VETERINARY REPORT

CANADIAN COMMERCIAL SEAL HUNT

PRINCE EDWARD ISLAND

MARCH 2001

CONTENTS:

EXECUTIVE SUMMARY:

Following the comprehensive and methodical study of the 2001 Canadian commercial seal hunt, by 5 independent veterinarians, we conclude that the hunt is resulting in considerable and unacceptable suffering.

Cranial evaluation of 76 seal carcasses produced data that clearly demonstrates the occurrence of such suffering. In 17% of the cases observed there were no detectable lesions of the skull, leading us to conclude that any alteration in consciousness is very unlikely to have occurred as a result of clubbing.

The Canadian Government has indicated that the commercial seal hunt will continue indefinitely. In light of this fact, we strongly feel that the adoption of a more reliable and consistent procedure for the killing of seals can significantly reduce the present level of suffering. We recommend that a process of rapid stunning (resulting in a rapid loss of consciousness), followed immediately by a bilateral corneal reflex check to assess loss of consciousness, followed immediately by bleeding out to ensure death occurs, are followed in order to reduce these levels of suffering. The bilateral loss of corneal reflexes ('blinking eye' reflexes) is generally accepted as the most accurate means of confirming a loss of consciousness.

Shooting and clubbing should be viewed as stunning methods only, producing a potentially temporary loss of consciousness. Death should be completed by exsanguination (bleeding out). All seals should be treated and killed in the same manner under the same regulations, regardless of whether the seal was initially shot or clubbed.

It is very difficult to determine loss of consciousness in any seal by observation. Swimming movements can be voluntary or involuntary. It is difficult to differentiate between involuntary reflex movement and conscious voluntary movement without assessing higher centre activity. It must therefore be assumed that all movement seen could be due to conscious voluntary muscle activity until the corneal reflex has been checked.

Any method for killing a seal which does not allow for the above process of stunning, checking and bleeding to be performed, has an enormous potential to create suffering and is therefore unacceptable. As this process cannot be consistently followed in open water, we consider that shooting seals in open water can never be humane. Any method of taking a seal which requires the seal to be recovered by gaffing or hooking before the process can be followed, can never be humane.

We believe that multiple blows or shots to an individual seal, is not acceptable from an animal welfare point of view. Training and enforcement should aim to produce a standard of competence, whereby unconsciousness can be achieved with the first blow or shot.

Based on our observations, it is obvious that there is a tremendous lack of consistency in the treatment of each seal and the existing regulations are neither respected nor enforced. There is undoubtedly an obvious need to reduce suffering and improve the welfare of these animals by alterations in the existing regulations and increasing their enforcement. The DFO

proposals address some of our concerns. However, we are making additional recommendations that will further reduce this unnecessary suffering.

If the Canadian commercial seal hunt is to be considered as an "industry"[1], it is imperative that every effort is made to comply with Canadian animal production regulations. However, it is quite clear from our personal observations that the present seal hunt fails to comply with these basic animal welfare regulations.

INTRODUCTION:

The six veterinarians involved with this report are of different backgrounds, interests and specialities. These individuals were brought together by the International Fund for Animal Welfare (IFAW) to act as licensed observers of the Canadian Seal Hunt 2001. Their objective was to act as professional, independent observers, to observe the hunt, both directly and via video recordings, and, using their combined experience and knowledge, to make comment on the current conduct of the hunt. Also, in light of the impending changes to the Marine Mammal Regulations in regards to the seal hunt, to review and make suggestions for these regulations.

The veterinary panel collected information by: examining young seals in their natural environment; meeting with the regional Canadian Department of Fisheries and Oceans personnel; reviewing video footage collected by IFAW from previous hunts; monitoring the recording of video footage from the current hunt by having a member of the panel in the aircraft during recording on two days; attending the hunt by aircraft and making visual observations as well as landing on the ice to examine (and in some cases dissect out the skull from) sculped carcasses after the hunt had moved through. As background information, the biology of the Harp Seal was presented and reviewed by Dr. David Lavigne, a marine mammal expert (non-veterinarian). Documents examined and discussed included: current Marine Mammal Regulations and the Department of Fisheries and Oceans suggested changes to these regulations; IFAW discussion paper on the proposed regulation changes; correspondence between the Canadian Veterinary Medical Association Animal Welfare Committee and DFO; correspondence between the CVMA Animal Welfare Committee and IFAW; the Canadian Slaughter of Animals Regulations; the Criminal Code of Canada sections involving Cruelty to Animals; and, the 2000 Report of the AVMA Panel on Euthanasia.

[1] Personal communication with Roger Simon, Department of Fisheries and Oceans

PARTICIPANTS ON THE VETERINARY PANEL:

Rapporteur:

Joanne Fielder, B.Sc**.,** BVM+S, MRCVS

Worked in mixed practice in the U.K. and with primates in Indonesia. Currently is the Emergency Relief Veterinarian for the IFAW based in Brussels.

Independent veterinarians:

Rosemary L. Burdon, BVSc., MRCVS, Cert.Vet.Acup.

Associate veterinarian for the Massachusetts SPCA Nantucket Animal Hospital and Wildlife Facility.

John Gripper, B.Sc., MRCVS

Many years in mixed veterinary practice in the Cotswolds in the U.K. During the last few years, has acted as consultant veterinarian for wildlife to different organizations internationally.

J. Alan Longair, B.Sc., DVM

Companion animal practitioner on Vancouver Island, British Columbia. Past president of the BCSPCA, past chair of the Canadian Veterinary Medical Association Animal Welfare Committee.

Ian Robinson, BVSc, Cert SHP, Cert ZooMed, MRCVS

After 15 years in agricultural practice, joined the RSPCA as the Veterinary Manager of the Norfolk Wildlife Hospital in Norfolk, U.K. Has attended many marine wildlife emergencies worldwide.

Debbie Ruehlmann, DVM, MS, DipACVIM (Neurology)

Specialist in neurology, Angell Memorial Animal Hospital, Boston, Mass.

SCIENTIFIC DISCUSSION:

Effective stunning (i.e. loss of consciousness) will be achieved by focal damage to the brain stem or diffuse and severe damage to the cerebral cortices.

The most efficient way to render an animal unconscious by a blow to the head, is a blow to the brain stem. The brain stem in mammals is the most highly protected part of the central nervous system. It is located ventrally within the calveria, beneath the cerebellum and overlying skull. Furthermore, in seals, flexion of the neck places a thick layer of blubber over the base of the skull. Therefore, the only target area available in a seal is the skull overlying the cerebral cortex. Delivering a blow to this area and the underlying cortex is a much less efficient way of rendering an animal unconscious.

Diffuse and severe damage only to the cerebral cortices can result in significant disruption of the ascending reticular activating system, resulting in unconsciousness, which may be temporary i.e. conscious sensation may return.

