

Traps, Humaneness and Game Management

Jonathan Reynolds considers the implications on predation control of changes in international trapping standards.

CANADIAN FUR TRAPPERS AND SHOOTING ESTATES IN THE UK MAY SEEM WORLDS APART, BUT ATTEMPTS TO RESOLVE THE 'HUMANENESS' ISSUE IN FUR-TRAPPING ARE LIKELY TO HAVE REPERCUSSIONS FOR GAMEKEEPING PRACTICE IN THE UK.

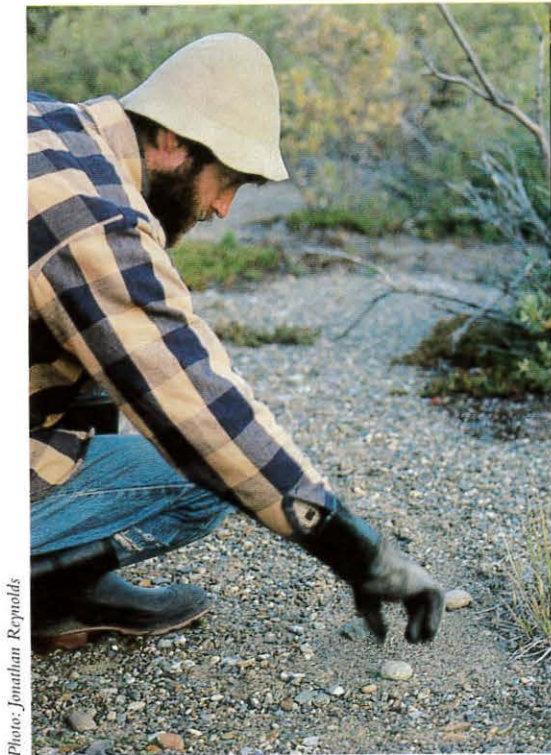
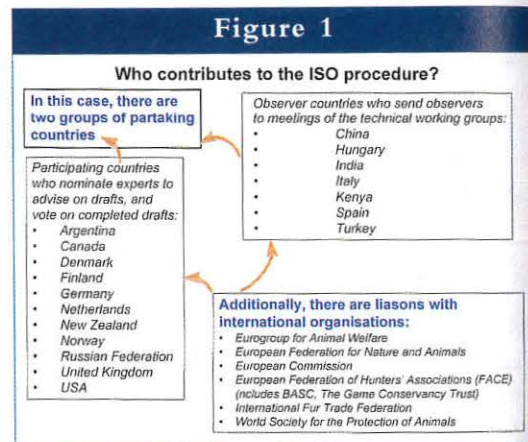


Photo: Jonathan Reynolds



Photo: Game Conservancy Limited



Is humaneness an international concept?

Around the world, everyone involved in game management, trapping, hunting and predator or pest control should be aware of an international debate formally conducted during the past ten years under the auspices of the International Standards Organisation (ISO). This debate has forced scientists, trade regulators, animal rights groups, engineers and businessmen to reflect deeply on animal traps, on humaneness, and on the inconsistencies apparent everywhere in human attitudes to wildlife management. Although the formal debate seems likely soon to fizzle out in political compromise, the issues it raises are here to stay.

The debate began in 1987, when the International Standards Organisation started work towards a 'Humane animal (mammal) traps' standard. The declared intention was to establish technical criteria by which the humaneness or cruelty of different devices might be judged. This effort came about following an initiative from Canada, soon joined by six other countries and finally swelling to include 11 participating countries and seven more observers (see Figure 1).

The purpose of all International Standards is to make dealings between countries easier. Standards

Institutes from participating countries receive the views of invited organisations (see Figure 2) and subsequently nominate independent experts to assist a Technical Committee. Technical Committees work to clarify terminology, define acceptable quality standards, specify testing procedures, ensure compatibility, and so forth. The existence of any standard – national or international – also facilitates

legislation, as statutes can simply refer to a standard, which is more readily updated to account for technological changes. In all these respects, the value of a standard is obvious for, say, bicycle lamps or computer connectors. In the case of trap hardware, too, the aim seemed sensible. Legislation governing trapping methods differs enormously between countries, and what is apparently acceptable in one country is thought abhorrent in another – evidence a resolution by the EU to prohibit fur imports from countries using leg-hold traps, which was due to come into force in January 1995. Surely international agreement on humaneness could be found without resorting to trade embargoes? However, it was quickly evident that humaneness was not a technical measure, like tensile strength or metallic composition, but an intangible concept on which there existed profoundly different views. Development of the International Standard became hopelessly mired in ethical questions and politics.

