

A Veterinary Opinion on Hunting with Hounds

“Hunting by hounds is the natural and most humane method of controlling the population of all four quarry species, fox, deer, hare and mink, in the countryside”

– Supported by some 400 members of the Royal College of Veterinary Surgeons



Dr. L.H. