

Humane Observer Report

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HUMANE OBSERVER REPORT
Northern Fur Seal Subsistence Harvest
St. Paul Island, Alaska
July - August, 1998
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; thereafter a subsistence harvest was begun with only immature males taken for food. This subsistence harvest has continued for the last fifteen years (1984-1998). 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 Reports: 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 1998.

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.

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Fur seals (*Callorhinus ursinus*) were harvested from 27 June through 7 August 1998 from ten haulout areas (Gorbach, Kitovi, Lukanin, Marjovi, West Vostochni, Polovina, Little Polovina, Zapadni, Zapadni Sands and Zoltoli Sands). A total of 1296 animals were killed this year including 1291 subadult males and 5 adult females (Table 1).

ENVIRONMENTAL CONDITION

The environmental conditions of the harvest from 28 June 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 44°F to 52°F, with an overall average of 48°F. Rain occurred once during a harvest and it was misty eleven times. A mild to moderate breeze was present every day but one. The wind speed varied from 0 to 19 knots with an overall average of 8.4 knots. Cloud cover was heavy most of the time (25 days) and partially cloudy/sunny two days (Table 2). The environmental conditions were similar 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 0830 to 1200 hours each day this summer. The estimated distance of the drive ranged from 100 to 475 yards. Animals were driven from 12 to 31 yards/minute with an average of 23 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

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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/terrain was monitored and estimated, as this is believed to be an important cooling factor for the animals. The grass was wet 21 days, moist 2 days and dry one day (Table 3).

HARVESTING PERIOD

The harvesting activity was characterized by holding the animals in a large pod approximately 30 to 40 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 15 to 20% 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 99.8°F to 110.0+°F. Only one animal died due to hyperthermia this year.

This animal was taken for food. This year the number of animals that experienced hyperthermia was extremely low and was most likely due to the early morning harvest.

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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/dive, 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. This stopping of the harvest occurred twice this year.

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. The carcass of one male was condemned this year due to

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an infected bite wound; otherwise all of the animals were healthy.

OIL CONTAMINATION OF ANIMALS

This year oily material was not found on any subadult male northern fur seals that were killed in the harvest. The number of animals found with oil on their pelts has decreased since 1994 when 23 contaminated animals were found.

SUMMARY

In summary the harvest went well and was done in an orderly and humane fashion. Points to be remembered during the harvest:

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 the 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. Do not gather subadult animals near rookeries.

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Table 1. Table of dates, locations and number of northern fur seals killed Alaska 1998.

| DATE | LOCATION | MALES | FEMALES | TOTAL |
|---------|------------------|-------|---------|-------|
| 27 June | Gorbatch | 34 | 0 | 34 |
| 27 June | Polovina | 17 | 0 | 51 |
| 7 July | Gorbatch | 33 | 0 | 84 |
| 8 July | Lukanin | 24 | 0 | 108 |
| 10 July | Big Zapadni | 40 | 0 | 148 |
| 14 July | Zapadni Sands | 46 | 0 | 194 |
| 15 July | Polovina | 48 | 0 | 242 |
| 16 July | Lukanin | 33 | 0 | 275 |
| 16 July | Ketovia | 14 | 0 | 289 |
| 18 July | Gorbatch | 66 | 0 | 355 |
| 21 July | Big Zapadni | 43 | 1 | 399 |
| 22 July | Polovina | 84 | 0 | 483 |
| 23 July | Lukanin | 59 | 0 | 542 |
| 24 July | Gorbatch / Reef | 72 | 0 | 614 |
| 25 July | Marjovi | 34 | 0 | 648 |
| 27 July | Zapadni Sands | 50 | 0 | 698 |
| 29 July | Polovina | 21 | 3 | 722 |
| 29 July | Ketovi | 39 | 0 | 761 |
| 30 July | Big Zapadni | 42 | 0 | 803 |
| 31 July | Gorbatch | 56 | 0 | 859 |
| 1 Aug | Vostoichi - west | 37 | 0 | 896 |
| 3 Aug | Zapadni Sands | 43 | 0 | 939 |
| 3 Aug | Lukanin | 49 | 0 | 988 |
| 4 Aug | Polovina | 47 | 0 | 1035 |
| 4 Aug | Little Polovina | 28 | 0 | 1063 |
| 5 Aug | Big Zapadni | 48 | 0 | 1111 |
| 6 Aug | Marjovi | 81 | 2 | 1194 |
| 7 Aug | Zolotoi | 103 | 0 | 1297 |