There were two factions. The pragmatists (the International Standards Organisation officials, trappers and fur-trading bodies) argued that technical characteristics of traps which led to suffering could be defined, allowing designs to be compared in terms of humaneness. Even if there was no consensus agreement on what was acceptable, at least it would become easier to choose amongst existing traps. Progress towards better traps would also be facilitated, even encouraged, by the exercise.

On the other hand, the idealists (the animal rights movement) maintained that humaneness could not be qualified: a trap was either humane or it wasn't. In their view most existing traps were intrinsically inhumane. They saw the ISO standard as a cynical ploy to sanction these devices so as to safeguard trade in furs. True, Canada had poured \$11 million into research and development of trapping systems towards greater humaneness and acceptability, but this they saw as an attempt to buy respectability by an industry under threat.

For 10 years, the formulation of a standard stumbled over technical details that necessitate not one but dozens of ethical judgements. How 'instant' is a humane death: one second, one minute, three minutes, 10 minutes? As no device can guarantee 100% performance, is a 90% kill rate acceptable? How many test animals must be sacrificed to be sure the kill rate is 90% and not 60%? (This one at least is readily answered by statisticians.) Is it better for an animal to drown or be held by one leg for eight hours and then shot? Are snares designed to kill or restrain? Is a 5% risk of a broken leg worse than a 1% risk of a crushed pelvis? Is even the stress of live capture without injury acceptable?

So difficult is it to find agreement on these issues that the word 'humane' has now been dropped from the draft standard's title, subtly transforming it to a less ambitious standard on classifying, testing and comparing traps, but not defining acceptability. At

the time of writing, draft standards for testing killing and restraining traps are proposed for balloting by participating countries. However, acceptance at the vote is no certainty and meanwhile the EU fur ban has remained a threat to trade peace, since any form of trade restriction is likely to generate retaliatory measures. Desperate to salvage trade relations, the major countries involved (Canada, USA, the Russian Federation) have tried to negotiate a 'Framework Agreement' with the EU on 'humane trapping standards', postponing the EU ban on fur imports until 1 April 1997. At the time of writing, the issue remains unresolved.

Does this affect the UK?

All of this may seem of only marginal interest for game management in the UK. After all, leg-hold traps (gin traps), the main focus of the animal rights lobby in all this, were banned in England and Wales in 1954 and in Scotland in 1976, while home-grown fur is a very minor interest. An International Standard,



Photo: Jonathan Reynolds

LEG-HOLD TRAPS (GIN TRAPS) HAVE LONG BEEN ILLEGAL IN ENGLAND, WALES AND SCOTLAND.

furthermore, is not binding even for countries that participated in its formulation. In the case of a European Agreement, formulated or adopted by the European Committee for Standardisation (CEN, the body famous for standardising bananas), member bodies such as the British Standards Institute are actually obliged to conform, and the standard would probably be incorporated into European legislation. Even so, there would remain opportunities for EU member countries to derogate for the purposes of pest control.

But this 'uninvolved' attitude of European nations has incensed the major fur-exporting countries who point out that humaneness is no less an issue in pest control. It is impossible to condemn traps used to catch fur-bearers without condemning other uses of the same or similar traps. Indeed, much of the fur that ends up on the market actually comes from animals killed because they are pests of agriculture or some other human activity. Even EU member countries like the Netherlands and Germany kill thousands of muskrats to prevent damage to dykes by tunnelling (in 1994 over 700,000 were killed in these countries alone). They then face the dilemma of either recouping costs (£12 million per year in the Netherlands for muskrats) by putting the

pelts on the market, or of wasting marketable animal products. The trapping methods used differ little from those used in North America, yet the proposed EU trade restriction will prohibit import of muskrat fur from North American countries on the grounds of cruel practices!