A large blow to the cerebral cortex is unlikely to result in immediate brain stem herniation. Cerebral oedema can elicit herniation but only after a considerable time period (potentially hours). Massive cerebral haemorrhage associated with a blunt external trauma would be unlikely to occur and result in immediate death.

Therefore, skull palpation is not the most reliable as a means of interpreting death or level of consciousness. The location and severity of crush injuries involving the CNS will affect the possible outcome; it is therefore open to misinterpretation.

The bilateral loss of corneal reflexes (‘blinking eye’ reflexes) is the most accurate means of confirming a loss of consciousness.

It is very difficult to determine loss of consciousness in any seal in the water by observation, when it cannot be directly approached and the corneal reflex assessed. A loss of movement cannot be viewed as an effective means of indicating either death or loss of consciousness.

In the absence of discernible purposeful conscious movement, other movements cannot be differentiated from involuntary movements. Swimming movements can be voluntary or involuntary. It is difficult to differentiate between involuntary reflex movement and conscious voluntary movement without assessing higher centre activity. It must therefore be assumed that all movement seen could be due to conscious voluntary muscle activity until the corneal reflex has been checked.

Once a corneal reflex has been performed and the unconscious state has been confirmed, the sealer must immediately and as the very next action taken, move to exsanguinate (or bleed out) the seal, in order to avoid the animal regaining consciousness. Shooting and clubbing should be viewed as stunning methods, producing a potentially temporary loss of consciousness only. Death should be completed by exsanguination (bleeding out).

Exsanguination should be performed by completely severing both brachial plexuses or by directly entering the heart and major vessels via the thoracic inlet. This should never be performed on a conscious animal. Adequate time must be given to allow for bleeding out, and thus death, prior to hooking or hauling, or continuation of skinning. This action is compatible with the cuts required to dress the carcass.

The process of rendering the seal unconscious, assessing the corneal reflex, taking further action where necessary to ensure loss of consciousness and effective exsanguination, must all be performed before the hunter is able to move on to the next seal.

Any method for killing a seal which does not allow for the above process of stunning, checking and bleeding to be performed, has an enormous potential to create suffering and is therefore unacceptable.

As this process cannot be followed in open water, we consider that shooting seals in open water can never be humane.

Any method of taking a seal which requires the seal to be recovered by gaffing or hooking before the process can be followed, can never be humane.

OBSERVATION AND EVALUATION:

Veterinary observations were made in the following three ways:

1. ***Helicopter via Wes Cam***.

The 'Wes Cam' camera observations, on 27th and 28th March 2001, were made by a veterinarian who was present in the helicopter fitted with this camera. Hunting was viewed via the lens of a high-resolution camera in real time. All of these observations are backed up with the original video material taken over these two days.
Appendix 2, Tables 2 and 3.

2. ***Helicopter via binoculars.***

Veterinarians viewed the hunt within the permitted area, over a two-day period (27th and 28th March 2001).
Appendix 2. Table 1.

3. ***Skull examination of seal carcasses in situ within the hunting area.***

Appendix 1, Tables 4 – 14.

Skull Examinations:

Skull evaluation of 76 seals was performed including visual examination and palpation. Carcasses were chosen at random from areas representative of the entire hunt March 27th and 28th, 2001.

Fractures of the skull varied in severity and location and involved the cranium, maxilla, orbits, and mandible. There were no apparent penetrating gunshot wounds in these cases.

a. Fractures of the cranium:

Fractures of the cranium were categorized into 3 main groups:

I. None: No fractures of the cranium

II. Minimal to moderate:
- Minimal: Hairline and non-displaced fractures overlying one cortical hemisphere.
- Moderate: Compression fractures involving bone overlying one cortical hemisphere.

III. Severe to extensive:
- Severe: Compression fractures overlying both cortical hemispheres
- Extensive: Compression fractures overlying both cortical hemispheres with visually apparent compressed or obliterated brain tissue.

Although skull fractures do not absolutely correlate with structural lesions involving the brain, for blunt external head trauma correlation does exist for some statements to be made with reasonable confidence.

Unconsciousness is being defined to be at a level where the seal would not be aware or feel being hooked through the maxilla with a spearing instrument, being skinned, or rendered a laceration for bleeding.

I. Craniums with no apparent fractures would be highly un-probable to be associated with a level of unconsciousness. Furthermore, it would be of significant question if any alteration in consciousness occurred in these cases. These cases equate to 17 % of cases examined.

II. Minimal fractures including hairline or non-displaced fractures could be associated with a decreased level of consciousness but highly unprobable unconsciousness.
Moderate fractures would be more likely to be associated with a more significant decrease in consciousness than minimal , but would still not have a high level of probability to be associated with unconsciousness.
These cases equate to 25 % of cases examined.

III. Extensive fractures would undoubtedly be associated with a level of unconsciousness and severe fractures would be highly probable to be associated with a level of unconsciousness.
These cases equate to 58 % of cases examined.

Non formalin fixed brains assessed with having moderate skull fractures were grossly examined in 3 cases, on the site of the hunt and within 6 hours of being hunted, by removing the cranium with pliers:

1. One skull had a 3 cm diameter circular compression fracture immediately caudal to the right orbit. Examination of the brain revealed a 2-21/2 cm diameter area of contusion underlying the fracture. Two small thin (2-3 mm) symmetric pockets ½ cm in diameter of hemorrhage were present overlying the occipital cortices on each side. There were no lesions of underlying cortical tissue. Diffuse congestion consistent with post mortem changes was present.

2. Skull compression fracture extending from the right caudal aspect of the orbit 5 cm caudolateral over the right hemisphere. Contusion was present directly underlying. Diffuse congestion consistent with post mortem changes was apparent.

3. ½ cm long slight elevation in suture line over the frontal cortical region. There were no underlying brain lesions. 1 -1/2 cm long nondisplaced fracture ½ cm caudal to the right orbit. 1/4 cm with and length area of contusion underlying. Diffuse congestion consistent with post mortem changes was present.

Lesions in these cases were not consistent with resulting in a level of unconsciousness.

In light of the notes of the meeting with DFO official Roger Simon, it should be noted that massive hemorrhage or hemorrhage to any significant degree was not apparent in these 3 cases.

b. Extracranial fractures

Of the 76 seal skulls observed, 61% had extracranial fractures involving one or more of the following bones: Maxillary, Mandibular, Orbit (left and or right), and Zygomatic arch. (Appendix 1, Table 12).

Fractures observed:
28 % of cases had mandibular fractures
41% had maxillary
28% had orbital
13% zygomatic arch.

Of the 76 skulls observed, 45 % had fractures involving two or more bones.

Fractures of each bone ranges from 1-4. Several cases had complete crushing of the maxillary, mandibular and/or orbital bones.

Several of the seals with orbital fractures had crushed globes, evidence of damage to the eye (hyphema), or evulsion of the globe.

