

ANIMAL WELFARE CONCERNS AND WILDLIFE TRAPPING: ETHICS, STANDARDS AND COMMITMENTS

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Trapping is a wildlife management tool used to remove a surplus of furbearers from a population and to maintain productive animal communities (Payne 1980, Proulx 1984). Trapping can control predators or pests when they are causing economic damages or when they are impacting heavily on other wildlife (Berryman 1971). Trapping is also used to hold the spread of wildlife diseases in check (Todd 1981, Rosatte 1987). For the wildlife biologist, trapping provides basic data on the general health and the dynamics of wildlife populations. For the trappers it is a recreational activity or a traditional way of life, a source of income and/or food and clothing (Standing Committee on Aboriginal Affairs and Northern Development, 1986). However, for animal welfare/rights organizations, trapping is a source of concern.

Since 1925, organized efforts to reform trapping were aimed primarily at reducing cruelty to animals, particularly by outlawing the steel leghold trap (Gerstell 1985, Gentile 1987). In the United States, more than 450 anti-trapping bills have been introduced in various state legislatures and the Federal Congress, and between 1968 and 1982, 90 local governments banned some form of trapping for "humane" reasons (Gentile 1987). Although it may be true that the real intentions of some campaigns are to ban trapping altogether (Daubel 1978, Goodrich 1979, Dyson 1985), the suffering of animals is the rallying point around which many organizations have placed their banners (Schmidt and Bruner 1981).

During the last 60 years, the wildlife profession has witnessed an expansion of animal welfare/rights organizations. Frankie Trull, Director of the Washington DC-based National Association for Biomedical Research, estimates that there are 400 animal rights groups today with approximately 2 million members (Vaughan 1988). Jessup (1983) and Rowsell (1984) believe that some of these groups are led by animal welfare entrepreneurs who milk the emotions and pocketbooks of urban people, and oversimplify and distort the facts. The apparent growth in the anti-hunting/anti-trapping movement in recent years has been related to the process of urbanization (Leonard 1972, Shaw 1974, Applegate 1975, Herscovici 1985) and

to a poor understanding of wildlife management (Howard 1984). However, while all this may be true, the fact remains that there presently is a societal concern regarding the issue of "humaneness" in wildlife trapping which ultimately endangers wildlife management programs.

The objectives of this paper are to identify the ethical responsibility of wildlife professionals and the commitments that they must make with respect to the issue of "humaneness" in trapping.

TRAPPING - RELATED INJURIES

People involved in the issue of "humaneness" in wildlife trapping often dismiss or downplay the injuries and pain caused by trapping devices. However, the scientific records provide evidence that animals commonly are found in traps with injuries which are probably painful to any sentient organism.

Berchielli and Tullar (1980) and Novak (1981) found that approximately 37% of raccoons (*Procyon lotor*) captured in Nos. 1-1/2 and 2 coil spring leghold traps had lesions exposing flesh or tendons, cut tendons and/or broken bones.

Gilbert and Gofton (1982) trapped 11 muskrats (*Ondatra zibethicus*) in simulated natural conditions in drowning sets with No. 1-1/2 leghold traps. Although the struggle was not intense, it was directed at the trap and four muskrats had lacerations and abrasions. Another animal sustained a fractured humerus. Under similar experimental conditions, Gilbert (1981) found severe damage (broken bones, deep lacerations) in 7 of 13 beavers (*Castor canadensis*) captured in Nos. 3 and 4 double long spring leghold traps.

Olsen et al. (1986) found that 95% of coyotes (*Canis latrans*) captured in No. 3 leghold traps had ligament injuries, and joint subluxations and luxations were common. Olsen et al. (1988) also reported serious (dislocated joints or simple fractures below the carpals or tarsals) or severe (amputations and compound fractures) damage to 19 of 36 coyotes captured in No. 3 legholds. They reported similar injuries for 18 of 48 red foxes (*Vulpes vulpes*) and 23 of 38 gray foxes (*Urocyon cinereoargenteus*) captured in No. 1-1/2 leghold traps.

The Federal Provincial Committee for Humane Trapping (FPCHT 1981) reported that of five lynxes (*Felis lynx*) trapped in unspecified legholds, three had broken legs and one had broken metacarpals. Of three trapped in No. 4 jump traps, one had broken metacarpals. Similar injuries were recorded by Olsen et al. (1988) for bobcats (*Felis rufus*) captured in padded and unpadded No. 1-1/2 leghold traps.

