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



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ABSTRACT

In a recent article in this journal (Butterworth and Richardson. A review of animal welfare implications of the Canadian commercial seal hunt. *Marine Policy* 2013;38:457–469), the authors argued that “generally accepted principles of humane slaughter cannot be carried out effectively or consistently during the Canadian commercial seal hunt”. The present review purports to show that these authors’ conclusions were incorrect because they were highly selective in their treatment of the information available and made no attempt to consider other perspectives. In addition, their reliance on anecdotal video sequences to support some of their points was seriously flawed since a vast proportion of these sequences failed to meet fundamental criteria of scientific rigor. The article by Butterworth and Richardson [5] failed to provide an unbiased presentation of the available data and therefore did not bring further clarity to the debate on the Canadian commercial seal hunt.

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1. Introduction

The Canadian commercial seal hunt is the largest marine mammal harvest in the world (average of 270,000 animals harvested annually between 1998 and 2007, the vast majority being 1–3 months old [1]) and as such, is highly controversial. Questions about the animal welfare implications of the methods used to kill seals have been raised since the 1960s and have been the subject of a number of reviews (e.g., [2,3]). Most recently, the European Food Safety Authority (EFSA) conducted an extensive review of all the data available on the animal welfare aspects of killing seals throughout the world. Its working group, consisting of experts with a variety of backgrounds and with various levels of familiarity with seal hunts, concluded that “many seals can be, and are, killed rapidly and effectively without causing avoidable pain, distress, fear and other forms of suffering, using a variety of methods that aim to destroy sensory brain functions. However, there is a strong evidence that, in practice, effective killing does not always occur but the degree to which it does not happen has been difficult to assess, partly because of a lack of objective data and partly because of the genuine differences in interpretation of the available data” [4].

A recent article by Butterworth and Richardson [5] published in this journal, using much of the same material available to EFSA [4], concluded that “generally accepted principles of humane slaughter cannot be carried out effectively or consistently during the Canadian commercial seal hunt”. However, the authors did not discuss why they arrived at significantly different conclusions than those of the EFSA working group. This critique addresses some of the animal welfare issues raised by Butterworth and Richardson [5] that are incorrect or misleading. It does not deal with all the flaws contained in their article, such as their views on hunting conditions and climate change which are outside their realm of expertise and are thus speculative. Readers should therefore view other aspects of their article with considerable skepticism.

2. Analysis

The objective of a scientific review is to provide a comprehensive overview of the current knowledge on a topic using previously published research [6]. To fit scientific standards, it is required to follow a structured, systematic approach in which the process to select the information is explicitly described and can be reproduced. This scientific rigor is necessary for readers to appreciate the validity of the conclusions reached in the review. The Materials and Methods section in Butterworth and Richardson [5] did not provide explicit methodology to reproduce the

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investigative work, or to select and weigh the evidence used. The fact that much of the material had already been evaluated by EFSA [4] was never discussed. Instead, an undisclosed, and potentially biased, selection and weighing appear to have occurred. The type of information referenced in the review ranged from peer-reviewed articles published in recognized scientific journals to anecdotal evidence such as video footage. Out of the 104 references in the review, 28 were peer-reviewed publications, of which only five directly studied the practices during the seal hunt. In other words, at least 95% of the referenced information was not peer-reviewed scientific evidence related to the seal hunt. The review contained a total of 231 citations and, except for Daoust et al. [7] (cited 10 times), the other four accessible peer-reviewed articles on the seal hunt were only cited once or twice. Instead, the authors focused their review on only three references (refer Table 1 in Butterworth and Richardson [5]), two of which were not peer-reviewed articles. The most cited reference was a non-peer-reviewed report produced by one of the co-authors himself [8] with 21 citations (9% of the total citations within the review), that was submitted to the EFSA working group. However, the EFSA [4] report concluded after reviewing the material available (including that of Butterworth et al. [8]) that without adequate sampling that is representative of the entire hunt with respect to sample size and design, it is not possible to establish reliably the exact proportion of animals that are killed outright, with good animal welfare results.