Comments:

The current methods and competency of clubbing is significantly inaccurate in location, resulting in severe and unacceptable suffering. In order to highlight this point it should be noted that 28% of seal skull observed had blows to the head region resulting in mandibular fractures where the bottom of the head had clearly been struck instead of the top.

It is not possible for us to know if extracranial skull fractures occurred prior to those of the cranium (for those of which had cranium fractures). This raises great concern for the welfare of seals in which there is potential that the cranial lesions sufficient to render them unconscious were inflicted after extracranial trauma.

It is of utmost concern regarding the severe suffering occurring in seals who have no lesions of the cranium, as well as those having fractures felt not sufficient to render the seal unconscious.

Video footage from 1998, 1999 and 2000.

Review of video recording of the 1998, 1999 and 2000 Canadian seal hunts included 179 seals observed hunted. Of these, 96 seals were shot, 56 seals were shot and then clubbed or gaffed, 19 seals were clubbed or gaffed, and 8 seals were killed by unknown means.

Observations from these recordings include:

1) Assessing level of consciousness was not being performed by the majority of seal hunters; 79% did not check a corneal reflex, indicating that many of these seals could potentially have been skinned or hooked alive.
2) In 40% of cases (32% of the clubbed seals and 92% of the shot seals) the hunter returned to strike the seal for a second time (average time to second strike 27 seconds). We assume that the reason for this action is that the hunter believed that the seal was still conscious. This is clearly unacceptable.
3) Only 6% of seals were bled immediately, where struck.
4) The average time from initial strike to bleeding was 66 seconds.
5) 18 seals were observed to be skinned, on average this occurred 60 seconds after the initial strike. It is uncertain which of these seals were bled or had a level of consciousness checked to ensure that they were not skinned while conscious.

RECOMMENDATIONS:

The Canadian Government has indicated that the commercial seal hunt will continue indefinitely. In view of this fact, we believe that the following recommendations will work towards reducing the severe levels of suffering that we have observed, both directly and indirectly via permitted observation and pathological examination respectively; occurring during the 2001 seal hunt.

In order to ensure that these recommendations can be reviewed with ease, we have formatted them according to the existing regulatory proposals, as defined by the Canadian Department of Fisheries and Oceans.

As veterinarians we have commented only on those proposals that have a bearing on animal welfare according to our professional areas of expertise.

Whilst it is obvious that there is much agreement with the CVMA's own response to these proposals, we would respectfully ask that you review and consider our additional recommendations.

We strongly advise that our recommendations are included with the CVMA proposals to the DFO regarding future regulatory controls of Canada commercial seal hunt.

DFO PROPOSALS:

1) Establish a prohibition on the harvest of the whitecoat stage of harp, grey and ringed seals in place of the prohibition on the sale of whitecoat harp seals.

No comment

2) Revoke the prohibition on the sale of bluebacks and protect younger hooded seals by closing this harvest until the harvest until the animals have been weaned.

No comment

3) Establish commercial and personnel use sealing licences in the regulations

We would agree that licensing and therefore training should be mandatory for all sealers.

4) Make a training program a prerequisite for all sealing licences and encourage the professionalization of commercial sealers.

We agree with this proposal and would recommend that such a training program should provide a comprehensive understanding of the entire seal hunt process, giving the licensee a functional understanding of the recommendations that we have laid down and therefore a knowledge of how to comply with the regulations.

The training program should include a test of competence, which must be completed successfully prior to issue of a licence. The licensing process should include reassessment on a regular basis. The current two year "probationary" period could be incorporated into such a training program.

We recommend that the training program should incorporate a regular marksmanship test for firearms licence holders, which would include a proficiency test and would therefore be in addition to existing firearms training / licensing.

5) Modify the seal fishery observation licence depending on the results of an ongoing court challenge

No comment

6) Replace an unclear prohibition on the discard of marine mammals with a requirement that sealers land either the pelt, carcass or both the pelt and carcass.

We are concerned that harvesting of parts may be open to flouting of the regulations; all seals should be killed as stipulated in our recommendations and body parts (excluding moulting hair) should only be removed from dead seals. We support this proposal if the inclusion of

this proposal in the regulations will help to ensure that the regulations are complied with and enforced.

7) Allow fishermen in the lumpfish fishery to land incidental catches of seals and record them against the TAC.

We are concerned about the level of suffering of seals in 'by-catch' and would recommend that the DFO investigate further ways in which this suffering can be reduced.

8) Apply gear restrictions to all commercial sealing on the Atlantic coast.

We support this proposal as we strongly advocate that all seals be treated in the same manner under the same regulations throughout the entire Canadian waters.

9) Provide for the non-lethal harvest of hair.

We would recommend that research must be performed to further investigate this proposal. Prior to adopting this proposal we would recommend that regulations and guidelines be developed regarding the ways in which this product is harvested.

The non-lethal harvesting of seal hair must be an alternative to a hunt. In order to achieve this it may be necessary to protect seals for the purpose of non–lethal harvest within specified areas, or make other appropriate provisions.

10) Submit requests for changes to gear requirements for review by veterinary and gear experts

We would fully support this proposal.

11) Assist in or commission a review of current harvesting practices by veterinary experts.

We would agree that there is a need to comprehensively review the current harvesting practices and would like to submit this veterinary report to aid this review process.

Based on our observations, particular concerns, not raised elsewhere, include the clubbing of mobile seals, the multiple clubbing of seals and the practice of clubbing or shooting several seals in quick succession as opposed to correctly processing each seal in turn.

This recommendation is supported by our direct observations from the helicopter, which revealed several seals being clubbed in excess of eight times, with 22% being clubbed more than three times (table 1). 17% of skulls examined had no lesions of the cranium (table 12); 61% had extra-cranial skull fractures (table 11); 13% had multiple mandibular fractures without any lesions of the calverium.

12) Establish a clearer requirement for the blinking eye reflex test to be done before bleeding and skinning.

We recommend that the bilateral corneal (blinking eye) reflex should be the mandatory test for unconsciousness. We further recommend that all seals be immediately bled to ensure death occurs.

Further explanation of this is given in our scientific discussions.

13) Establish a licence regime, including prerequisites and conditions, to allow the killing of seals where:
- They are a danger to property and reasonable deterrence efforts have failed
- Their presence in a fishing or river area is inflicting great damage on migrating fish stocks.

All seals must be treated and killed according to the same recommended regulations in order to reduce the level of suffering that may be encountered.

Other recommendations:

1) Based on our observations there is a tremendous lack of consistency in the treatment of each seal and the existing regulations are neither respected nor enforced. There is therefore an obvious need to improve this situation.

2) Seals must be recognised as Marine Mammals (not fish) and treated accordingly. At present the seal hunt is regarded as a 'fishery'. Seals belong to the Order Carnivora, together with cats and dogs, and share similar levels of intelligence and neurological development as these other species. From a veterinary medical view, seals have many similarities to dogs. This should be borne in mind as we feel that there is an entrenched attitude in the sealing industry, which compares seals with fish.

