

24 August 1999

Mr. David Cormany
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Dear Dave

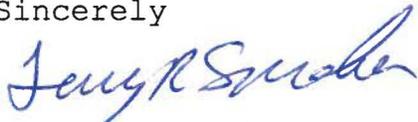
Please find enclosed the Humane Observer Report for the 1999 northern fur seal subsistence harvest on St. Paul Island, Alaska.

The 1999 Northern fur seal harvest was unusual this year. The harvest started on 2 July and ended on 7 August 1999. A total of 1000 animals were killed. There were no females killed and no cases of hyperthermia this year. I think this is a first. Animals were gathered, handled and killed in a humane fashion at all harvest except one, that is the round-up on 31 August 1999 from Zolotoi Sands in which approximately 50 to 60 seals fell from a 50 foot cliff. At least 36 animals died from this event. There was also a problem with wastage this year. At least 36 carcasses, 19 hearts and numerous pieces of liver were found discarded at the blubber dump.

As like last year pelts were not found this season that had been contaminated with oil. In 1994: 23 animals were found, in 1995: 3 animals were found, in 1996: 4 animals were found and in 1997: 1 and 1998: none.

I hope all of the work with the co-management organization is working out. Please keep me informed. Have a great day.

Sincerely



Terry R. Spraker, DVM, PhD, DACVP

HUMANE OBSERVER REPORT
Northern Fur Seal Subsistence Harvest
St. Paul Island, Alaska
July-August, 1999
Terry R. Spraker

INTRODUCTION

Northern fur seals (Callorhinus ursinus) have been harvested for their pelts for the last 200 years on the Pribilof Islands. During this time period, the native Privilovians could freely take the meat of the harvested animals for food. On St. Paul Island, the commercial harvest for pelts ceased in 1984; therefore a subsistence harvest began with only immature males taken for food. This subsistence harvest has continued for the last sixteen years (1984-1999). The harvest is a well planned and orderly procedure. Young male northern fur seals are gathered by driving them from their haulout areas to a specific killing field where they are held in a large pod. Five to ten seals are then cut from this large pod and driven to a group of three to four men who stun the animals by hitting them on the skull or upper neck with a solid wooden club. The animals are dragged a short distance away from the killing area where the chest and heart are cut open. The animals are then skinned and butchered for human consumption. For a more detailed description of the procedures of the harvest, see Humane Observer Report: Stoskopf 1984; Letcher, 1985; Dorsey, 1986; Zimmerman et. al., 1986. This report will be limited to my observations of the humane activities of the northern fur seal harvest for July and August 1999.

Multiple factors were evaluated during this harvest. These factors included environmental conditions, methods of gathering and herding the animals, and the harvesting of animals. These three areas will be discussed separately.

Northern fur seals (Callorhinus ursinus) were harvested 19

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times from 2 July through 7 August 1999 from seven haulout areas (Polovina - 5 times, Gorbach - 4 times, Big Zapadni - 4 times, Zapadni Sands - 2 times, Lukanin - 2 times, Marjovi - once and Zolotoi Sands - once). A total of 1000 subadult male animals were killed this year. Females were not killed this year (Table 1).

ENVIRONMENTAL CONDITION

The environmental conditions of the harvest from 7 July through 7 August were monitored including the average air temperature, degree of precipitation, wind and cloud cover. The air temperature was taken when the drive began and ranged from 42°F to 46°F, with an overall average of 45°F. Rain occurred twice during the harvests, it was misty eleven times and the air was relative dry 5 times. A breeze was present 17 of the 18 days recorded. The wind speed varied from 0 to 20 knots with an overall average of 10.8 knots. Cloud cover was complete and low most of the time (14 days) and light and high only on 4 days (Table 2). The environmental conditions were slightly cooler this year as compared to previous years.

GATHERING OF ANIMALS

Ten to fifteen men would go to a specific haulout area and quickly form a line along the shore thus preventing the seals access to the ocean. Then the seals were gathered into several pods and driven to the killing field. The animals were gathered between 8:50am to 12:25am this summer, but most drives began between 9:30 to 11:00am. Estimated distance of the drives ranged from 125 to 375 yards. Animals were driven from 14 to 38 yards/minute with an average of 26 yards/minute. The animals were usually rested during the drive. The drives were similar this year as compared to previous years (Table 3).

