	18	26	25	40							146
3	38	28	39	60	48	70	55	65							403
5	5	3	13	15	15	36	15	223							325
<u>Zapadni Reef</u>															
2	48	7													55
3	110	42													152
5	104	85													189
<u>Little Zapadni</u>															
2	6	13	23	27	24	24									117
3	19	32	50	46	45	68									260
5	21	18	20	11	14	116									200
<u>Zapadni^c</u>															
2	14	20	22	31	24	31	28	13							183
3	(1) 25	49	51	42	44	67	55	32							366
5	(73) 10	14	15	16	17	17	67	308							537

^a Class 2 = territorial adult male without female; class 3 = territorial adult male with female; class 5 = non-territorial adult male.

^b Numbers in parenthesis are the adult males counted on the second point south of Sea Lion Neck.

^c Numbers in parenthesis are the adult males counted on Zapadni Point Reef.

Table 5. B Number of adult male northern fur seals counted, by class^a and rookery section, St. George Island, Alaska, 8-10 July 2007. A dash indicates no section.

Rookery and class of male	Section					Total
	1	2	3	4	5	
<u>Staraya</u>						
2	9	7	-	-	-	16
3	29	12	-	-	-	41
5	20	3	-	-	-	23
<u>Zapadni</u>						
2	5	3	11	-	-	19
3	18	34	26	-	-	78
5	33	6	1	-	-	40
<u>South</u>						
2	19	15	10	-	-	44
3	49	56	60	-	-	165
5	46	9	7	-	-	62
<u>East Cliffs</u>						
2	47	16	-	-	-	63
3	100	59	-	-	-	159
5	24	39	-	-	-	63
<u>East Reef</u>						
2	13	-	-	-	-	13
3	53	-	-	-	-	53
5	9	-	-	-	-	9
<u>North</u>						
2	15	23	42	20	10	110
3	41	56	83	45	23	248
5	36	13	21	5	22	97

^a See Glossary of previously published Fur Seal Investigation reports for a description of the classes of adult male seals.

Table 6. Summary of entanglement observed among adult female northern fur seals on St. Paul Island, Alaska, 1991 - 2007.

Year	Total count	Number entangled	Number scarred	Total (entangled + scarred)	entanglement rate (%)
1991	16,009	3	7	10	0.019
1992	25,089	3	6	9	0.012
1993	31,638	3	11	14	0.009
1994	30,269	7	10	17	0.023
1995	29,109	3	8	11	0.010
1996	30,426	4	7	11	0.013
1997	30,406	2	9	11	0.007
1998	28,461	3	8	11	0.011
1999	22,820	2	6	8	0.009
2000	7,746	3	5	8	0.039
2001	5,917	3	0	3	0.051
2002	9,607	1	1	2	0.010
2003	6,426	1	1	2	0.016
2004	19,701	2	7	9	0.010
2005	8,643	2	3	5	0.023
2006	9,039	1	2	3	0.011
2007	11,305	2	0	2	<0.001

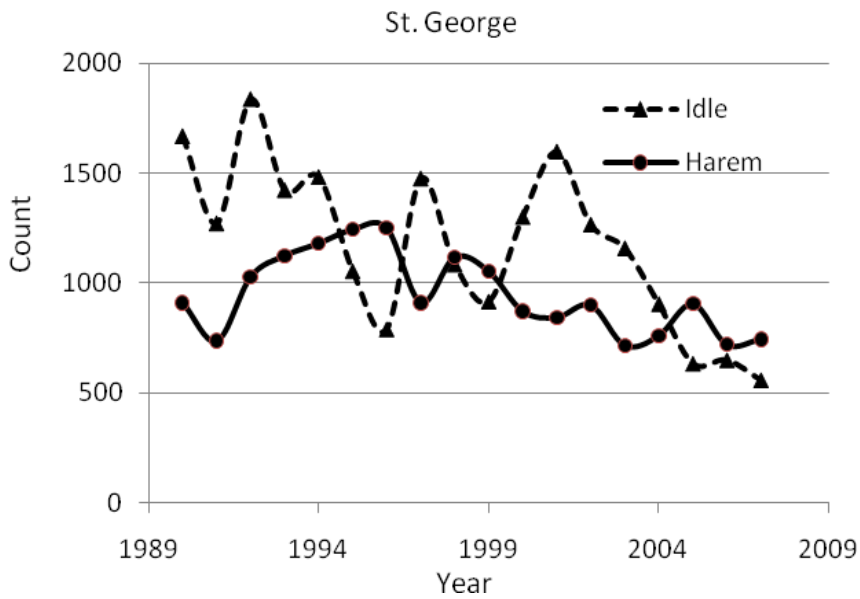
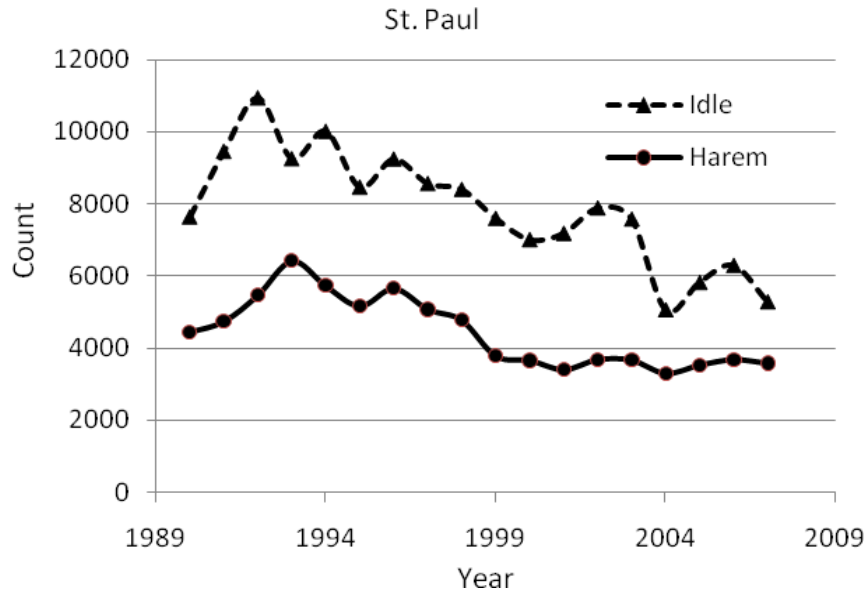


Figure 1. Temporal dynamics of the counts of adult male northern fur seals on St. Paul and St. George Islands, 1990-2007, showing territorial males with females (filled circles) and idle males (territorial without females and non-territorial combined, filled triangles).