3) The hunting of pregnant females is generally considered to be an unethical hunting practice. We strongly advise that the hunting season is condensed to prevent the hunting of adult females within the third trimester of pregnancy.

4) Shots should only be fired by a certified marksman using legally required ammunition and weapons, to seals on the ice, from a distance and under conditions, which will enable an accurate head shot to be taken, whereby the projectile will enter the brain causing sufficient damage to render the animal either unconscious or dead. If there is any doubt regarding the effectiveness of the first shot to cause sufficient damage to the brain, then subsequent shots must be fired in order to achieve this goal.

The sealer should then proceed to directly approach the shot seal, as the very next action, in order to assess the corneal reflex and then immediately perform exsanguination. We recommend that there should exist a time limit from the time the seal is hit and performing exsanguination once a corneal reflex has been performed, in order to prevent unnecessary suffering.

We feel that this may be an appropriate time for ballistics experts to review the necessary requirements regarding choice of weapon and ammunition. Calibre and velocity are important in determining the degree / extent of CNS damage.

5) Multiple clubbing or shooting is not acceptable from an animal welfare point of view; training and enforcement should aim to produce a standard of competence, whereby unconsciousness can be achieved with the first blow or shot.

SUMMARY:

In our opinion, the 2001 Canadian seal hunt is resulting in considerable and unacceptable suffering.

The adoption of a more reliable procedure for the killing of seals can significantly reduce the present level of suffering.

We recommend the procedure of rapid stunning, checking corneal reflexes and bleeding is the procedure of choice.

We recommend that this procedure is included in the regulations and is effectively enforced.

APPENDIX 1.
RESULTS OF OBSERVATIONS

Table 1: Veterinary observations from helicopter March 27th 2001

	Boat 1 (1734)	Boat 2 (15053)	Boat 3 (blue)	Boat 4 (175716) Bel Espoir	Boat 5 (Jean Mattieu)
No. seals observed hunted	11 seals	2 seals	6 seals	14 seals	7 seals
Corneal palpation performed?	6 seals	none	1 seal	4	2
No. of blows ( ) indicates time from first to last blow If no time indicated it means 30secs	Seal 1 : 1 blow Seal 2 : 1 blow Seal 3 : 4 blows Seal 4 : 8 blows (55 sec) Seal 5 : 3 blows Seal 6 : 2 blows Seal 7 : 2 blows Seal 8 : 2 blows Seal 9 : 2 blows Seal 10 : 2 blows Seal 11: 1 blow and abandoned	Seal 1 : 8 blows (50secs) Seal 2 : 5 blows (75 sec) seal also kicked repeatedly and stood on)	Seal 1 : 1 blow Seal 2 : 3 blows Seal 3 : 2 blows Seal 4 : 3 blows (struck with a gaff) Seal 5 : 3 blows (70 sec) Seal 6 : 2 blows	Seal 1 : 4 blows Seal 2 : 3 blows (45 sec) Seal 3 :1 blow then hooked then 1 blow Seal 4 : 1 blows then hooked then 2 blows then 2 mins and 10 secs after initial blow received 1 more bow Seal 5 : 3 blows Seal 6 2 blows Seal 7 1 blow Seal 8 : 2 blows then hooked then 2 more blows (40secs) Seal 9 : 1 blow then hooked then 3 more (80 secs) Seal 10 : 1 blow, kicked then 2 more blows Seal 11: 3 blows Seal 12 : 4 blows Seal 13: 1 blow Seal 14 : 2 blows	Seal 1: 9 blows Seal 2: 1 blow Seal 3: 1 blow Seal 4 : 4 blows Seal 5 : 3 blows Seal 6 : 4 blows Seal 7 : struck and lost
No. Bled before hooked	none	1 seal bled < hooked	none	none	1 seal bled < hooked 4 hooked before bled 1 unable to see

Table 2: Veterinary Observations from the Wes Cam for clubbed seals

Clubbed seals	Number of seals March 27th 2001	Number of seals March 28th 2001
Clubbed, blinking eye reflex check, and bled	2	2
Clubbed, blinking eye reflex check	10	2
Clubbed and bled (no reflex check)	11	4
Clubbed and dragged or left	21	2
Clubbed as a group, then left and later returned to.	17	9
Clubbed and lost	1	0
Totals	51	19

Table 3: Veterinary observations from the Wes Cam of shot seals.

Shot seals	Number of seals March 27th 2001	Number of seals March 28th 2001
Shot, blinking eye reflex check, and bled	1	1
Shot and hooked (Of these, clubbed after gaffing on boat)	5 (Not recorded)	10 (1)
Shot and bled	3	3
Shot, then clubbed and blinking eye reflex check	9	Not recorded
Shot and not immediately recovered despite signs of life	1	0
Shot then clubbed	11	10
Shot and lost	0	3
Totals	30	27

(In addition on March 27th, 2 seals were observed being run over by boat.)

APPENDIX 2.
RESULTS OF GROSS PATHOLOGICAL EXAMINATIONS

0bservations from March 27, 2001

Table 4: Extra-cranial skull fractures

No. of seals with extra-cranial skull fractures	Orbital fractures	Mandibular fractures	Zygomatic fracture	Maxillary fractures	Two or more areas fractured	Extracranial fractures with no cranium	Extracranial fractures with mild-mod cranium
17	5	4	1	8	8	5	9

Total number of seal skulls examined was 33

Table 5: Cranium fractures observed

No detectable fractures	Minimal to moderate	Severe to extensive
6	11	16

Total number of skulls observed 33

RESULTS OF GROSS PATHOLOGICAL EXAMINATIONS (cont.)

0bservations from March 28, 2001

Table 6: Extra-cranial skull fractures

(team a)

No. of seals with extra-cranial skull fractures	Orbital fractures	Mandibular fractures	Zygomatic fracture	Maxillary fractures	Two or more areas fractured	ECF with no cranium	ECF with mild – moderate cranium
19	11	12	5	16	18	0	4

Total number of seals examined was 19

Table 7: Cranium fractures

(team a)

No detectable fractures	Minimal to moderate	Severe to extensive
0	3	16

Total number of seals observed was 19

RESULTS OF GROSS PATHOLOGICAL EXAMINATIONS (cont.)

0bservations from March 28, 2001

Table 8: Extra-cranial skull fractures

(team b)

No. of seals with extra-cranial skull fractures	Orbital fractures	Mandibular fractures	Zygomatic fracture	Maxillary fractures	Two or more areas fractured	No of seals with extra cranial fractures but no cranium involvement	No seals with ECF and mild-moderate cranium
10	5	5	4	7	8	1	6

(There were 4 seals that had no skull lesions (cranium or extra cranium)

Total number of seal skulls examined was 24

Table 9: Cranium fractures

(team b)

No cranium fractures	Minimal to moderate	Severe to extensive
7	5	12

(Three of the five seals in the minimal to moderate category had hairline fractures with no displacement)

Total number of seal skulls examined was 24

RESULTS OF GROSS PATHOLOGICAL EXAMINATIONS (cont.)