Table 2. Summary of environmental conditions during the 1998 northern fur seal subsistence harvest on St. Paul Island, Alaska.

| DATE | LOCATION | Air Temp Fahrenheit | Precipitation | Wind Knots Direction | Cloud Cover |
|---------|--------------------|------------------------|---------------|-------------------------|--------------|
| 27 June | Gorbatch | NT | None | NT | Complete |
| 27 June | Polovina | NT | None | NT | Complete |
| 7 July | Gorbatch | 46 | None | 15 S | Complete |
| 8 July | Lukanin | 44 | None | 8 NE | Complete |
| 10 July | Big Zapadni | 49 | Misty | 14 NW | complete |
| 14 July | Zapadni Sands | 46 | None | 8 ESE | complete |
| 15 July | Polovina | 46 | Misty | 11 WNW | complete |
| 16 July | Lukanin | 45 | Misty | 10 NW | complete |
| 16 July | Ketovi | 45 | Misty | 10 NW | complete |
| 18 July | Gorbatch | 46 | None | 3 SW | complete |
| 21 July | Big Zapadni | 47 | None | 5 E | complete |
| 22 July | Polovina | 47 | Misty | 7 SE | complete |
| 23 July | Lukanin | 49 | Misty | 9 NE | complete |
| 24 July | Gorbatch/Reef | 50 | None | 11 NW | complete |
| 25 July | Marjovi | 49 | Misty | 12 NW | complete |
| 27 July | Zapadni Sands | 49 | Misty | 8 SW | complete |
| 29 July | Polovina | 48 | Misty | 6 NW | complete |
| 29 July | Ketovi | 50 | None | 6 SW | complete |
| 30 July | Big Zapadni | 48 | None | 4 SW | complete |
| 31 July | Gorbatch | 49 | Rain | 19 SE | complete |
| 1 Aug | Vostochni- west | 50 | Misty | 2 W | complete |
| 3 Aug | Zapadni Sands | 48 | None | 9 SW | complete |
| 3 Aug | Lukanin | 48 | Misty | 9 SW | complete |
| 4 Aug | Polovina | 49 | None | 8 W | complete |
| 4 Aug | Lit. Polovina | 49 | None | 10 W | complete |
| 5 Aug | Big Zapadni | 48 | None | 5 SW | complete |
| 6 Aug | Marjovi | 52 | None | 0 | partly sunny |
| 7 Aug | Zolotoi | 48 | None | 10 NW | partly sunny |

Table 3: Summary of activity during the drive of northern fur seals to the killing fields during the subsistence harvest, St. Paul Island, Alaska 1998.

