



## Steel-Jawed Leghold Traps and Killing Neck Snares: Similar Injuries Command Change to Agreement on International Humane Trapping Standards

Gilbert Proulx & Dwight Rodtka

To cite this article: Gilbert Proulx & Dwight Rodtka (2017): Steel-Jawed Leghold Traps and Killing Neck Snares: Similar Injuries Command Change to Agreement on International Humane Trapping Standards, Journal of Applied Animal Welfare Science

To link to this article: <http://dx.doi.org/10.1080/10888705.2017.1286989>



Published online: 16 Feb 2017.



Submit your article to this journal [↗](#)



View related articles [↗](#)



View Crossmark data [↗](#)

# Steel-Jawed Leghold Traps and Killing Neck Snares: Similar Injuries Command Change to Agreement on International Humane Trapping Standards

Gilbert Proulx<sup>a</sup> and Dwight Rodtka<sup>b</sup>

<sup>a</sup>Alpha Wildlife Research & Management Ltd., Sherwood Park, Alberta, Canada, and University of Fort Hare, Alice, South Africa; <sup>b</sup>Retired Problem Wildlife Specialist, Alberta Agriculture, Rocky Mountain House, Alberta, Canada

## ABSTRACT

According to the Agreement on International Humane Trapping Standards (AIHTS), which was signed by the European Community, Canada, and Russia in 1997, killing devices used for the capture of canids and other fur-bearing nonhuman animals should render an animal irreversibly unconscious within 300 s. However, killing neck snares are not included in the agreement. In this commentary, a parallel is drawn between injuries caused by steel-jawed leghold traps, which have been banned by the AIHTS signatory countries, and killing neck snares to demonstrate that these snares should also be included in international humane trapping standards (i.e., AIHTS). Previous scientific investigations have shown that neither manual nor power-killing neck snares can consistently render canids unconscious rapidly. Animals caught in killing neck snares suffer injuries that are similar to or worse than those reported for leg-captured canids. The authors strongly recommend that AIHTS be modified to include killing neck snares and that such devices be subject to the criteria applied to other trapping devices. Alternative restraining trapping devices, which are effective and more humane, are available for capturing wild canids.

## KEYWORDS

Canids; killing neck snares; international trapping standards; humaneness; animal welfare

## Introduction

In 1987, the International Organization for Standardization (ISO) worked through its Technical Committee TC 191 to develop acceptable humane mammal trapping standards. One main objective was to ensure the ban of steel-jawed leghold traps that had been described as inhumane because of the severity of the injuries they inflicted on nonhuman animals that resulted in unacceptable pain and suffering (Proulx & Barrett, 1989). As there were no international humane trapping standards in 1991, the Council of the European Union adopted the “Leghold Trap” Regulation 3254/91, which prohibited the use of leghold traps in the community and the introduction into the European community of pelts and manufactured goods from countries that catch animals with leghold traps or trapping methods that do not meet international humane trapping standards.

In 1995, under pressure from the European Union (e.g., Simon & Southey, 1995), negotiations began on the Agreement on International Humane Trapping Standards (AIHTS) that would result in the banning of steel-jawed leghold traps in the territories of signatory countries. This agreement was signed by the European Community, Canada, and Russia in 1997. According to this agreement, killing devices used for the capture of animals should be certified in accordance with the standards, and for most species, including canids, they should render an animal irreversibly unconscious within 300 s (Official Journal of the European Communities, 1998).

**CONTACT** Gilbert Proulx ✉ [gproulx@alphawildlife.ca](mailto:gproulx@alphawildlife.ca) 📍 Alpha Wildlife Research & Management Ltd., 229 Lilac Terrace, Sherwood Park, AB T8H 1W3, Canada.

Color versions of one or more of the figures in the article can be found online at [www.tandfonline.com/haaw](http://www.tandfonline.com/haaw).