Inconsistency, even hypocrisy, in human attitudes is obvious. While the animal rights movement would wish to see universal welfare standards, a look at societies around the world shows that ethical standards currently vary not only between countries, but also with context: that is, the level of suffering we daily accept in dealing with wild animals is related to the desirability of doing something. Faced with domestic infestations of rats or mice, most people will accept the use of poisons, traps, ferrets, dogs and cats. Similarly, the preservation of costly engineering structures, such as dykes, or of valuable crops, can over-ride usual sensitivities.

How clean is UK practice?

Any attempt to define trap cruelty or humaneness has to distinguish between traps designed to kill (killing traps) and those designed to capture without killing (restraining traps). In killing traps, suffering will be greater if traps merely injure or fail to kill quickly, whereas restraining traps should hold without injury or killing. This fundamental classification seems straightforward when you consider Fenn traps (killing traps) or live-capture squirrel

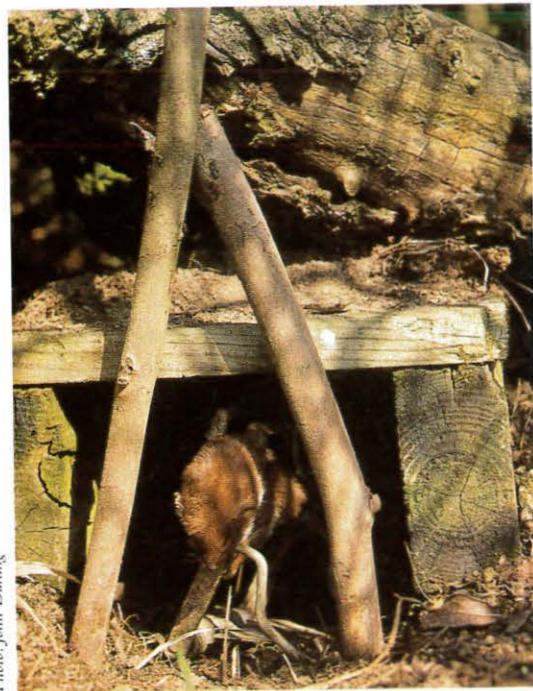


Photo: John Darling

cages (restraining traps), but there are grey areas. Are snares, for instance, designed to kill or to restrain? In North American usage, snares are intended to kill by strangulation: sites are chosen with this in mind, self-locking snares are the norm, and additional devices ('kill sticks' and 'power snares') may be used to ensure a rapid death. In the UK, self-locking snares

are prohibited and there is a statutory requirement to check snares every day. These measures were introduced to reduce the likelihood of death by strangulation, and as a result snares have been operated primarily as restraining devices. Reflecting this ethic, the British Association for Shooting and Conservation Code of Practice specifies appropriate choice of sites, twice-daily checks and provisions to minimise non-target captures. The differences in design of American and UK snares are tiny, yet there is a fundamental difference in our expectations of their performance.

In the UK, most killing traps currently approved have been well tested by MAFF, both for mechanical performance and in field use. It is probable that any future standard will specify more extensive, perhaps more stringent but certainly different, tests. From the common mouse-trap upwards, reappraisal to meet new performance requirements would be necessary. Ironically, alternatives to trapping, for example shooting, would not be exposed to the same scrutiny, so that traps would be allowed or disallowed on their individual merits alone.

How to measure pain and stress

In recent years, enormous strides have been made in the assessment of animal welfare based on detailed knowledge of the chemistry of pain, stress and injury. This understanding derives from many different branches of science: animal behaviour, biochemistry, exercise physiology and sports medicine, veterinary science and human medicine. Pain and stress are no longer vague conditions that are difficult to describe to your doctor, but clear processes that can be quantified from chemical changes in blood or tissue samples (see box right). Similarly, structural damage to muscles, tendons or other tissues results in very definite changes in blood chemistry. For each animal species, a large amount of background work is necessary to establish normal levels of chemicals, but changes in blood and tissue chemistry have already been used to compare different culling methods for rabbits, foxes, lynx, coyotes, possums and deer. An important point is that the chemical processes involved are common to all mammals so that comparison with human experience is possible. This specialist branch of science may become central to animal welfare issues, but it is still an emergent discipline with plenty of scope for misinterpretation. It is essential that decision-makers are well-informed, well-advised and that they factor in the overall benefits of, say, culling programmes.