Killing devices which do not quickly render unconscious the target animals can be distressful to the animals. Rowsell et al. (1981) reported that for one red fox and one coyote caught in a manual neck snare, death was not rapid: inflammatory exudates, which require 4-6 h to develop, were present in both animals in the area of the snares. In Alberta, wolves (*Canis lupus*) and coyotes were also found alive after they had been snared by the neck (FPCHT 1981).

It is true that any capture method, even a box trap, will eventually cause some distress. By contrast however, it is known that properly monitored cage devices seldom injure the animals and that killing devices can kill quickly. The list of selected trapping-related injuries presented here, although not exhaustive, suffices to illustrate that the concerns of animal welfare/rights groups regarding the fate of the animals are not always exaggerated or overemotional. Trappers or wildlife biologists do not set trapping devices with the intention of inflicting pain; however, it is apparent that some of the devices used in wildlife management programs cause serious injuries that we should try to eliminate.

ATTITUDES AND PROFESSIONALISM

Wildlife biologists, when confronted with the problem of "humaneness" in wildlife, commonly remain passive. Because they did not write the regulations which allow the use of some trapping devices, they accept no responsibility for their actions. Such attitudes bring no solution to the problem of "humaneness" in trapping and contrast with Schmidt and Bruner's (1981) assertion that "we are the professionals; therefore, we should be taking the initiative in dealing with the treatment of the wildlife resource".

Wildlife biologists will also adopt a conservative attitude, where the status quo is stubbornly maintained. This is not new to the wildlife profession. Scheffer (1976) concluded that "During its 40 years of life, professional management has been weakened by inbreeding; ... the consequences are narrow vision, decreased recognition of alternatives, resistance to change, and emphasis on structure at the expense of broad usefulness ...". This conservative attitude was recently denounced by Barrett et al. (1988) in a review of the

reactions of western countries to the anti-trapping concerns. They pointed out that the Americans have adopted an uncompromising defensive position in the face of the anti-trapping movement and that an active research program to find an alternative to the steel leghold trap has never been developed in the United States. They also pointed out that the view that the steel leghold trap was efficient and "humane" was apparently shared by many leading wildlife professionals. The Wildlife Society's (1985) policy directive on trapping stated that the Society "Recognize that the steel leghold trap represents an effective, practical means for capturing certain species of wildlife, ..."

We believe that the conservative approach has contributed to the public opinion that wildlife agencies' priorities are first with the consumer rather than with wildlife (Shay 1977, Schmidt and Bruner 1981). Antis have played on this suspicion regularly and have succeeded in delaying or stopping management plans and programs (Shay 1977). We believe that the conservative approach is not a solution to the issue of "humaneness" in trapping. In many regions of the United States, it failed to stop anti-trapping bills (see Gentile 1987). Where it has succeeded, it was only for a short period of time before another bill was submitted for "humane" reasons. The conservative approach is a short-term solution (when it works) to a long-term problem. Also, the issue of "humaneness" has surfaced generation after generation and now "inbred animal activists" fight against "inbred wildlife biologists". In the long run, the ultimate losers are the wildlife resource and the wildlife profession.

Another strategy that wildlife biologists can opt for is to act like professionals. Gilbert (1971) indicated that the qualifications of a professional should include: capability, tolerance and understanding, tact, flexibility, self-analysis and criticism, dignity, able to communicate, devotion to duty, honesty, and willingness to help others. The passive and conservative approaches hardly meet this characterization where the professional is an individual with an ethical outlook plus training and capabilities as demonstrated by performance (Gilbert 1971).

During the last 30 years, the wildlife biologist has strived to become a real professional. As a wildlife biologist, he/she first demonstrated expertise in the art and science of applying the principles of ecology to the normal stewardship and management of wildlife resources and their environments (Yoakum and Zagata 1982). And, through membership and certification programs of The Wildlife Society, the wildlife biologist has accepted common objectives and a code of ethics (The Wildlife Society 1986). Pertinent to the issue of "humaneness" in trapping, two of the Society's objec-

tives are "to develop and promote sound stewardship of wildlife resources..." and "to seek the highest standards in all activities of the wildlife profession". The Society also specifies in its Code of Ethics that a member must "subscribe to the highest standards of integrity and conduct"; "strive to increase knowledge and skills to advance the practice of wildlife management"; and "promote competence in the field of wildlife management by supporting high standards of education, employment and performance".