A footnote to Article 7 in the AIHTS stipulates that the standards do not prevent individuals from constructing and using traps, provided that such traps comply with designs approved by the relevant competent authority. For example, in the case of killing neck snares, although they are commonly manufactured and commercially sold on the open market, they are deemed by all relevant Canadian competent agencies to be noncommercial devices and therefore are not subject to the AIHTS. As a result, killing neck snares are used throughout Canada in accordance with provincial and territorial regulations to capture most of the more than 70,000 canids harvested every year (Statistics Canada, 2011). In Alberta, Canada, Environment and Sustainable Resource Development (ESRD) is the relevant competent authority and it dictates the appropriate design for neck snares: “Neck snares must be equipped with a locking device that is designed and set to prevent the snare loop from loosening again after it has tightened on the neck of the fur-bearing animal” (Craig Brown, information officer, ESRD, personal communication, April 22, 2014).

Any signatory country can make an exception for killing neck snares and only stipulate minimum structural requirements to render them legal. In all cases, however, killing neck snares are supposed to be used for killing animals and not restraining them. Killing neck snares are used in some European countries—for example, Spain (Duarte, Farfán, Fa, & Vargas, 2012) and the Czech Republic (Battye, 2010). Although the use of killing snares is not currently allowed in Russia, hunting and trapping organizations are asking the Russian government to legalize them (Dr. Nikita Ovsyanikov, independent researcher, personal communication, January 2017).

In this discussion article, we draw a parallel between injuries caused by banned steel-jawed leghold traps and permissible killing neck snares to demonstrate that these snares should be included in international humane trapping standards such as the AIHTS. We argue that by not including killing neck snares, the AIHTS fail to provide a sufficient level of welfare protection for trapped animals and encourage the perpetuation of a trade in pelts and products from animals who have endured trauma and stress, which have been deemed unacceptable by today’s standards.

### **Similarities between injuries caused by leghold traps and killing neck snares**

Steel-jawed leghold traps cause several different moderate to severe injuries to captured canids: major subcutaneous soft tissue lacerations or erosions; tooth fractures; joint dislocations, partial dislocations, and hemorrhages; severe internal organ damage; and bone fractures (e.g., Kern, McDonald, Strickland, & Williams, 1994; Kuehn, Fuller, Mech, Fritts, & Berg, 1986; Novak, 1981; Olsen, Linhart, Holmes, Dasch, & Male, 1986; Olsen, Linscombe, Wright, & Holmes, 1988; Phillips, Gruver, & Williams, 1996; Seddon, Van Heezik, & Maloney, 1999; Van Ballenberghe, 1984). Leg-captured animals are simply restrained and do not get killed by the trap jaws; the animals endure severe pain and suffering for the duration of the capture until they are dispatched by the trapper. This is also true for animals captured in killing neck snares by any part of their body other than the neck. Killing neck snares then act like restraining traps.

For the quickest death possible when using snare devices, canids must be caught behind the jaw where the carotid artery and the trachea are maximally exposed (Federal Provincial Committee for Humane Trapping [FPCHT], 1981). However, all previous scientific investigations in seminatural environments and in the wild have shown that canids are not consistently captured at an optimal neck location (FPCHT, 1981; Guthery & Beasom, 1978; Phillips, 1996; Proulx & Barrett, 1990). Furthermore, because of collateral blood circulation, it is difficult to stop blood flow to and from the brain by tightening a snare on the neck (Proulx et al., 2015). As a result, less than 50% of canids captured by the neck in killing neck snares lose consciousness within 300 s (FPCHT, 1981; Proulx & Barrett, 1990); death may come after hours or days (Phillips, 1996), depending on the killing efficacy of the snare and the frequency of visits by trappers. Snare technology and materials have not changed during the last 40 years (see Proulx et al., 2015), and severe injuries reported in the early 1980s are still recorded today in neck-snared canids who do not die quickly (Daoust & Nicholson, 2004; FPCHT, 1981; Proulx et al., 2015; Rowsell, 1981).

