

12 August 2009

Mr. Mike Williams
National Marine Fisheries Services
Alaska Region/Protected Resources
Anchorage, Alaska

Dear Mike

This letter is in reference to my observations of the 2009 subsistence harvest for the Aleut community of St. Paul Island, Alaska. I was on St. Paul Island from 31 July through 12 August 2009. I worked with tribal personnel to assist with the transition of responsibility for the subsistence harvest humane observer position. This transition included sharing expertise and techniques for detecting early signs of hyperthermia and round-up techniques for avoiding unnecessary stress that can result in excess body heat production leading to hyperthermia. Samantha Zacharof collected seal core body temperatures, made behavioral observations of seals during the round-ups and harvests consistent with those of the humane observer. I worked with her for the last three harvests on 5, 6 and 7 August.

Short notes for these harvests:

5 August 2009: Polovina haul-out, the temperature was 44.6°F, SE winds at 10 mph, over cast and misty. Round-up started at 9:05AM and proceeded to move the seals to the killing field without incident; the round-up crew kept the pods slightly tight, but given the cool temperatures did not increase the risk of hyperthermia. Sealers killed 47 sub-adult male fur seals (SAMs), no females were killed, no indications of hyperthermia were observed, Ms. Zacharof delegated temperature monitoring to Kara Mandregan.

6 August 2009: Vostochni (West Side Story haul-out), the temperature was 46.4°F, NE winds at 15mph, overcast and misty. Round-up started at 9:10AM, the round-up crew kept and maintained the seals well and kept the pod spread loosely during the harvest. Sealers killed 45 SAMs, no females were killed and indications of hyperthermia were not observed. Ms. Zacharof was gathering meat for her family at this harvest and again delegated temperature monitoring to Kara. Kara seemed to have three jobs: monitoring temperatures, helping to record harvested seal lengths with the respective carcass (Dr. Andrew Trites research project), and collecting teeth (NMML and Dr. Trites research).

7 August 2009: Big Zapadni haul-out: the temperature was 50°F, NE winds at 20 to 25 mph, clouds were high, light and sometimes sunny. The round up started at 9:00AM and seals were slowly moved to the killing field. The round-up crew kept and

maintained the seals spread loosely in the pods during the harvest. Sealers killed 79 SAMs, no females were killed, no indications of hyperthermia were observed. Sam monitored the seals well and kept accurate temperatures. Kara spent most of her time helping to track and record seal lengths and collecting teeth. Zee Melovidov treated the sealers and researchers with fried bread with halibut spread again this year which was extremely nice and helps to make this a community event. A SAM harvested was observed with cysts on the thoracic aspects of the left side of the diaphragm and on the pleural surface of the intercostal muscles of the left ribs. Lesions were not present on the pleural surface of the lungs. These lesions were suggestive on gross examination as encysted parasitic larvae. Further work will be done to confirm the nature of this lesion. The meat from this seal was not taken for human consumption thus avoiding the risk of exposure to an unknown pathogen or parasite. I have never observed such an infection in a northern fur seal in 23 years of necropsies on St. Paul Island. A necropsy report and histological examination will be completed and submitted to the NMFS and Tribal Government of St. Paul Island.

Summary and guidance for future harvests:

The northern fur seal subsistence harvests of 2009 proceeded humanely and without incident. A total of seven harvests occurred during the course of the season, four harvests occurred prior to 1 August, and were scheduled every Friday during the 6-week harvest season. Spreading the harvest effort more evenly across the season seems to have allowed a portion of family orders to be filled prior to the final days of the harvest season. Many changes to the harvest organization and implementation over the last two years have resulted in marked improvements in the harvest.

One of the main diagnostic tools used for detecting an increased probability of hyperthermia is core body temperature of harvested seals. Taking temperatures provides data related to hyperthermia risk, but seal behavior provides an earlier sign that the humane observer can use to inform the harvest foreman that the risk of hyperthermia mortality is increasing. Thus the island sentinel acting as the humane observers can observe the seal behavioral changes (see point 10 below) that indicate overheating and increased risk of hyperthermia before core body temperatures have risen to excessive levels.

Since I have been associated with the subsistence fur seal harvest (1987 to present) the pelts of the animals have been examined for oil contamination. I observed 33 oiled SAMs taken in the subsistence harvest from 1991 through 1997. Oil was not found on any of the subadult males killed in the subsistence harvest between 1998 through 2009 on St. Paul Island. An oil spill on 3 August 2009 in the St. Paul harbor did not result in

observations of oiled seals in any of the subsequent 2009 harvests. These observations suggest oil contamination exposure on or near St. Paul Island during the last 12 years may have decreased.

Another factor that should be carefully monitored or controlled is the number of people on the killing field. This includes the sealers, researchers and bystanders. There is a role for all of these groups of people, but the number of each should be kept to a minimum. There appeared to be an excessive number of people on the killing field which resulted in the interruption of the sealers trying to do their work. More people on the killing field results in higher probability of problems with humane killing of animals and people getting hurt.

In prior years I have suggested points to be remembered during harvests, and I will outline how these points have been implemented in 2009.

1. All round-ups and harvests have occurred in the morning; thus avoiding warmer afternoon environmental temperatures.
2. On 7 August 2009 environmental temperatures were between 50°F to 55°F with wind, both the round-up crew and the sealers provided frequent rests during the round-up drive and kept the holding pod loose.
3. The harvest foreman discussed the driving plans with round-up crew before drives started.
4. Seals were driven slowly to the killing field.
5. The round-up crew did not unnecessarily harass the seals during the drive.
6. Seals lagging behind during the drives were released from the pods as conditions allowed and sleeping seals were avoided as practical.
7. Bulls were released from the drive as practical without allowing too many harvestable SAMs to avoid the harvest. Females were observed during the round-up and drive and the sealers were warned of their presence during the stunning and released when the pod cutters moved them from the main pod.
8. Seals were allowed to rest 10 to 15 minutes prior to the harvest and during the harvest as conditions warranted.
9. Pods of between five and seven were often driven to the stunners. Pods of 10 to 15 seals were sometimes driven to the stunners and often created delays in stunning the preferred seals or the escape of seals past the stunners.

10. The stunning and pod cutting were temporarily delayed when some of the animals in the holding pod began flipper fanning, open mouth breathing, and lying down. The seals were rested by allowing them to spread out and not be approached by pod cutters or holders.

11. Stunners took time to isolate the selected animals to be killed and called out the number of harvestable seals in the pods to be stunned. The additional communication and time spent by the stunners allowed a young female seal to be released on 7 August 2009.

12. For the last several years intoxicated persons have not been allowed to work in any of the positions at the harvest or even to be on the killing field. This was the case again this year.

It has truly been a pleasure working as the Humane Observer over these last 23 years. I thank you deeply for this unique opportunity.

Sincerely

Terry R. Spraker, DVM, PhD, Diplomat ACVP