0bservations from March 28, 2001

Table 10: Total extra-cranial skull fractures

(Combining data from Team A and B)

No. of seals with extra-cranial skull fractures	Orbital fractures	Mandibular fractures	Zygomatic fracture	Maxillary fractures	Two or more areas fractured	Extracranial fractures with no cranium	Extracranial fractures with mild to moderate
29	16	17	9	23	26	1	10

A total of 43 seal skulls were examined

Table 11: Total cranium fractures

(combining data from Team A and B)

No cranium fractures	Minimal to moderate	Severe to extensive
7	8	28

Total number of seals observed was 43

RESULTS OF GROSS PATHOLOGICAL EXAMINATIONS (cont.)

Total observations from March 27-28, 2001

Table 12: Total Extra-cranial skull fractures observed.

No. of seals with extra-cranial skull fractures	Orbital fractures	Mandibular fractures	Zygomatic fracture	Maxillary fractures	Two or more areas fractured	ECF with no cranium	ECF with mild to moderate cranium
46	21	21	10	31	34	6	16

A total of 76 seal skulls were examined

Table 13: Total cranium fractures observed

No cranium fractures	Minimal to moderate	Severe to extensive
13	19	44

A total of 76 seal skulls were examined

Table 14: Percentage breakdown of total cranium fractures observed

No cranium fractures	Minimal to moderate	Severe to extensive
17%	25%	58%

A total of 76 seal skulls were examined

APPENDIX 3: 1998 Seal Hunt Observation Documentation.

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
3	1		14:23	Shot	No	15:47	NA	No	NA	NA		Shooting and leave to suffer
	2		16:40	Shot	No	17:22					Time of strike is time boat appears. Shot seal appears after.	
	3		16:40	Shot	Unknown	17:47	Unknown	Unknown	Unknown	Unknown	Time of strike is time boat appears. Shot seal appears after. Time hooked is time seal is gone—hooked off camera.	
6	1		14:03	Shot then clubbed	No	14:24	14:16	No	NA	NA		
	2		14:34	Shot	No	14:54	NA	No	NA	NA		
	3	20:45		Shot then clubbed	Maybe	21:06	20:57	No	NA	NA		
	4	20:45		Shot then clubbed	No	21:	21:18	No	NA	NA		Shooting and leave to suffer
	5	20:45		Shot then clubbed	No	21:45	21:37	No	NA	NA		Probable hooking alive
	6	22:30		Shot	No	22:53	NA	No	Unknown	Unknown	Noose used instead of hook	
	7	22:30		Shot	No	23:11	NA	No	Unknown	Unknown	Noose used instead of hook	
	8	22:30		Shot	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Noose used instead of hook	
	9	22:30		Shot	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Noose used instead of hook	
	10	23:13		Shot then clubbed	Maybe	23:45	23:24	No	NA	NA		Probable shooting and leave to suffer

Total Seals = 13

APPENDIX 4: 1999 Seal Hunt Documentation.

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
23	1		23:07:06	Shot	No	23:07:21	NA	No	NA	NA	Thrown in boat 28 seconds after shot	Possible hooking alive
	2		23:08:13	Shot then Clubbed	No	23:08:41	23:08:33	No	NA	NA	Seal not in picture when shot	Shooting and leave to suffer Possible hooking live seal
	3		23:09:54	Shot	No	23:11:03	NA	No	NA	NA	Seal not in picture when shot	Struck and lost
	4		23:09:58	Shot then clubbed	No	23:11:05	23:10:42	No	NA	NA	Seal not in picture when shot	Possible shooting and leave to suffer Hooking alive seal
	5		23:12:57	Shot	No	23:1435	NA	No	NA	NA	Seal not in picture when shot	Shooting and leave to suffer Hooking alive
	6		23:16:23	Shot	No	23:16:31	NA	No	NA	NA	Seal not in picture when shot	Possible hooking alive
	7		23:17:21	Shot	No	23:17:37	NA	No	NA	NA	Seal not in picture when shot Seal shows movement after in boat	Hooking alive Shooting and leave to suffer
	8		23:18:24	Shot then clubbed	No	23:18:39	23:19:16	No	NA	NA	Seal holds up flipper in boat Struck after in boat	Hooking alive Shooting seal and leave to suffer
	9		23:19:44	Shot	No	23:20:37	NA	No	NA	NA	Seal not in picture when shot	Possible hooking alive
	10		23:19:48	Shot	No	23:20:19	NA	No	NA	NA	Seal not in picture when shot	Hooking alive
	11		23:19:55	Shot	No	23:20:38	NA	No	NA	NA	Seal not in picture when shot Time hooked is time appearing hooked. Was hooked sooner, but off camera	Possible hooking alive
	12		23:23:40	Shot	No	23:24:00	NA	No	NA	NA	Seal not in picture when shot Seal shows movement in boat	Hooking alive Shooting and leave to suffer
	13		23:24:27	Shot	No	23:25:23	NA	No	NA	NA	Seal not in picture when shot Time hooked is time appearing hooked. Was hooked sooner, but off camera	Hooking alive Shooting and leave to suffer

APPENDIX 4: 1999 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
	14		23:24:38	Shot	No	23:24:53	NA	No	No	No		Possible hooking alive Possible shooting and leave to suffer
	15		23:26:02	Shot	No	23:26:27	NA	No	NA	NA	Seal not in picture when shot	Possible hooking alive Possible shooting and leave to suffer
	16		23:26:05	Shot then clubbed	No	23:26:46	23:26:41	No	NA	NA	Seal shows reflex movement first and then voluntary movement	Possible shooting and leave to suffer Possible hooking alive
	17		23:27:23	Shot	No	23:27:38	NA	No	NA	NA	Seal shows reflex movement	
	18		23:28:20	Shot	No	23:28:39	NA	No	NA	NA	Seal not in picture when shot	
	19		23:28:24	Shot	No	23:28:54	NA	No	NA	NA	Seal not in picture when shot	
	20		23:28:30	Shot	No	23:28:54	NA	No	NA	NA	Seal not in picture when shot	Possible shooting and leave to suffer Possible hooking alive
24	1	20:00:45		Shot	No	20:01:27	NA	No	NA	NA	Seal shot before appearing Time hooked is time appearing hooked. Was hooked sooner, but off camera	
	2		20:00:46	Shot	No	Unknown	Unknown	Unknown	Unknown	Unknown	Camera focuses on other seal while this one is handled	
	3		20:01:15	Shot	No	20:03:16	NA	No	NA	NA		Shooting and leave to suffer
	4		20:03:39	Shot	No	20:03:51	NA	No	NA	NA		
	5		20:06:52	Shot	No	20:07:09	NA	No	NA	NA		
	6		20:07:53	Shot	No	20:08:57	NA	No	NA	NA		Possible shooting and leave to suffer
	7		20:09:44	Shot	No	20:10:08	NA	No	NA	NA		
	8		20:11:09	Shot	No	20:11:32	NA	No	NA	NA	Seal not in picture when shot	
	9		20:12:57	Shot	No	20:13:18	NA	No	NA	NA	After hooking, sealer drags to boat and appears to stop seal to death beyond camera view.	Hooking alive Shooting and leave to suffer
	10	20:14:37		Shot	No	20:14:42	NA	No	NA	NA	Appear to have been shot long before appearing on camera	
	11	20:14:37		Shot	No	20:15:08	NA	No	NA	NA	Appear to have been shot long before appearing on camera	Hooking alive Shooting and leave to suffer