Because canids are not always captured by the neck, they also suffer severe injuries observed in animals captured in steel-jawed leghold traps. Abdominal captures may even lead to disembowelment (D. Rodtka, personal observation). While edema is considered a minor injury in leg-captured canids (ISO, 1999), it is major in neck-captured animals who do not die quickly and is referred to as “jelly head” (Proulx et al., 2015). Edema is so severe in these animals that it causes extreme swelling of the neck and head, including the eyes, which may freeze shut in winter. This is common on traplines where trappers only check the snares weekly. In some provinces, there are no mandated checking times for snares. Consequently, snared animals can die slowly from their injuries but also from exposure, exhaustion, dehydration, or starvation (Proulx et al., 2015). Finally, neck-captured canids will break their teeth and cut their gums while chewing on snare wires. Those who escape with a tightened snare eventually die from infection and starvation (Daoust & Nicholson, 2004; Figure 1).

To summarize the severity of the injuries commonly observed in canids captured in killing neck snares, particularly those who do not die quickly, we developed a schematic representation of injuries based on photographs that we collected from trapper blogs and outdoor magazine forums (Figure 2). Although we could not include these photographs in this article for copyright reasons, readers may access such pictures on the internet (as demonstrated by a Google search for “photos of snared wolves”).

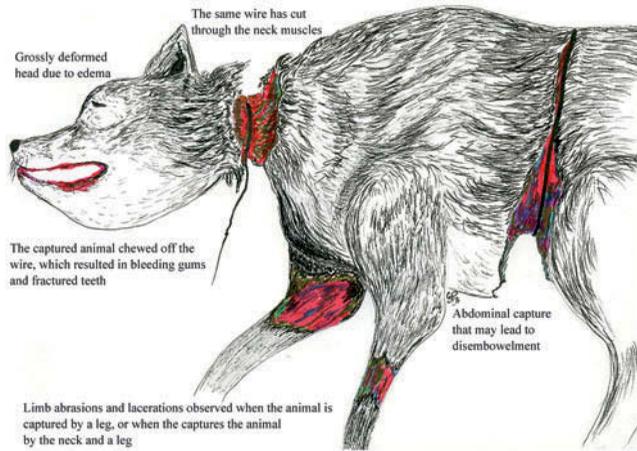
### Why are the snares an exception in the AIHTS?

Animals caught in killing neck snares suffer injuries that are similar in severity to those recorded in canids captured in banned steel-jawed leghold traps. The existence of such injuries led to public resentment of steel-jawed leghold traps, the formation of antitrapping and animal welfare organizations (Gentile, 1983; Kellert, 1976), and the 1991 “Leghold Trap” Regulation 3254/91 prohibiting the use of leghold traps in the European community. Why should killing neck snares still be an exception in the AIHTS? Canids who are kept alive in killing neck snares experience the same level of pain and suffering as those captured in banned steel-jawed leghold traps.

In spite of scientific evidence (Proulx et al., 2015), trappers claim that snares are humane, as they note that technology has come a long way and maintain that snares cut off blood supply to the brain and render animals unconscious very quickly (Ellis, 2016; Sinnema, 2014). Yet, they do not explain why wolves (*Canis lupus*), coyotes (*Canis latrans*), and red foxes (*Vulpes vulpes*) are commonly found alive in killing neck snares with broken teeth and bleeding gums, swollen heads, and skinned



**Figure 1.** Photograph of a wolf with a snare wire around the neck. Note the indent in the animal’s neck. Because of the presence of a lock, the noose will not loosen up and the wire will likely cut deeper through the skin and flesh and cause an infection and chronic pain (© Dwight Rodtka. Reproduced by permission of Dwight Rodtka. Permission to reuse must be obtained from the rightsholder).