| DATE | LOCATION | Duration of Drive (min) | Estimated Distance of Drive (yards) | Estimated Speed of Drive in yards/min | Terrain Type and Moisture |
|---------|----------------|-------------------------|-------------------------------------|---------------------------------------|--|
| 27 June | Reef/Gorbatch | NT | NT | NT | NT |
| 7 July | Gorbatch | 2 | NT | NT | NT |
| 8 July | Lukanin | 5 | NT | NT | NT |
| 10 July | Big Zapadni | 15 | 250 | 17 | flat sandy, wet grass (++) |
| 14 July | Zapadni Sands | 6 | 250 | 31 | flat sand, wet grass (+) |
| 15 July | Polovina | 10 | 250 | 25 | uphill dirt, wet grass (+) |
| 16 July | Lukanin | 6 | 185 | 31 | uphill dirt, wet grass (+) |
| 16 July | Ketovi | 4 | 100 | 25 | flat rocky, dirt, wet grass (+) |
| 18 July | Gorbatch | 11 | 250 | 23 | uphill dirt, wet grass (+) |
| 21 July | Big Zapadni | 19 | 200 | 10 | downhill dirt, wet grass (++) |
| 22 July | Polovina | 10 | 250 | 25 | uphill dirt, wet grass (+) |
| 23 July | Lukanin | 11 | 225 | 21 | uphill dirt, wet grass (+) |
| 24 July | Gorbatch/Reef | 4 | 100 | 25 | uphill dirt, wet grass (+) |
| 25 July | Marjovi | 9 | 200 | 22 | flat sandy, wet grass (+) |
| 27 July | Zapadni Sands | 8 | 200 | 25 | uphill sand, dry grass (+) |
| 29 July | Polovina | 7 | 150 | 19 | uphill dirt, flat dirt, flat wet grass (+) |
| 29 July | Ketovi | 5 | 150 | 30 | flat dirt rocky, wet grass (+) |
| 30 Aug | Big Zapadni | 15 | 300 | 20 | downhill dirt rocky, sandy flat, wet grass (++) |
| 31 July | Gorbatch | 5 | 150 | 30 | uphill dirt, flat wet grass (+) |
| 1 Aug | Vostochni-west | 14 | 250 | 18 | flat, wet grass (+) |
| 3 Aug | Zapadni Sands | 6 | 150 | 27 | uphill sand, flat wet grass (+) |
| 3 Aug | Lukanin | 11 | 300 | 25 | uphill rock, flat wet grass (+) |
| 4 Aug | Polovina | 8 | 250 | 31 | sand, wet glass (+) |
| 4 Aug | Lit. Polovina | 10 | 200 | 20 | flat, moist grass (+) |
| 5 Aug | Big Zapadni | 14 | 275 | 20 | downhill dirt rocky, sandy flat, wet flat grass (++) |
| 6 Aug | Marjovi | 9 | 150 | 17 | flat dirt, wet grass (+) |
| 7 Aug | Zolotoi | 25 | 300 | 12 | uphill sandy, hilly sand and moist, grass (++) |

Table 4: Summary of deep body core temperature and number of animals suffering from hyperthermia during the 1998 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 |
|---------|---------------------|-----------------|---|--|--|-----------------------|
| 27 June | Gorbatch / Polovina | NT | NT | NT | NT | 0 |
| 7 July | Gorbatch | 22 | NT | NT | NT | 0 |
| 8 July | Lukanin | 23 | NT | NT | NT | 0 |
| 10 July | Big Zapadni | 7 | 99.9 | 100.5 | 101.2 | 0 |
| 14 July | Zapadni Sands | 15 | 102.7 | 102.9 | 104.1 | 0 |
| 15 July | Polovina | 13 | 102.4 | 102.7 | 103.6 | 0 |
| 16 July | Lukanin | 17 | 100.0 | 99.1 | 101.9 | 0 |
| 16 July | Ketovi | 9 | 100.4 | 102.0 | 102.6 | 0 |
| 18 July | Gorbatch | 16 | 102.0 | 103.4 | 102.8 | 0 |
| 21 July | Big Zapadni | 11 | 102.0 | 103.6 | 101.7 | 0 |
| 22 July | Polovina | 9 | 101.4 | 102.8 | 100.8 | 0 |
| 23 July | Lukanin | 14 | 102.6 | 102.8 | 102.6 | 0 |
| 24 July | Gorbatch | 16 | 102.3 | 101.8 | 103.5 | 0 |
| 25 July | Marjovi | 19 | 103.2 | NR | 103.7 | 0 |
| 27 July | Zapadni Sands | 12 | 103.5 | 104.5 | 104.1 | 0 |
| 29 July | Polovina | 15 | 103.1 | NR | 101.0 | 0 |
| 29 July | Ketovi | 9 | 101.9 | NR | 101.8 | 0 |
| 30 July | Big Zapadni | 14 | 103.6 | 103.0 | 103.4 | 0 |
| 31 July | Gorbatch | 10 | 102.0 | 102.2 | 102.9 | 0 |
| 1 Aug | Vostochni-west | 11 | 102.9 | 101.9 | 103.8 | 0 |
| 3 Aug | Zapadni Sands | 10 | 103.4 | 104.2 | 104.1 | 0 |
| 3 Aug | Lukanin | 11 | 102.5 | 103.2 | 102.5 | 0 |
| 4 Aug | Polovina | 14 | 103.3 | 104.3 | 104.6 | 0 |
| 4 Aug | Little Polovina | 7 | 103.6 | 104.4 | 103.7 | 0 |
| 5 Aug | Big Zapadni | 16 | 102.7 | 102.2 | 105.7 | 0 |
| 6 Aug | Marjovi | 14 | 103.2 | 103.4 | 105.6 | 1 |
| 7 Aug | Zolotoi | 14 | 103.7 | 102.9 | 103.7 | 0 |