To recognize that animals can suffer and to seek alternatives to devices which cause serious non-lethal trauma to animals is to implement sound stewardship of wildlife resources and to seek the highest standards. To recognize the weakness of our programs and to find a remedy for the good of the wildlife resource and wildlife management is to act as a wildlife professional. A wildlife biologist who deliberately continues to use trapping methods which invariably and needlessly inflict pain, when effective and efficient alternatives exist, is not a professional and his/her actions endanger the future of the wildlife profession.

ALTERNATIVES, STANDARDS AND RESEARCH

Based on our experience as active researchers in the field of "humane" trapping and for the purpose of this paper, we define a "humane" trap as a live-capture device which holds an animal with minimal distress and trauma, or a killing device which renders an animal irreversibly unconscious as quickly as possible. According to Olsen et al.'s (1986, 1988) work on padded leghold traps, minimal distress in live-holding situations would correspond to small cuts and bruises, and minor joint damage. According to the research standards of Proulx and Barrett (1988a) who reported on the development of three "humane" killing systems, an acceptable killing device would be one which, at a level of significance $\alpha = 0.05$, will render irreversibly unconscious, within a pre-determined period of time (variable with species, Proulx and Barrett 1988a) > 79% of all captured animals.

Alternatives exist for wildlife professionals. Olsen et al.'s (1986, 1988) work pointed out that padded leghold traps can substantially reduce limb injuries to coyotes, bobcats, red and gray foxes, and raccoons as compared to injuries from standard steel leghold traps. Also, as trappers learn to properly use these devices, it is expected that their capture efficiency will be similar to that of standard steel legholds (Linscombe and Wright 1988, A. Todd, Alta. Fish and Wildl. Div., pers. comm.). One of the traps developed by Proulx and Barrett (1988a) is the C120 Magnum trap, a rotating-jaw trap optimized to render irreversibly unconscious

marten (*Martes americana*) within 3 min (time period provided by FPCHT 1981). The C120 Magnum passed all the laboratory and biological tests conducted in simulated natural conditions and was found more "humane" than the standard Conibear 120 (Woodstream Co., Niagara Falls, Ont.) trap (Proulx et al. 1989 a,b). Barrett et al. (1989) also found that the C120 Magnum was as efficient as traditional trapping devices commonly used to harvest marten. This trap is now recommended for manufacture and distribution (Proulx and Barrett 1988b). For the time being, the users of the standard Conibear 120 traps can independently transform them into C120 Magnum traps (see Proulx et al. 1989a).

Given the choice between a trap which either holds an animal with minimal hardship or quickly kills it, and a trapping device which causes prolonged suffering, true wildlife professionals must opt for the more "humane" trap. In reality, this is the only decision which is compatible with our code of ethics. The padded leghold traps and the C120 Magnum trap are alternatives that wildlife professionals can immediately incorporate into their wildlife management programs. This will be beneficial to trappers (struggling animals often damage their pelts) and to our public image. However, there are still many wildlife species for which no "humane" trapping device exists and it is vital for the future of trapping that we establish standards and pursue the research and development of additional "humane" traps.

The need for trap standards has long been recognized and, on the basis of the information provided by the FPCHT, performance criteria were established for killing devices (Manthorpe 1981). These criteria are guidelines that permit one to recognize traps which can kill "humanely" and they are regularly updated with the information provided by researchers and interested parties. Canada is the only country so far to have established national standards (Canadian General Standards Board 1984) for specification and performance of killing-type traps (Barrett et al. 1988). However, Canada was instrumental in creating, through the International Organization for Standardization (ISO) in Geneva, a committee to develop international standards for live-holding and killing traps. Wildlife professionals should endorse their respective country's membership of this committee and they should work towards accepting and implementing the standards which are compatible with the ethics of their profession.

From a trapper's viewpoint, catch efficiency is usually regarded as the most important trap characteristic (Warburton 1982). Also, past "humane" trapping research programs had to meet the requirements of the fur industry, e.g., the trap must have a weight and size

similar to those of the leghold trap, it must be useful for a wide range of species, it must be safe, cheap, and easy to set and to manufacture (Drahos 1952). It is ludicrous to believe that a "humane" trap will consistently have all the attributes of the steel leghold trap. Trappers play an important role in wildlife management programs and their cooperation is necessary to promote more "humane" trapping activities. However, we are the wildlife professionals and we have the ethical responsibility to determine the criteria of acceptance of trapping devices in wildlife management activities. It is our duty to elevate the importance of the "humaneness" criterion. This means that trappers may have to work with "humane" devices with a capture efficiency lower than that of traditional models, but still effective to successfully conduct wildlife management activities. Trap manufacturers may have to re-tool their equipment and trappers may have to pay more for "humane" traps. These may be the concessions that all participants will have to make to sustain trapping and to meet the societal concern regarding "humaneness" in trapping.