An estimated difficulty of the drive was graded on a scale of 1+ to 3+, with 1+ being the easiest, and 3+ being the most difficult. These same paths have been used for driving seals to the killing field for several hundred years and were all fairly easy drives (Table 3). The degree of wetness to the grass and terrain was monitored and estimated as this is believed to be an important cooling factor for the animals. The grass was wet 14 days and moist 4 days. This was also similar as compared to previous years (Table 3).

HARVESTING PERIOD

The harvesting activity was characterized by holding the animals in a large pod approximately 20 to 30 yards from the stunning area. While a few young boys held the seals, three to four young men would cut out a small pod of seals and drive them to the stunners. The pod size usually was 5 to 8 animals. Animals were killed by hitting them on the skull at the level of the ears or over the 1st/2nd cervical vertebra. The majority of times, the animals were hit just once. These animals would immediately drop and were hit again on the skull. However, sometimes the first hit missed its mark and one or two more hits were required. The number of double- and triple- hits were not counted this year, but my overall impression was that the accuracy was about the same this year as in previous years.

Deep body core temperatures of approximately 10% of the animals were taken throughout each harvest. The temperatures were then divided into three equal time slots during the harvest for each day. The average body temperatures are presented in Table 4. Temperatures ranged in individual animals from 100.5°F to 106.3°F. No animals died due to hyperthermia this year.

Hyperthermia is due to overheating caused by over activity of the animals. Predisposing factors include warm environmental

temperatures, lack of cloud cover and/or mist, dry grass, lack of wind, animals being driven too fast (especially uphill), long drives, animals being held too tight in the large holding pods and having too much activity or moving around in the large holding pods. Another predisposing factor is the amount of rest an animal has had before the drive. For example, an animal that has just arrived on the haulout from a feeding trip may not be "fully rested" and, if they are subjected to a harvest/drive, become exhausted quicker than a totally rested animal.

To avoid hyperthermia animals should be driven slowly, rested at least 10-15 minutes after the drive and the holding pods should be kept loose. If an animal lags behind during the gathering period they should be allowed to drop out of the pod. If the environment temperature is 55°F, great care has to be taken during the drive and the harvest and if the temperature is $\geq 60^\circ\text{F}$, no cloud cover, wind or mist, the harvest should not be done that day. When the animals in the holding pod show early signs of hyperthermia (including, flipper fanning, open mouth breathing and lying down) the harvest should be stopped and the animals released slowly.

HEALTH STATUS

The health status of the animals was evaluated by examining viscera and carcasses throughout the harvest. Stomachs were opened and checked for parasites and ulcers. Gastric parasites were Contracaecum sp. and Anisakis sp., both of which have been reported previously in fur seals. The overall parasitic burden was comparable this year as in previous years. In general, the harvested animals appeared to be in good body condition and healthy.

OIL CONTAMINATION OF ANIMALS

This year (as last year) animals were not found with oil on their pelts. The number of animals found with oil on their pelts has decreased since 1994 when 23 contaminated animals were found.

SUMMARY

This was an unusual year because there were two positive and two negative events that happened that nearly resulted in cessation of the harvest for the 1999 season. The two positive activities were that female northern fur seals were not killed this season and cases of hyperthermia were not observed throughout the entire harvest period. As far as I know this is the first time during any of the subsistence harvests that cases of hyperthermia did not occur and female seals were not clubbed in the harvest. However I understand this is the norm on St. George.

The two major negative events that occurred this year included wastage of meat and one gross error that resulted in approximately 60 northern fur seals falling off a 50 foot cliff onto a beach covered with large sharp boulders. The wastage included at least 36 completely cut-up northern fur seal carcasses, a minimum of 19 hearts and numerous pieces of liver that were discarded at the blubber dump in the middle of the harvest season. The only portion of the carcass not present was the fore flippers. This amount of wastage is not acceptable in any type of subsistence harvest especially within a threaten species such as northern fur seals. The second major event occurred on 31 July 1999 that resulted in 50 to 60 animals falling from a 50 foot cliff. The drive started at 11:30 AM on Zolotoi Sands. The drivers rounded up approximately 400 to 500 animals, but the animals separated into three groups. Two groups were quickly lost and all of the drivers concentrated on the