NR = No Temperature Recorded

Table 5: Summary of the rate of kill of Northern fur seals during the 1998 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 |
|---------|-----------------|--------------------------|-------------------------------------|---|
| 27 June | Reef/Polovina | 51 | NR | NR |
| 7 July | Gorbatch | 33 | 57 | 0.6 |
| 8 July | Lukanin | 24 | 26 | 0.9 |
| 10 July | Big Zapadni | 40 | 34 | 1.0 |
| 14 July | Zapadni Sands | 46 | 78 | 0.6 |
| 15 July | Polovina | 48 | 68 | 0.7 |
| 16 July | Lukanin | 33 | 24 | 1.4 |
| 16 July | Ketovi | 14 | 11 | 1.3 |
| 18 July | Gorbatch | 66 | 82 | 0.8 |
| 21 July | Big Zapadni | 44 | 63 | 0.7 |
| 22 July | Polovina | 84 | 91 | 1.1 |
| 23 July | Lukanin | 59 | 64 | 1.1 |
| 24 July | Gorbatch/Reef | 72 | 83 | 0.9 |
| 25 July | Marjovi | 34 | 27 | 1.3 |
| 27 July | Zapadni Sands | 50 | 45 | 1.1 |
| 29 July | Polovina | 24 | 25 | 1.0 |
| 29 July | Ketovi | 39 | 30 | 1.3 |
| 30 July | Big Zapadni | 42 | 60 | 0.7 |
| 31 July | Gorbatch | 56 | 45 | 1.2 |
| 1 Aug | Vostochni-west | 37 | 41 | 0.9 |
| 3 Aug | Zapadni Sands | 43 | 28 | 1.5 |
| 3 Aug | Lukanin | 49 | 39 | 1.3 |
| 4 Aug | Polovina | 47 | 56 | 0.8 |
| 4 Aug | Little Polovina | 28 | 38 | 0.7 |
| 5 Aug | Big Zapadni | 48 | 38 | 1.3 |
| 6 Aug | Marjovi | 82 | 64 | 1.3 |
| 7 Aug | Zolotoi | 103 | 82 | 1.3 |

5 August 1998

Mr. David Cormany
NOAA, National Marine Fisheries Service
Alaska Regional Office
P.O. Box 21668
Juneau, Alaska 99802-1668

Dear Dave

Please find enclosed the Humane Observer Report for the 1998 northern fur seal subsistence harvest on St Paul Island, Alaska.

The 1998 Northern fur seal harvest went well this year. The harvest started on 27 June and ended on 7 August, 1998. A total of 1296 animals were killed including 1291 subadult males and five females. The reason for the killing of so many females was due the gathering subadults males too close to a rookery on Polovina in which 3 females were killed during one harvest. After the third female was killed the whole pod was released and the harvest was stopped. This year the number of hyperthermic cases was a record low and only one animal was found to be hyperthermic. The primary reason for this low level of hyperthermic cases was due the harvest starting earlier in the morning instead of around noon. This was a major change in the harvest this year and was a good change. Animals were gathered, handled and killed in a humane fashion this year.

No subadult males were 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 was found.

I hope all will workout well with the co-management organization during this next year. Please keep me informed.

Have a great day.

Sincerely

Terry R. Spraker, DVM, PhD, DACVP