**Figure 2.** Amalgam of the types of injuries observed in canids captured in killing neck snares who do not die immediately. The extent of the injuries will vary with the size and behavior of the snared animals, environmental conditions, and the duration of the capture before dispatching by the trapper (© Gilbert Proulx. Reproduced by permission of Gilbert Proulx. Permission to reuse must be obtained from the rightsholder).

and lacerated necks. The fact is that, unlike researchers (e.g., Proulx & Barrett, 1990), trappers do not sit and observe animals being caught in snares. Although it is difficult to determine the time to death in animals who suffered in killing neck snares, it is obvious that an animal who broke his/her teeth chewing on a cable, sustained deep lacerations during escape attempts, or suffered severe swelling in the head region did not lose consciousness within 300 s, or even 1 hr. Capture sites often show signs of struggle, including blood, urine, and defecation.

Trappers should integrate new technology into their toolkits for the capture of canids. Including killing neck snares in the AIHTS and making them illegal because of their cruelty to animals would not mean the end of trapping. There are many alternatives to killing neck snares—namely, restraining traps that meet Proulx, Cattet, and Powell's (2012) stringent humane trapping standards. These traps include padded foothold traps (Olsen et al., 1988; Phillips et al., 1996), modified footsnare (Darrow, Skirpstunas, Carlson, & Shivik, 2009; Onderka, Skinner, & Todd, 1990), and cable restraints (Garvey & Patterson, 2014; Pruss, Cool, Hudson, & Gaboury, 2002; Shivik, Martin, Pipas, Turnam, & DeLiberto, 2005). These alternative devices can all be equipped with tranquilizer tabs (Balsler, 1965; Berger & Gese 2007; Sahr & Knowlton, 2000) and electronic signaling for prompt removal of an animal from a trap (Larkin, VanDeelen, Sabick, Gosselink, & Warner, 2003; Ó Néill, De Johgh, Ozolinš, De Jong, & Rochford, 2007).

### What needs to be done?

The aim of the AIHTS is to ensure a sufficient level of welfare of trapped animals and to further improve this welfare. A general consideration is that in certain situations with killing traps, there may be a short period of time during which the level of welfare may be poor (Official Journal of the European Communities, 1998). Allowing killing snares to be used in the field does not result in a sufficient level of welfare of trapped animals, and the welfare of snared animals is not compromised for only a short period of time. By failing to include killing neck snares, the AIHTS fails to provide sufficient welfare protection for trapped animals and encourages the perpetuation of a trade in pelts and products from animals who have endured trauma and stress, which are deemed unacceptable by today's standards.

In light of scientific findings and the knowledge that canids (and nontarget animals) captured in killing neck snares suffer as much as those caught in banned steel-jawed leghold traps, we strongly

recommend that the AIHTS be modified to include manual and power-killing neck snares and that such devices be subject to the same criteria that are applied to other trapping devices used for the capture of large carnivores—namely, canids. Without the threat of a trade embargo by the European Community, it is unlikely that significant changes to the trapping regulations of the AIHTS's signatory countries and the recognition that steel-jawed leghold traps are unacceptable would have happened. Hopefully, conservation organizations, wildlife professionals, and animal welfare groups will apply pressure on governments (European Commission, n.d.; Government of Canada, 2017; Ministry of Natural Resources and Environment of the Russian Federation, n.d.) to force them to improve trapping regulations in their countries and ban the use of killing neck snares.

## Acknowledgments

We are grateful to Pauline Feldstein, Sadie Parr, and two anonymous referees for their comments on an earlier draft of the manuscript.