APPENDIX 4: 1999 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
	12		20:18:28	Shot then clubbed	No	20:19:07	20:19:03				Seal not in picture when shot Seal shot in throat	Possible shooting and leave to suffer
	13		20:19:52	Shot	No	20:20:30	NA	No	NA	NA		Possible shooting and leave to suffer Possible hooking alive
	14		20:20:57	Shot then clubbed	No	20:21:17	20:21:15	No	NA	NA	Seal not in picture when shot	Shooting and leave to suffer Hooking alive

Total Seals = 34

APPENDIX 5: 2000 Seal Hunt Documentation.

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
1402	1	21:56:59	21:57:04	Club	No	15 sec	54 sec	No	56 sec (not shown)	-		
	2		21:58:12	Shot, Clubbed with gaff – 17 seconds	No	22 sec	17 sec	No	44 seconds			Shooting seal & leaving to suffer, clubbing with a boat hook
	3		22:02:06	Gaff	No	15 sec	4 sec	No	1 min 11 sec			Possible hooking alive
	4	22:03:00		Shot	No	29 sec	51 sec	No		56 sec		Possible hooking & skinning alive
	5		22:04:59	Shot, gaff	No	25 sec	19 sec, 37 sec	No		1 min 12 sec		Shooting seal & leaving to suffer, clubbing with a boat hook, possible hooking a live
	6		22:06:34	Shot	No	24 sec	47 sec, 1 min sec 32	No	1 min 56 sec			Shooting seal & leaving to suffer, hooking alive, bled alive
	7	22:08:49 Didn't see the shot.		Poss shot, Gaff	?	3 sec	13 sec, 48 sec	No		58 sec		Shooting seal & leaving to suffer, hooking alive, clubbing with a boat hook, skinning alive
	8		22:11:19	Club	No	5 sec, 44 sec	22 sec	No		54 sec		Clubbing seals & leaving to suffer, hooking alive, skinning alive
	9	22:22:48		Shot	No	22:22:48		No	?	?		
	10	22:23:26		Shot	No	2 min 26 sec		No			3 min 23 sec later still not skinned or bled	
	11	22:29:15		Shot							19 sec later boat is leaving the area and the camera moved somewhere else.	
	12	22:29:33		?	?			Yes				
	13		22:30:45	Shot	No	55 sec	18 sec	Yes	33 sec			Shooting a seal & leaving it to suffer, bleeding a live seal
	14	22:32:21		Shot	No			No			1 min 21 sec later still not skinned or bled	
	15	22:34:12		Shot	No	7 sec		No			22 sec later – couldn't see	

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
	16		22:36:04	Shot, clubbed	No	28 sec	19 sec			54 sec		Shooting seal and leaving to suffer
	17		22:37:32	Shot, clubbed	No	48 sec	4 sec, 43 sec	No		2 min 13 sec		Shooting seal and leaving to suffer, possible hooking alive
	18	22:39:54		Shot, gaff, club	No	32 sec,	45 sec, 1min 6 sec	No	1min 35 sec			Shooting seal & leaving to suffer, hooking alive, clubbing with a boat hook
1404	1	00:01:05		Shot, clubbed	No	1 min 16 sec	53 sec, 1 min 11 sec	No	1 min, 22 sec			Shooting seals and leaving them to suffer, clubbing with a boat hook, hooking and dragging live seal, skinning live seal
	2	00:03:11		Shot, gaff	No	48 sec	35 sec	No		1 min 5 sec		Shooting seals and leaving them to suffer, clubbing with a boat hook, hooking alive, possible skinning alive
	3		00:05:37	Shot, gaff	No	59 sec	44 sec	No			2 min, 2 sec still not bled but the camera moved to another shot.	
	4	00:07:39		Shot, clubbed	No	24 sec	7 sec, 20 sec	No			47 sec still not bled	Shooting seals & leaving them to suffer, clubbing with a boat hook, hooking alive
	5	00:08:26		Shot				?			41 sec still not recovered	
1406	1, 2	00:11:23		Poss shot, clubbed	No	25 sec		No			1 min, 28 sec still not bled, camera pulls out.	Shooting seals & leaving them to suffer, clubbing with a boat hook, hooking alive
	3	00:12:53		Shot	No	11 sec, 25 sec		No		1 min 37 sec		
	4	00:16:08		Shot, clubbed	No	1 min 4 sec	39 sec, 56 sec	No			2 min 35 sec still not bled	Shooting seals & leaving them to suffer, clubbing with a boat hook, possible hooking alive
	5		00:18:45	Clubbed								Struck and Lost, clubbing with a boat hook
	6		00:20:08	Shot, clubbed	No	1 min 2 sec	50 sec	No		1 min 32 sec		Clubbing with a boat hook
	7		00:22:19	Shot, clubbed	No	43	27 sec	No			1 min 26 sec still not bled	Shooting seals & leaving them to suffer, clubbing with a boat hook, possible hooking alive
	8		00:23:49	Shot, clubbed	?	36 sec	18 sec	No			1 min 8 sec still not bled	Shooting seals & leaving them to suffer, clubbing with a boat hook
	9	00:24:57		Shot, clubbed			9 sec			1 min 5 sec		Shooting seals & leaving them to suffer

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
	10	00:24:57		Shot, clubbed			12 sec			1 min 28 sec		Shooting seals & leaving them to suffer
	11	00:24:57		Shot, clubbed			16 sec			45 sec		Shooting seals & leaving them to suffer, bled alive
	12	00:24:57		Shot, clubbed			20 sec			27 sec		Shooting seals & leaving them to suffer, bled alive
	13	00:27:58		Shot, Clubbed	No	1 min 4 sec	45 sec	No	1 min 44 sec			Shooting seals & leaving them to suffer
	14	00:30:35		Shot	No	17 sec					1 nub 4 sec still not bled	Possible hooking alive
	15		00:33:50	Shot, clubbed	no	1 min 12 sec	1 min	No			2 min 1 sec still not bled	
	16		00:33:57	Shot, clubbed	No	1 min 18 sec	55 sec	No			1 min 44 sec still not bled	Possible shooting seal & leaving to suffer, possible hooking alive
	17	00:35:41		Clubbed	No	43 sec		No			2 min 17 sec still not bled Sealer clubs seal multiple times	Clubbing seals (no quick kill)
	18		00:38:31	Clubbed	No			No				Clubbing seals & leaving them to suffer, Struck and lost
	19		00:39:40	Clubbed	No	00:40:06		No			00:41:24 still not bled (multiple seals in boat not bled)	Clubbing seal & leaving them to suffer, hooking alive
	20		00:43:07	Clubbed	No	0043:29		No			00:45:24 still not bled	
	21	00:46:15		Clubbed	?	00:46:18	00:46:39	No			00:47:35 still not bled	Possible hooked alive
1435	1-4	02:31:15		?	?	Various		1 out of 4				
	5	02:44:01		?	?	?		no				
	6	02:44:58		?	?	02:45:01		No	02:46:35			
	7		02:48:31	Clubbed	yes			Yes	02:48:39			Clubbing a seal & leaving it to suffer, bleeding alive
	8		00:51:25	Clubbed	no	02:53:38		Yes		02:51:33		Clubbing with a boat hook, possible skinning alive