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remaining 150 are so animals. The animals were driven from Zolotoi Sands southeast towards the Gorbatch blind. During this time about half of the drivers left the seals and went to start another roundup from Gorbatch. The 150 are so animals split into two groups, one group of about 50 to 60 animals went east towards the cliffs and about 90 to 100 moved westward toward the ocean. I personally lost sight of the animals at this time. The animals that went east were observed to have fallen over a 45 to 50 foot cliff, but this was not reported to me. I observed one driver trying to keep 12 animals from going off a cliff which he did for about 10 minutes, but the animals ran past him and fell about 15 to 20 feet from a cliff. The harvest was already starting at Gorbatch so I went to the harvest. The harvest lasted one hour, then, after the harvest the one area that I saw that animals had fallen was checked. This area was under a cliff that was 15 to 20 feet. No dead animals were found, but a fresh set of foot prints were observed. During this time I did not have knowledge of the fact that 50 to 60 animals had fall 300 to 400 yards up the cliffs. Later that day Tom Laughlin and his group found where the 50 are so animals had fallen from the cliff. They found 31 dead and 7 or 8 injured animals. Two of sealers, Dave Cormany and I went down to investigate the injured animals. All the injured animals went into the sea when we approached except three, which the sealers clubbed. The next day we posted all of these animals, 34 found on the beach under the cliffs and 2 more found washed up at East Landing. At least 36 subadult male northern fur seals were inhumanely killed in this event (for a detailed report of the necropsies see the Northern Fur Seal Disease Report, Tom Loughlin, Seattle, Washington, necropsy numbers 99CuA 8 to 41 and 43 and 44.) Problems that occurred that resulted in this incident included changing of plans in the middle of a round-up by the leaders of the harvest, by half the

drivers leaving the gathered animals near the cliffs and not checking the animals immediately after they had fallen (to put the injured animals out of there pain). This incident could have been prevented if driving plans are made before the drive starts and drive plans are not changed in the middle of a drive if the released animals could possibly get themselves into trouble. For example near cliffs at Lukanin and Zolotoi Sands or if the gathered animals would run or be driven into a rookery which sometimes has happened at Big Zapadni and Northeast Point - Vostochni side.

Points to be remembered during the harvest include:

1. Drive the animals slowly to the killing field.
2. Do not unnecessarily harass the seals during the drive.
3. Rest the animals 10 to 15 minutes prior to the harvest.
4. Harvest in the morning; thus avoiding warmer afternoon environmental temperatures.
5. Drive small pods to the stunners. Five to seven animals are good, but not 10 to 15 animals at a time.
6. Take a little more time to isolate the selected animals to be killed.
7. If environmental temperatures are 55°F to 60°F, give the seals frequent rests during the drive and keep the holding pods loose. If environmental temperature is 60°F or above, do not have a harvest.
8. Try to "weed out" (release) older animals and females during the drive.
9. When the animals in the holding pod show early signs of hyperthermia (including, flipper fanning, open mouth breathing and lying down) the harvest should be stopped and the animals released slowly.

10. Discuss driving plans with drivers before drive starts. If driving plans are changed during a drive because not enough animals are gathered or too many big bulls or females are in the group, the animals should be released in a safe area not near cliffs. I am not sure what to do if animals are running towards a cliff. My impression is that they probably should be left alone and not disturbed. I think the animals if not pushed will avoid them, but if scared will jump quickly.
11. Do not allow intoxicated persons to work in any of the positions at the harvest or even to be on the killing field because of the disruption that they cause and the danger to themselves and others especially if they have a knife.

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Table 1. Table of dates, locations and number of northern fur seals killed during the subsistence harvest on St. Paul Island, Alaska 1999.

| DATE | LOCATION | SEALS KILLED MALES | SEALS KILLED FEMALE | RUNNING TOTAL KILLED |
|---------|---------------|--------------------------|---------------------------|-------------------------|
| 2 July | Gorbatch | 26 | 0 | 26 |
| 7 July | Zapadni Sands | 19 | 0 | 45 |
| 8 July | Polovina | 35 | 0 | 80 |
| 10 July | Big Zapadni | 12 | 0 | 92 |
| 14 July | Polovina | 36 | 0 | 128 |
| 17 July | Gorbatch | 40 | 0 | 168 |
| 21 July | Polovina | 30 | 0 | 198 |
| 23 July | Big Zapadni | 39 | 0 | 237 |
| 26 July | Gorbatch | 63 | 0 | 300 |
| 27 July | Polovina | 35 | 0 | 335 |
| 28 July | Zapadni Sands | 65 | 0 | 400 |
| 29 July | Big Zapadni | 69 | 0 | 469 |
| 30 July | Lukanin | 69 | 0 | 538 |
| 31 July | Gorbatch | 68 (36) * | 0 | 642 |
| 3 Aug | Polovina | 66 | 0 | 708 |
| 4 Aug | Big Zapadni | 86 | 0 | 794 |
| 5 Aug | Lukanin | 90 | 0 | 884 |
| 6 Aug | Marjovi | 46 | 0 | 930 |
| 7 Aug | Zolotoi Sands | 70 | 0 | 1000 |
| Total | | | 0 | 1000 |

* = On 31 July approximately 50 to 60 subadult male northern fur seals fell from the 50 foot cliffs east of Zolotoi Sands killing at least 36 animals.