## References

- Balsler, D. S. (1965). Tranquilizer tabs for capturing wild carnivores. *Journal of Wildlife Management*, 29, 438–442.
- Battye, D. (2010). *Use of snare and pest control in Europe* (Research paper). Belfast, Ireland: Northern Ireland Assembly.
- Berger, K. M., & Gese, E. M. (2007). Does interference competition with wolves limit the distribution and abundance of coyotes? *Journal of Animal Ecology*, 7, 1075–1085.
- Daoust, P.-Y., & Nicholson, P. H. (2004). Severe chronic injury caused by a snare in a coyote, *Canis latrans*. *Canadian Field-Naturalist*, 118, 243–246.
- Darrow, P. A., Skirpstunas, R. T., Carlson, S. W., & Shivik, J. A. (2009). Comparison of injuries to coyote from 3 types of cable-foot-restraints. *Journal of Wildlife Management*, 73, 1441–1444.
- Duarte, J., Farfán, M. A., Fa, J. E., & Vargas, J. M. (2012). How effective and selective is traditional red fox snaring? *Galemys*, 24, 1–11.
- Ellis, C. (2016, June 2). Debate rages over wolf bounties. *Rocky Mountain Outlook*. Retrieved from <http://www.rmoutlook.com/article/Debate-rages-over-wolf-bounties-20160602>
- European Commission. (n.d.). *Commissioner (2014–2019): Karmenu Vella*. Retrieved from [http://ec.europa.eu/commission/2014-2019/vella\\_en](http://ec.europa.eu/commission/2014-2019/vella_en)
- Federal Provincial Committee for Humane Trapping. (1981). *Report of the Federal Provincial Committee for Humane Trapping*. Federal-Provincial Wildlife Conference, June, Canadian Wildlife Service, Ottawa, ON.
- Garvey, M. E., & Patterson, B. R. (2014). Evaluation of cable restraints to live-capture coyotes (*Canis latrans*) in Southern Ontario, Canada. *Canadian Wildlife Biology & Management*, 3, 22–29.
- Gentile, J. R. (1983). *The evolution and geographic aspects of the anti-trapping movement: A classic resource use conflict* (Ph.D. thesis). Oregon State University, Corvallis.
- Government of Canada. (2017, January). *The Honourable Catherine McKenna MP*. Retrieved from <https://www.canada.ca/en/government/ministers/catherine-mckenna.html>
- Guthery, F. S., & Beasom, S. L. (1978). Effectiveness and selectivity of neck snares in predator control. *Journal of Wildlife Management* 42, 457–459.
- International Organization for Standardization. (1999). TC191. *Animal (mammal) traps: Part 4. Methods for testing killing trap systems used on land or underwater* (International Standard ISO/DIS 10990-4). Geneva, Switzerland: ISO.
- Kellert, S. R. (1976). Perceptions of animals in American society. *Transactions of the North American Wildlife and Natural Resources Conference*, 41, 533–546.
- Kern, J. W., McDonald, L. L., Strickland, M. D., & Williams, E. (1994). *Field evaluation and comparison of four foothold traps for terrestrial furbearers in Wyoming* (Technical research work order). Bloomington, IL: Furbearers Unlimited.
- Kuehn, D. W., Fuller, T. K., Mech, L. D., Fritts, S. H., & Berg, W. E. (1986). Trap-related injuries to gray wolves in Minnesota. *Journal of Wildlife Management*, 50, 90–91.
- Larkin, R. P., VanDeelen, T. R., Sabick, R. M., Gosselink, T. E., & Warner, R. E. (2003). Electronic signaling for prompt removal of an animal from a trap. *Wildlife Society Bulletin*, 31, 392–398.
- Ministry of Natural Resources and Environment of the Russian Federation. (n.d.). *The statute on the Ministry of Natural Resources and Environment of the Russian Federation*. Retrieved from <http://www.mnr.gov.ru/english>