Scientifically sound research programs will permit us to produce reliable "humane" traps and to reach high professional standards. However, we believe that the wildlife profession must accept responsibility. Linhart (1986) pointed out that proponents of foot snares as replacements for foothold traps continued to make judgments on the basis of very limited data and lacked proof that snares reduced injury or were as effective and adaptable as the foothold trap. Previous studies which claimed that some killing devices were "humane", appear in our view to have been premature judgments based on preliminary data. Typically, these studies failed to establish or define performance criteria for evaluating traps or any statistical basis for supporting conclusions. When subject to more rigorous scientific evaluation, claims made on the basis of trial and error research are rarely substantiated.

At the International Symposium on Trapping Wild Furbearers (Nov. 1988, Edmonton, Alta.), we learned that some "researchers" assessed the "humaneness" of killing traps by visiting them every 24h, without even knowing a priori if the trap generated enough energy to kill target species, if the trap would consistently strike animals in appropriate locations, or how long an animal will stay alive in such traps. There was evidence that such procedure led to undue suffering. The usefulness of post-mortem reports was also rather limited. Unless the central nervous, respiratory or circulatory systems have been seriously traumatized, it is our experience that a pathologist cannot and should not be expected to conclude with confidence the period of time to unconsciousness or death of a trapped animal. FPCHT (1981) reported that, in an attempt to gain

more information on foxes and coyotes snared in the field, a veterinary pathologist accompanied a trapper on an Alberta trapline. Not surprisingly, in the majority of cases, the veterinarian was unable to make conclusions. Proulx et al. (1989b) reported that trauma varied greatly and was sometimes only superficial in martens struck in the head/neck region and which lost consciousness within 3 min. On the basis of pathological findings, it was not possible to predict the period of time to unconsciousness when lesions were unremarkable.

Some people believe that these studies, carried out without any background information, are necessary to show progress. We do not agree. During the last 30 years of research, none of these studies has led to the discovery/development of a "humane" trapping device. To be successful, a "humane" trapping research program must first gather some background information in enclosures on animal behavior and on the ability of a trap to quickly render unconscious an animal (or, in the case of livetraps, to hold it) at different strike locations for a given species. Only when reliable background data are in place for particular species and traps, is it possible to interpret observations carried out in the field. On a short-term basis, ill-conceived studies may give the impression that something is being done to improve "humaneness" in trapping. On a long-term basis, however, they have the potential to endanger the credibility of scientific work and to destroy the confidence that professionals and the public have invested in "humane" trap research programs. Baskett (1985) stated that in the long run, the public, as well as the scientific community, can distinguish solid information from fluff, and it is short-sighted to settle for information that won't stand scientific scrutiny. In all future research endeavors, we recommend strict adherence to acceptable scientific rigor to sustain public confidence and to ensure useful results.

COMMITMENTS

Animal welfare/rights groups have flourished and are here to stay (Vaughan 1988), and the issue of "humaneness" in trapping will probably be the subject of more campaigns. Wildlife biologists must now make commitments that will be compatible with their code of ethics, satisfy the major complaints of these groups, enlist the support of the public, and help ensure the future of sound wildlife management programs. We believe that, at the international level, wildlife professionals (and their professional organizations such as The Wildlife Society) must:

1. Adopt trapping standards which will ensure that animals will be either live-captured with minimal distress

and trauma, or killed as quickly as possible, insofar as the state of the science or the art will allow.

2. Phase-out trapping devices for which efficient and more "humane" alternatives exist.
3. Establish national research programs that will deal with the issue of wildlife trapping and furbearer management.
4. Organize national and international meetings with researchers and representatives of interested groups.
5. Encourage the publication of trap development findings in refereed scientific journals.
6. Participate in trapper education courses which must include the most "humane" trapping techniques available for all purposes (e.g., fur-harvest, predator/pest control, wildlife research and introduction programs...).
7. Regularly proclaim their humane trapping policy, and any new development and implementation, in public education programs.
8. Promote their position on the issue of "humane" trapping to wildlife agencies, government departments and legislative bodies, and lobby for their support.

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