Trap performance

The 'capture rate' measured in enclosure trials (ie, how often triggering the trap results in capture) is very different from the important field statistic: what proportion of the animals present are captured. A trap with unimpeachable mechanical performance

Can Suffering Show in the Blood?

The mammalian body responds to stressful events with a cascade of hormone production aimed to govern body functions during the emergency. Build-up of one hormone often acts as the trigger for production of the next, so the result is that different hormones appear sequentially in the blood stream, each building up over a characteristic time-scale. So the concentrations of different hormones in a blood sample reveal the duration and intensity of the stress.

In addition, increased activity of the heart and other muscles results in the abnormal release of by-products into the blood stream. In the case of extreme exercise or injury, chemicals appear in the blood which are actually the result of tissue breakdown.

Finally, special opium-like chemicals are produced by the body to numb the brain in the face of extreme pain, allowing it to continue activity. High levels of such chemicals confirm the stress an animal is enduring, but are ambiguous indicators of pain.

may in practice prove to capture only a young and naïve fraction of a wild target population, and to be successful only at particular times of year. In predation control there is a crucial distinction between an efficient trap, which catches a lot of animals, and an effective one that really helps to reduce predation levels.

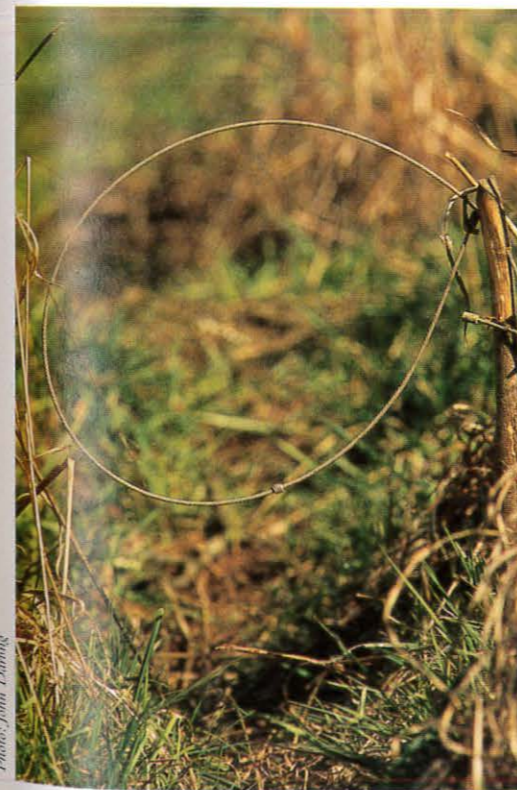


Photo: John Darling

Operator education

It is not possible to define 'humaneness' for a trap on technical grounds alone. Its technical performance in ideal conditions in trial enclosures, even with

sacrificial test animals, may be very different from its performance in the field. The operator may enhance its performance through his skill, or lower it through careless use. Trapper education is something most countries recognise as a crucial factor. Should UK operators be better educated? Indeed, should they be required to demonstrate competence by passing some kind of exam? Within Europe, the UK stands out as exceptional in not having an official hunter or trapper qualification. Government antipathy to such a scheme has always been the cost of licensing thousands of farmers and 2,500 full-time gamekeepers, not to mention many part-timers. To some extent, for gamekeepers at least, operator education is being addressed through NVQs and other recognised qualifications.

Humane despatch

An aspect of trapping that has seen little public discussion before the ISO debate has been the humane despatch of captured animals. After all, even if a trap is a clean-operating live-capture trap, the captive must ultimately be killed. And if this applies to traps, it must equally apply to wild animals killed for food or sport. For small animals a blow to the head may be all that is necessary, but for anything larger than a mink, clean killing involves possession of specialist tools. In the UK, 'Humane killers' as used by slaughterers, stalkers or huntsmen all require a Firearms Certificate. 'Captive bolt' guns can only be used where they can be placed tight up against the animal's skull; in all other circumstances, 'humane killer' means a .22 pistol firing a free bullet, though a fox in a snare can be dispatched with a shotgun. Given the recent public concern and legislation to prohibit the possession of handguns, there is a potential problem here.

Who pays?