- Novak, M. (1981). The foot-snare and the leg-hold trap, a comparison. In J. A. Chapman & D. Pursley (Eds.), *Proceedings of the Worldwide Furbearer Conference* (pp. 1671–1685). Frostburg, MD: Worldwide Furbearer Conference.
- Official Journal of the European Communities. (1998). *Agreement on International Humane Trapping Standards between the European Community, Canada and the Russian Federation*. Retrieved from <http://ec.europa.eu/world/agreements/downloadFile.do?fullText=yes&treatyTransId=1428>
- Olsen, G. H., Linhart, S. B., Holmes, R. A., Dasch, G. J., & Male, C. B. (1986). Injuries to coyotes caught in padded and unpadded steel foothold traps. *Wildlife Society Bulletin*, 14, 219–223.
- Olsen, G. H., Linscombe, R. G., Wright, V. L., & Holmes, R. A. (1988). Reducing injuries to terrestrial furbearers by using padded foothold traps. *Wildlife Society Bulletin*, 16, 303–307.
- Onderka, D. K., Skinner, D. L., & Todd, A. W. (1990). Injuries to coyotes and other species caught by four models of footholding devices. *Wildlife Society Bulletin* 18, 175–182.
- Ó Néill, L., De Johgh, A., Ozoliņš, J., De Jong, T., & Rochford, J. (2007). Minimizing leg-hold trapping trauma for otters with mobile phone technology. *Journal of Wildlife Management* 71, 2776–2780.
- Phillips, R. L. (1996). Evaluation of 3 types of snares for capturing coyotes. *Wildlife Society Bulletin*, 24, 107–110.
- Phillips, R. L., Gruver, K. S., & Williams, E. S. (1996). Leg injuries to coyotes captured in three types of foothold traps. *Wildlife Society Bulletin*, 24, 260–263.
- Proulx, G., & Barrett, M. W. (1989). Animal welfare concerns and wildlife trapping: Ethics, standards and commitments. *Transactions of the Western Section of the Wildlife Society*, 25, 1–6.
- Proulx, G., & Barrett, M. W. (1990). Assessment of power snares to effectively kill red fox. *Wildlife Society Bulletin*, 18, 27–30.
- Proulx, G., Cattet, M. R. L., & Powell, R. A. (2012). Humane and efficient capture and handling methods for carnivores. In L. Boitani & R. A. Powell (Eds.), *Carnivore ecology and conservation: A handbook of techniques* (pp. 70–129). London, England: Oxford University Press.
- Proulx, G. D., Rodtka, D., Barrett, M. W., Cattet, M., Dekker, D., Moffat, E., & Powell, R. A. (2015). Humaneness and selectivity of killing neck snares used to capture canids in Canada: A review. *Canadian Wildlife Biology & Management*, 4, 55–65.
- Pruss, S. D., Cool, N. L., Hudson, R. J., & Gaboury, A. R. (2002). Evaluation of a modified neck snare to live-capture coyotes. *Wildlife Society Bulletin*, 30, 508–516.
- Rowell, H. C. (1981). *Research for development of comprehensive humane trapping systems snare study, Part I*. Ottawa, ON, Canada: University of Ottawa and Federal Provincial Committee for Humane Trapping.
- Sahr, D. P., & Knowlton, F. F. (2000). Evaluation of tranquilizer trap devices (TTDs) for foothold traps used to capture gray wolves. *Wildlife Society Bulletin*, 28, 597–605.
- Seddon, P. J., Van Heezik, Y., & Maloney, R. F. (1999). Short- and medium-term evaluation of foothold trap injuries in two species of fox in Saudi Arabia. In G. Proulx (Ed.), *Mammal trapping* (pp. 67–78). Sherwood Park, Alberta, Canada: Alpha Wildlife Publications.
- Shivik, J. A., Martin, D. J., Pipas, M. J., Turnam, J., & DeLiberto, T. J. (2005). Initial comparison, jaws, cables, and cage-traps to capture coyotes. *Wildlife Society Bulletin*, 33, 1375–1383.
- Simon, B., & Southey, C. (1995, May 10). EU targets Canada for fur exports. *The Financial Post* 5.
- Sinnema, J. (2014, March 1.). A country built on fur. *Edmonton Journal*, B1, B3–B5.
- Statistics Canada. (2011). *Fur statistics* (Catalogue No. 20-013-X). Ottawa, ON, Canada: Minister of Industry.
- Van Ballenberghe, V. (1984). Injuries to wolves sustained during live-capture. *Journal of Wildlife Management*, 48, 1425–1429.