Table 2. Summary of environmental conditions during the 1999 northern fur seal subsistence harvest on St. Paul Island, Alaska.

| DATE | LOCATION | AIR TEMP (F°) | PRECIPITATION | WIND KNOTS / DIRECTION | CLOUD COVER |
|---------|---------------|---------------|---------------|------------------------|---------------|
| 2 July | Gorbatch | NR | NR | NR | NR |
| 7 July | Zapadni Sands | 42 | None | 7 SE | Complete/low |
| 8 July | Polovina | 43 | Misty | 11 E | Complete/low |
| 10 July | Big Zapadni | 45 | None | 10 N | Complete/low |
| 14 July | Polovina | 46 | Misty | 11 E | Complete/low |
| 17 July | Gorbatch | 45 | None | 5 E | Complete/high |
| 21 July | Polovina | 45 | None | 6 S | Complete/high |
| 23 July | Big Zapadni | 46 | Misty | 13 S | Complete/low |
| 26 July | Gorbatch | 45 | Misty | 12 SE | Complete/low |
| 27 July | Polovina | 45 | Misty | 0 | Complete/low |
| 28 July | Zapadni Sands | 46 | Rainy | 11 SSW | Complete/low |
| 29 July | Big Zapadni | 45 | Misty | 17 SW | Complete/low |
| 30 July | Lukanin | 46 | Misty | 20 S | Complete/low |
| 31 July | Gorbatch | 46 | None | 16 SSW | Complete/high |
| 3 Aug | Polovina | 45 | Rain | 11 ENE | Complete/low |
| 4 Aug | Big Zapadni | 45 | Misty | 9 E | Complete/low |
| 5 Aug | Lukanin | 45 | Misty | 15 SSE | Complete/low |
| 6 Aug | Marjovi | 46 | Misty | 10 SSW | Complete/low |
| 7 Aug | Zolotoi Sands | 45 | Misty | 11 SW | Complete/high |

Table 3: Summary of activity during the drive of northern fur seals to the killing fields during the subsistence harvest, St. Paul Island, Alaska 1999.

| DATE | LOCATION | DURATION OF DRIVE (min) | ESTIMATED DISTANCE OF DRIVE (yards) | ESTIMATED SPEED OF DRIVE - yards/min | TERRAIN TYPE AND WETNESS OF GRASS, (OVERALL DIFFICULTY OF DRIVE) |
|---------|---------------|-------------------------|-------------------------------------|--------------------------------------|--|
| 2 July | Gorbatch | NR | NR | NR | uphill dirt, wet, (+) |
| 7 July | Zapadni Sands | 6 | 125 | 21 | flat sandy, wet, (+) |
| 8 July | Polovina | 8 | 200 | 25 | uphill dirt, moist, (+) |
| 10 July | Big Zapadni | 18 | 365 | 20 | downhill rocky, sandy-flat, wet, (++) |
| 14 July | Polovina | 5 | 150 | 30 | uphill dirt, flat, wet, (+) |
| 17 July | Gorbatch | 4 | 150 | 38 | uphill dirt, flat, wet, (+) |
| 21 July | Polovina | 5 | 125 | 25 | uphill, dirt, wet, (+) |
| 23 July | Big Zapadni | 14 | 255 | 18 | flat sand, wet, (+) |
| 26 July | Gorbatch | 5 | 125 | 25 | uphill dirt, wet, (+) |
| 27 July | Polovina | 5 | 150 | 30 | uphill dirt, moist, (+) |
| 28 July | Zapadni Sands | 5 | 150 | 30 | flat, sandy, wet, (+) |
| 29 July | Big Zapadni | 14 | 375 | 27 | downhill rocky, sandy-flat, wet, (++) |
| 30 July | Lukanin | 5 | 175 | 35 | uphill dirt/rocky, wet, (+) |
| 31 July | Gorbatch | 6 | 150 | 25 | uphill dirt, wet, (+) |
| 3 Aug | Polovina | 10 | 200 | 33 | uphill dirt, wet, (+) |
| 4 Aug | Big Zapadni | 16 | 365 | 23 | downhill rocky, sandy-flat, wet, (++) |
| 5 Aug | Lukanin | 13 | 225 | 28 | uphill dirt/rocky, wet, (+) |
| 6 Aug | Marjovi | 9 | 150 | 17 | flat dirt, moist, (+) |
| 7 Aug | Zolotoi Sands | 17 | 275 | 14 | uphill/hilly-sand, moist, (+) |