The adoption of a trap standard might be implemented in various ways, but all would require knowledge of the performance of existing traps, and of all subsequent innovations. Who would pay for this? All research is expensive, though technical research on trap hardware is cheap compared with research on use of the same traps in field conditions (see box overleaf). There are four possible sources of funding: European government, national government (ie, MAFF), trap manufacturers, and private bodies (eg, The Game Conservancy Trust). Arguably trap manufacturers have a commercial interest in trap approval, but most European manufacturers are small, and rigorous testing requirements might actually deter trap development rather than stimulate it. Since many different interest groups are potentially affected, by trap standardisation, it is perhaps a government concern. But it is also a pan-European problem, and perhaps, after all, we should look to the EU to co-ordinate and fund the necessary research.

BY INTENTION, FENN TRAPS ARE KILLING TRAPS.

SNARES ARE A VALUABLE TOOL WHEN CROPS ARE HIGH AND SPOT LAMPING IS IMPOSSIBLE. THE OPERATOR'S SKILL MAY DETERMINE NOT ONLY EFFICIENCY BUT ALSO TARGET-SPECIFICITY.

The Cost of Trap Research

One important aspect of trap assessment is capture efficiency in field use: a trap which captures humanely is little use if its capture efficiency is low.

It can be very expensive to establish capture rate in field conditions. Imagine two trap designs A and B, where A is 30% better at catching than B. Suppose too that capture rate for A is one target animal per thousand trap nights (probably not unusual in predator control), and that one operator can run 30 traps continuously. It will actually take 12 months and 100 operators to establish reliably what the difference is. Even assuming the trap operators are volunteers rather than paid staff, the additional cost in materials, administration and analysis (about 6 months work for 1 scientist) is high, about £10,000 in all. Yet all this is only one aspect of trap performance...

The role of The Game Conservancy Trust and its members

What role should The Game Conservancy Trust play in the humaneness debate? Above all, we must ensure that decisions by legislators and regulators are based on adequate information. We must see that appropriate, scientifically credible research is done, and then make sure the results get through to the right people. Humaneness is a desirable goal in wildlife management, but progress on this front is not a simple choice between different methods or different designs of equipment.

Our development of the Larsen trap illustrates the way we think. Back in 1988, the management of predation by crows and magpies was a subject of real concern because it involved the use of poisons. The Game Conservancy Trust's research had shown that corvid birds were among a suite of predator species which could severely limit wild gamebird production. Gamekeepers felt they had no effective legal means to cull these birds and the populations of both species were increasing rapidly. The result was a strong temptation to break the law. Known instances of

illegal poisoning – an embarrassment to the game conservation world – were thought partially to reflect this frustration. Our solution was to research, refine and publicise the use of Larsen traps. We demonstrated that, with the use of a call-bird, Larsen traps were an extremely effective and species-specific means of catching corvids. With this evidence, we persuaded other national bodies that the use of these traps in game conservation would be a progressive step, and with their support convinced the DoE to issue an Open General Licence for Larsen traps. Today, the Larsen trap has been so effectively absorbed into game management practice that most users do not realise that they operate under an annually renewed Open General Licence. Larsen traps represent real progress, helping to reduce infringements of wildlife law and to increase game and wildlife numbers.

In our research on predator control generally, we consider the need for predation control, and whether that need actually changes as the numbers of predators and their prey respond to changes in the countryside. We consider the aims of control, its effectiveness at achieving those aims, the impact on predator and non-target populations, and whether those populations are increasing or decreasing. Increasingly we begin to consider 'What if...' questions: what would happen to predator populations if control methods were restricted? What would happen to wild game populations if predator populations increased?

Many of these questions are as important in farming and conservation as in game management. The Game Conservancy Trust has a leading position and responsibility in this field of research because of one crucial factor: a large membership involved in game management on a substantial proportion of Britain's land area. The continuous interest, hospitality and input from landowners and gamekeepers makes it possible for us to show predator/pest control methods in their proper context. Without that broader understanding, it is unlikely that politicians would make wise decisions on regulation. ♦


 LARSEN TRAPS
ILLUSTRATE HOW
RESEARCH LEADS TO
PROGRESS IN PREDATION
CONTROL METHODS.

Photo: John Darling