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violations/Abuse
	9		02:52:09	Clubbed	No	02:53:02		Yes		02:52:28		Clubbing with a boat hook, clubbing seal & leaving to suffer, possible skinning alive, possible hooking alive
	10		02:55:49	Clubbed	No	02:56:16		Yes		02:55:57		Possible skinning alive
	11	00:57:26		Shot				No			Dragged to boat fully conscious an not clubbed or bled (2 min passes when camera pulls out)	Shooting seal & leaving to suffer
	12	02:59:19		Shot	No	03:01:30		No				Shooting seal & leaving to suffer, possible hooking alive
	13	03:04:48		Clubbed	No	03:04:52		no	03:05:29			
	14	03:07:44		Shot	No	03:07:57		No		03:08:29		
	15		03:14:41	Clubbed		03:14:47		yes	?			
1433	1		00:50:49	shot	No	00:51:11		No	00:51:34			Shooting seal & leaving to suffer, possible hooking alive
	2		00:51:59	Shot, clubbed	No	00:52:38	00:52:34 00:52:55	No	00:53:04			Shooting seal & leaving to suffer, possible hooking alive
	3		00:53:40	Clubbed	No							Struck and lost
	4	00:54:13		Shot	No	00:54:41	00:54:34	no			00:55:35 still not bled	Shooting seal & leaving to suffer, possible hooking alive
	5	00:55:49		Shot	No	00:56:01		No	00:56:22			Possible shooting seal & leaving to suffer,
	6	00:56:36		Shot	No	00:56:45	00:57:17	No	00:57:26			Shooting seal & leaving to suffer, hooking alive
	7	00:57:29		Shot	No	00:57:49					00:58:14 still not bled	
	8		01:01:26	Shot, clubbed	No	01:02:22	01:02:34	no	01:02:47			
	9	01:03:03		Shot							01:04:24 seal has been retrieved (action not shown but the seal is missing from the bloody ice.)	
	10		01:04:34	Shot							01:06:01 – still not retrieved and camera pulls out.	Shooting seal & leaving to suffer
	11		01:07:37	Shot	No	01:08:01		No				

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violations/Abuse
	12	01:08:16		Shot, gaff	No	01:08:47	01:08:41 01:09:02	no	01:09:14			Shooting seal & leaving to suffer
	13	01:09:16		?	?			No	01:09:47			
	14		01:09:59	Shot								
	15	01:11:04		Poss shot, gaff		01:11:10	01:11:07					Shooting seal & leaving to suffer, possible hooking alive
	16		01:11:26	Shot	No	01:12:10		No			01:12:22 camera cuts out	
	17		01:14:19	Shot, clubbed.	No	01:14:36	01:14:55	No			01:15:05 sealer bends down with knife but camera pulls away	Shooting seal & leaving to suffer, hooking alive
	18		01:15:32	Gaff	No	01:15:36	01:15:47	No				
	19		01:16:48	Gaff	No	01:16:50		No	01:17:23			Clubbing seals & leaving to suffer, possibility hooking alive, possible bleeding alive
	20		01:17:46	Shot, gaff	?	01:18:26	01:18:50	No	01:19:30			Shooting seal & leaving to suffer, possible hooking alive
	21		01:19:48	Shot, gaff	No	01:20:13	01:20:11	No	01:21:47			Shooting seal & leaving to suffer, clubbing with a boat hook, hooking alive
	22	01:22:48		Shot	?	01:23:20					01:23:32 not on boat yet	
	23	01:23:35		Shot	No	01:24:11					01:24:53 not yet bled	shooting seal & leaving to suffer
	24	01:26:32		Shot	No	01:26:55		No				Possible shooting seal & leaving to suffer, possible struck and lost
	25	01:27:26		Shot	No	01:27:49		No			01:28:20 not bled yet	Shooting seal & leaving to suffer, hooking alive
	26											
1382	1	15:51:51		Shot, clubbed	No	15:52:08	15:52:05	No				
	2	15:55:36		Shot								
	3		16:15:10	Shot, gaff	No	16:15:42	16:15:47	No			16:20:10 still not bled	Shooting seal & leaving to suffer, possible hooking alive, clubbing with boat hook
	4	16:54:05		Shot, clubbed	No	16:54:33	16:54:48	No	16:55:01			Shooting seal & leaving to suffer, hooking alive
	5		17:32:01	Shot	no	17:34:56		No			17:36:02 still not bled	Shooting seal & leaving to suffer

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violations/Abuse
	6	19:21:50		Shot, clubbed	No	19:22:53	19:23:06	No			19:24:28 still not bled	Shooting seal & leaving to suffer, possible hook alive
	7	19:30:30		Shot	No	19:31:05	19:31:13	No			19:32:03	Shooting seal & leaving to suffer, possible hook alive
	8	19:54:32		Shot	No	19:54:32			19:55:29			Shooting seal & leaving to suffer, hooking alive, possible bleeding alive
	9	19:58:34		Shot	No	19:58:34	19:58:34	No			20:01:50 – still not bled	Possible shooting & leaving to suffer, possible hooking alive
	10	20:13:02		Shot	No	20:13:24		No	20:13:42			Possible shooting & leaving to suffer
	11	20:16:17		Shot	No	20:18:27		No	20:19:12			Shooting seal & leaving to suffer
	12	20:21:51		Shot	No	20:22:06		No			20:22:40	Possible shooting & leaving to suffer, possible hooking alive
	13	20:23:23		Shot	No	20:24:45		No		20:26:16		Possible shooting & leaving to suffer, hooking alive
	14	20:28:43		Shot	No	20:29:18					20:30:45 – still not bled	Shooting seal & leaving to suffer, hooking alive
	15		20:31:25	Shot	No	20:32:08		No			20:33:02 still not bled	Shooting seal & leaving to suffer, hooking alive
	16		20:38:58	Shot, clubbed	No	20:40:39	20:40:31	No			20:41:06 still not bled	Shooting seal & leaving to suffer,
	17	20:41:09		Shot	No							Struck and lost
	18		20:57:49	Shot	No	20:58:49	20:58:16	No			20:59:54 – still not bled	Shooting seal & leaving to suffer, possible hooking alive
	19		21:11:54	Shot	No	21:12:28	21:12:01	No			21:13:53 – still not bled	Shooting seal & leaving to suffer, possible hook alive
1434	1	02:10:18		Shot	No	02:10:54		No				
	2	02:10:18		Shot	No	02:11:36		No				
	3	02:13:32		Shot	No	02:13:55		No				
	4	02:13:32		Shot	No	02:14:34						
	5	02:16:00		Shot, clubbed	No	02:16:17	02:16:05	No			02:17:19 – still not bled	
	6	02:16:00		Shot, clubbed	No	02:16:43	02:16:08	No			02:17:19 – still not bled	
	7	02:16:00		Shot, clubbed	no		02:16:09				02:17:19 – still not bled	
	8	02:16:00		Shot, clubbed	No		02:17:25				02:18:00 – kicked in face	Shooting seal & leaving to suffer
	9	02:19:03		Shot	No	02:19:12		no	02:20:55			

