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A review of animal welfare implications of the Canadian commercial seal hunt

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ABSTRACT

The Canadian seal hunt is the world's largest commercial slaughter of marine mammals and, as such, has been the subject of veterinary scrutiny for half a century. In that time, veterinary experts have made multiple recommendations to improve welfare at the seal hunt, some of which have been included in Canadian sealing regulations. Yet analysis of video material and studies on the outcomes of the hunt suggest that the potential for suffering during the hunt continues, and may, in fact, be increasing. In the past decade, numerous countries have taken action to prohibit their trade in products of commercial seal hunts in response to public concerns about the welfare of the seals. With these actions now being examined at the World Trade Organization, it is important to determine if these concerns are warranted. This paper reviews relevant veterinary science, exploring the intrinsic elements of commercial sealing and unique physical adaptations of seals that prevent effective and consistent application of humane slaughter methods at the seal hunt. The review of available data indicates that generally accepted principles of humane slaughter cannot be carried out effectively or consistently in the commercial seal hunt.

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1. Introduction

Harp seals (*Phoca groenlandica*) are ice-breeding marine mammals that migrate annually between arctic and subarctic regions of the Atlantic. Northwest Atlantic harp seals, the primary focus of Canada's commercial seal hunt [1], spend the summer in the Canadian Arctic and along the Greenland coast and migrate south in the late autumn to overwinter off the northeast coast of Newfoundland (the "Front"), or in the Gulf of St. Lawrence (the "Gulf"). The adult females give birth in March. The pups are born with white fur (lanugo) and are weaned at approximately 12 days. After weaning, the young seals are abandoned by their mothers, and then fast for 4 to 6 weeks [2]. During this time, the commercial sealing season opens off Canada's east coast. The seals are hunted primarily for their fur and carcasses are routinely abandoned [3]. While trade in products of newborn seals is forbidden in Canada, once the seals begin to shed their white coats (a process that coincides with weaning), their products can be legally traded. The skins of young seals are the most valuable [4] and nearly all (98%) of the harp seals killed in recent years have been less than three months of age [5].

Most of the seals are killed in just a few days in late March (in the Gulf) and mid April (in the Front), with the opening day in each region the most lucrative [6]. During the years 2003–2008 commercial sealers in Canada landed 1,782,560 animals [7]. In the past half-century, veterinary experts have made multiple recommendations to improve welfare at the seal hunt (for example: Simpson [8,9], Rowsell [10–13], Burdon et al. [14], Daoust et al. [15] and Smith [16]). Some of these regulations have been reflected in Canadian regulations and conditions of licenses. Regardless, studies on the outcomes of the hunt suggest that the potential for suffering continues and is, because of the impacts of climate change, increasing. In 2009, the European Union prohibited trade in the products of commercial seal hunts. In response, Canada revised its Marine Mammal Regulations [17], claiming the new rules made the hunt humane, and challenged the EU regulation at the World Trade Organization. Since that time, the Russian Federation, Belarus and Kazakhstan have prohibited their trade in harp seal fur, sparking threats of further measures at WTO by the Canadian government.

This paper seeks to determine if the actions of nations in prohibiting seal product trade can be justified from an animal welfare perspective. It examines the current Canadian sealing regulations in comparison to generally accepted principles of humane slaughter to determine if these rules prescribe a humane death for seals. It also evaluates the unique physical adaptations of seals for marine life, which may present obstacles to humane

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Table 1

The author panel composition, date, and seal hunt or video material observed in the studies assessed in this paper [14,15,18]