2.1. Video sequences

Butterworth and Richardson [5] relied extensively on observations of video sequences of the commercial seal hunt reported in three previous studies [7–9] and on sequences collected subsequently by non-governmental organizations (NGOs) opposed to the hunt. This additional material was not analyzed, interpreted, or discussed anywhere in the article. To our knowledge, only two NGOs (International Fund for Animal Welfare [IFAW], Humane Society of the United States [now Humane Society International]) have regularly observed this hunt in the recent past. Neither group has provided a detailed description of their survey methods or attempts to avoid bias in the recording and interpretation of the video sequences that they assembled. Consequently, the analyses by Butterworth and Richardson [5] cannot be used to reach conclusions regarding the conduct of the hunt, a point raised by EFSA [4] when it reviewed a series of videos of the hunt submitted by NGOs, including some of the same sequences used by Butterworth and Richardson [5]. These authors also failed to identify a standard of video sequences that, in their view, constitute reliable evidence of good or poor animal welfare outcome. Without an objective and validated assessment method, even videos showing proper killing procedures can be misinterpreted by some as presenting animal welfare concerns. For example, Daoust et al. [7] examined video imagery provided by IFAW. Out of 116 interactions between harp seals and sealers, IFAW identified 39 (33.6%) violations pertaining directly to animal welfare issues while Daoust et al. [7] found 12 (10.3%). Such video material would be viewed and interpreted best by panels of experts reflecting a diversity of views, experience and backgrounds related to the killing of animals, as was done by the Independent Veterinarians' Working Group [3] and by the EFSA [4] working group.

2.2. Tools used to kill young seals

According to Butterworth and Richardson [5], “For mechanical stunning to be humane the general requirement is that insensibility be accomplished with the first application in that repeated application may result in pain, fear and distress”. All the primary references provided in the first part of this quote pertained to livestock, i.e.,

animals that are killed under controlled conditions (where, nonetheless, the outcome is not always successful). The difficulties with this type of comparison are discussed in Section 2.6. However, it is also difficult to follow the logic of this particular point when it comes to animal welfare associated with the seal hunt. Sealers routinely give more than one blow in quick succession (Daoust, personal observation) so that in the event that the first blow does not completely crush the top of the skull, the following blows will complete this task very quickly and thus ensure the death of the animal.

According to Butterworth and Richardson [5], “more than 40% of the seals observed being shot were likely not rendered immediately unconscious as evidenced by further clubbing action carried out by the sealers”. An equally valid, and more likely, interpretation is that clubbing was carried out to ensure that the top of the skull was completely crushed and thus that both cerebral hemispheres were destroyed, as required by the Marine Mammal Regulations (MMR) of the Fisheries Act of Canada [10]. Clubbing after the seal has been shot may be done as a precautionary measure or if the shot to the head did not fully destroy the top of the skull. For example, a shot may fracture the base of the brain case and cause immediate death without completely destroying the upper part of the brain case, as was observed by Daoust et al. [7] and again by Daoust and Caraguel [11]. Crushing the top of the skull ensures that the requirements of the MMR are met.

2.3. Extent of skull fractures

Butterworth and Richardson [5] stated that “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”. Nine of the 11 references provided were published between 1966 and 1981 and referred to the hunt for whitecoats, which ended in 1982 and was banned in 1987. Also, sealing practices changed substantially in 2009 with revised MMR [10]. Therefore, these observations do not provide an accurate representation of the hunt as it is currently carried out. Moreover, the Royal Commission on Seals and Sealing which reviewed the reports prior to 1986 contradicts this opinion since, citing a number of additional studies that found very low proportions of unfractured skulls, it concluded that “there is little cruelty or unnecessary suffering inflicted in most sealing operations” [2]. Interestingly, Daoust et al. [7] reported that, in the 1999 hunt, skulls of 221 (98%) of 225 seals killed with a hakapik prior to the observers' arrival on the ice floes had multiple depressed fractures with massive destruction of the brain, but neither this article nor those cited by Malouf [2] were included in the list of references cited by Butterworth and Richardson [5].

Tools used at the seal hunt may vary according to ice conditions, and this in turn may influence the types of injuries evident in carcasses. For example, according to Butterworth and Richardson [5], “Of the 76 post-mortems conducted by Burdon et al., 17% had no apparent skull fractures”. Observations by Burdon et al. [9] were carried out in the same year, and in the same general location, as some of the observations in the study by Daoust et al. [7], in which the hunt “involved the use of hakapiks and rifles in roughly equal proportions”. In the latter study, 40 seals were shot and subsequently struck with a hakapik (see Section 2.2). Three seals were shot only and died instantly; two were shot in the head, and one in the neck. Skull fractures would not have been seen in the latter animal, a factor that was not recognized by Burdon et al. [9] in their own observations. Of 245 seals shot and for which the original site of injury could be determined by Daoust and Caraguel [11], the neck was hit in 25 animals (10.2%), only six of which also had a skull fracture. A second shot was taken in only

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