Table 4: Summary of deep body core temperature and number of animals suffering from hyperthermia during the 1999 northern fur seal subsistence harvest on St. Paul Island.

| DATE | LOCATION | REST TIME (min) | AVERAGE DEEP BODY CORE TEMP F° (First 1/3) | AVERAGE DEEP BODY CORE TEMP F° (Middle 1/3) | AVERAGE DEEP BODY CORE TEMP F° (Last 1/3) | HYPER-THERMIC ANIMALS |
|---------|---------------|-----------------|--|---|---|-----------------------|
| 2 July | Gorbatch | NR | NR | NR | NR | 0 |
| 7 July | Zapadni Sands | 9 | 102.0 | 102.1 | 102.7 | 0 |
| 8 July | Polovina | 16 | 101.9 | 101.9 | 102.4 | 0 |
| 10 July | Big Zapadni | 20 | 101.8 | NR | 102.9 | 0 |
| 14 July | Polovina | 15 | 101.1 | 101.8 | 103.1 | 0 |
| 17 July | Gorbatch | 22 | 102.4 | 106.0 | 103.8 | 0 |
| 21 July | Polovina | 9 | 102.8 | 103.0 | 103.5 | 0 |
| 23 July | Big Zapadni | 22 | 102.2 | 103.0 | 102.8 | 0 |
| 26 July | Gorbatch | 13 | 102.6 | 102.5 | 102.1 | 0 |
| 27 July | Polovina | 10 | 103.3 | NR | 102.8 | 0 |
| 28 July | Zapadni Sands | 11 | 100.9 | 101.3 | 101.9 | 0 |
| 29 July | Big Zapadni | 14 | 101.4 | 102.6 | 103.6 | 0 |
| 30 July | Lukanin | 20 | 101.4 | 101.8 | 101.4 | 0 |
| 31 July | Gorbatch | 11 | 102.3 | 100.9 | 102.0 | 0 |
| 3 Aug | Polovina | 10 | 101.8 | 101.6 | 101.5 | 0 |
| 4 Aug | Big Zapadni | 14 | 101.2 | 101.8 | 102.8 | 0 |
| 5 Aug | Lukanin | 13 | 102.1 | 101.7 | 102.7 | 0 |
| 6 Aug | Marjovi | 10 | 102.6 | NR | 101.9 | 0 |
| 7 Aug | Zolotoi Sands | 17 | 102.3 | 103.1 | 104.3 | 0 |

NR = No Temperature Recorded

Table 5: Summary of the rate of kill of northern fur seals during the 1999 subsistence harvest on St. Paul Island.

| DATE | LOCATION | NUMBER OF ANIMALS KILLED | LENGTH OF TIME OF HARVEST (minutes) | AVERAGE NO. OF ANIMALS KILLED PER MINUTE OF HARVEST |
|---------|---------------|--------------------------|-------------------------------------|---|
| 2 July | Gorbatch | 26 | NR | NR |
| 7 July | Zapadni Sands | 19 | 40 | 0.5 |
| 8 July | Polovina | 35 | 84 | 0.4 |
| 10 July | Big Zapadni | 12 | 34 | 0.4 |
| 14 July | Polovina | 36 | 91 | 0.4 |
| 17 July | Gorbatch | 40 | 88 | 0.5 |
| 21 July | Polovina | 30 | 73 | 0.4 |
| 23 July | Big Zapadni | 39 | 63 | 0.6 |
| 26 July | Gorbatch | 64 | 86 | 0.7 |
| 27 July | Polovina | 35 | 42 | 0.8 |
| 28 July | Zapadni Sands | 65 | 76 | 0.9 |
| 29 July | Big Zapadni | 69 | 81 | 0.9 |
| 30 July | Lukanin | 69 | 114 | 0.6 |
| 31 July | Gorbatch | 66 | 68 | 1.0 |
| 3 Aug | Polovina | 66 | 69 | 1.0 |
| 4 Aug | Big Zapadni | 86 | 93 | 0.9 |
| 5 Aug | Lukanin | 90 | 96 | 0.9 |
| 6 Aug | Marjovi | 46 | 40 | 1.2 |
| 7 Aug | Zolotoi Sands | 70 | 94 | 0.7 |