Paper	Panel composition	Date	Seal hunt events observed	Video events observed
Burdon et al. [14]	International panel of veterinarians with expertise in a variety of specialties	2001 (1998–2000 video data)	Observed firsthand 127 seals killed during the commercial seal hunt in 2001 and conducted post mortems on 76 seal carcasses abandoned on the ice floes during the 2001 commercial seal hunt	Observed video material from 179 seal kills during three commercial seal hunts (1998–2000 inclusive)
Daoust et al. [15]	Veterinarians with a variety of specialties	1999 and 2001	Two members of the panel examined carcasses of 225 seals killed, mainly with a hakapik (see later for description of permitted methods), in the Gulf of St. Lawrence during 1999. Two panel members provided data on 47 seals shot at the Front the same year. One panel member provided data on 167 seals shot or killed by hakapik in the Gulf in 2001	The panel reviewed video evidence of 116 'interactions between harp seals and sealers' from the 2001 seal hunt
Butterworth et al. [18]	International veterinary and zoological experts with a variety of specialties	2007 (2003–2007 video data)	The panel carried out post-mortem examinations on 17 clubbed seals collected in 2007 in the northern Gulf of St. Lawrence. The report presented data on an Expert Opinion Analysis where 133 experts were sent sequences of events extracted from the videos for a single seal kill and asked 'How do you rate the overall welfare of this animal during the processes which resulted in its death?'	Examined video evidence of 169 seal kills from four seal hunts (2003–2007 inclusive) in the Gulf of St. Lawrence and the Front

slaughter, and other impediments to humane killing in the context of commercial seal hunting.

2. Materials and methods

In this paper, the findings from a number of veterinary studies (Table 1) on the Canadian commercial seal hunt conducted in the past five decades are reviewed, focusing primarily on three of the most recent of these.

This paper also contains video evidence (accessible as links in the Appendices) that has been collected by NGOs licensed by the Canadian government to observe the commercial seal hunt. Filming of the seal hunt has been undertaken in three ways:

- from the ice using video cameras;
- from inflatable vessels using video cameras; and
- from the air with the use of a Cineflex camera.

3. Review of the results of multiple studies

Veterinary studies on the outcomes of commercial sealing reveal consistent problems in the application of three central components of humane slaughter: stunning, monitoring for unconsciousness and bleeding.

3.1. Stunning

Canadian sealers are permitted by law to stun seals by clubbing, with wooden bats or with a pole known as a hakapik (by regulation consisting of a metal ferrule with a slightly bent spike not more than 14 cm in length attached to a wooden handle that measures not less than 105 cm and not more than 153 cm in length and not less than 3 cm and not more than 5.1 cm in diameter) or by shooting, with rifles and shotguns [17]. In addition, gaffs (wooden poles with hooks at the end) are frequently observed being used as clubbing implements [14,18] though their use has been prohibited for more than four decades [19] because their size and weight are not suitable for rendering seals unconscious. Both shooting and clubbing are considered stunning rather than killing methods as neither technique can assure immediate death in the field environment of the commercial seal hunt [17]. Clubbing is likely to be the preferred method

given that the prices paid for seal fur are reduced with each bullet hole found [20] and consistent accuracy when shooting is improbable under the conditions of the seal hunt [21,16,18]. However, sealers are now targeting older pups and so the killing occurs weeks later in the spring. This, paired with the impacts of climate change, means sealers are increasingly shooting seals from vessels because the sea ice is not solid enough to walk on. Shooting is now the predominant primary stunning method at the front, where two thirds of the hunt occurs [22].

3.1.1. Clubbing

In examining skulls of seals clubbed by Canadian sealers, veterinarians and official observers have consistently identified a lack of cranial injury that would correlate with insensibility [9,23–29,12,14,18]. Of 70 seals observed killed in 2001 by Burdon et al. [14], several seals were clubbed in excess of eight times, with 22% clubbed more than three times. Burdon et al. found that of the cases observed in video footage from 1998, 1999 and 2000, sealers returned to strike or shoot the seal for a second time in 40% of cases (32% of the clubbed seals and 92% of the shot seals) and that the average time between strikes was 27 s.

Of the 76 post mortems conducted by Burdon et al. [14], 17% had no apparent skull fractures. For these seals, it was indicated that assured association with unconsciousness would be highly improbable, and that it could be questioned whether any alteration in consciousness occurred in these cases. A further 25% had minimal fractures including hairline or non-displaced fractures, or moderate fractures. Burdon et al. stated that cases of minimal fractures could be associated with neural damage but that unconsciousness could not be guaranteed to have occurred. This same report noted that moderate fractures would be more likely to be associated with unconsciousness, but would still not have a high level of assurance that unconsciousness had been achieved. In total, 42% of seals examined did not show enough evidence of cranial injury to be associated with a high probability of unconsciousness.

Burdon et al. concluded,

“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 skulls 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.”

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