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

Tape	Seal #	Time In	Time of first documented strike	Type of strike (Shot/Club/gaff)	Blinking Reflex Check (y/n)	hooked	Second strike	Bled or skinned where struck (y/n)	Time of bleeding	Time of skinning	Comments	Violation / Abuse
	10	02:19:03		Shot, clubbed			02:19:41	No	-			
	11	02:19:11		Shot, clubbed			02:19:46	no	-			
	12	02:21:03		Clubbed		02:21:23	02:21:14	no			02:23:28 – still not bled	Clubbing seal & leaving to suffer, hooking alive
	13	02:24:18		Shot							02:25:29 – still not recovered	Shooting seal & leaving to suffer
	14	02:25:34		Shot		02:29:07						Shooting seal & leaving to suffer
1432	1	02:10:18		Shot	No	02:10:54	NA	No	NA	NA		
	2	02:10:18		Shot	No	02:11:37	NA	No	NA	NA		
	3	02:11:58		Shot	No	02:12:00	NA	No	NA	NA		
	4	02:12:38		Shot	Unknown	02:13:31	Unknown	Unknown	Unknown	Unknown	Seal seen dead at time in. No collection on camera. Time hooked is time seal still on ice and shot breaks	Unable to Determine
	5	02:13:33		Shot	No	02:13:56	NA	No	NA	NA		
	6	02:13:33		Shot	No	02:14:35	NA	No	NA	NA		Possible shooting and leave to suffer Possible hooking alive
	7	02:16:00		Shot then clubbed	No	02:16:17	02:16:05	No	NA	NA		Shooting and leave to suffer Hooking alive
	8	02:16:00		Shot then clubbed	No	Carried	02:16:07	No	NA	NA		
	9	02:16:00		Shot then clubbed	No	Carried	02:16:09	No	NA	NA		
	10	02:17:21		Shot then clubbed	No	Carried	02:17:25					Shooting and leave to suffer
	11	02:19:03		Shot	No	02:19:10						
	12	02:19:03		Shot then clubbed	No	Carried	02:19:41	No	NA	NA		

APPENDIX 5: 2000 Seal Hunt Documentation (cont.).

	13	02:19:10		Shot	No	Carried	02:19:47	No	NA	NA		
	14	02:24:29		Shot	No	unknown	unknown	unknown	unknown	unknown	Camera changes seen	
	15		02:25:36	Shot	No	02:29:07	NA	No	NA	NA		Shooting and leave to suffer

Total Seals = 133

APPENDIX 6.
MEAT INSPECTION REGULATIONS 1990.
CANADIAN REGULATIONS REGARDING WELFARE OF LIVESTOCK AT SLAUGHTER:

79.
Every food animal that is slaughtered shall, before being bled,

(a) Be rendered unconscious in a manner that ensures that it does not regain consciousness before death, by one of the following methods:

(i) By delivering a blow to the head by means of a penetrating or non-penetrating mechanical device in a manner that causes immediate loss of consciousness

(a) Be killed by one of the methods set out in paragraph (a)

80.
No equipment or instrument for restraining, slaughtering or rendering unconscious any food animal shall be used by any person for the those purposes

(a) Unless the person is by reason of the person's competence and physical condition, able to do so without subjecting the animal to avoidable distress or avoidable pain; or

(b) Where the condition of the equipment or instrument or the manner in which or the circumstances under which the equipment or instrument is used might subject the animal to avoidable distress or avoidable pain.

If the Canadian commercial seal hunt is to be considered as an "industry"[2], it is imperative that every effort is made to comply with these animal production regulations.

It is quite clear from our personnel observations that the present seal hunt fails to comply with these basic animal welfare regulations.

[2] Personal communication with Roger Simon, Department of Fisheries and Oceans

APPENDIX 7.

NOTES FROM INFORMAL MEETING WITH MEMBERS OF THE DEPARTMENT OF FISHERIES AND OCEANS STAFF AND RCMP
REGIONAL DFO OFFICER IN CHARGE, ROGER SIMON HOSTED MEETING

4:10 pm, MARCH 26, 2001, CHARLOTTETOWN, P.E.I.

Mr. Simon reviewed the requirements to receive a sealing license: must reside in an area that has a traditional seal hunt; attend a one day training course; 'apprenticeship' for two years - this entails sealing with an experienced sealer but does not equate to a true apprenticeship as there is no formal training or competency requirements during or at the end of this period.

DFO cannot revoke a sealers license unless the sealer is found guilty in a court of law of violations of the Marine Mammal Regulations or the Criminal Code of Canada. DFO has no remit to charge and convict, they pass the information on suspected infractions to the RCMP that would pursue charges.

DFO does not perform any assessment of competency of the sealer.

DFO's position is that clubbing is humane and should take a maximum of 3 blows to the head, however, their impressions are that one blow is usually sufficient. Palpation of the depressed skull was considered adequate enough to assess loss of consciousness ("massive hemorrhage" within the skull kills the animal). Clubbing on the nose only or starting to hit the seal on the back of the animal and working forward until the head is finally hit would be considered "beating a seal", which is not allowed.

DFO has officers on most of the vessels that were out at this date and would have 8 or 9 in total by the time the hunt was in full action. These officers made sure that the correct instruments were used, correct rifle/ammunition were used and that the regulations were followed.

A Firearms Acquisition Certificate was required before obtaining a rifle to shoot seals but that no accuracy or competency needed to be shown.

Once a license was obtained it would be renewed without question. If the license lapsed, however, the individual would have to go through the same process as a new applicant.

Mr. Simon stated that the seal hunt was a commercial hunt that met the humane standards that were derived from the Royal Commission on Seals/Sealing 1988 and the Canadian Veterinary Medical Association.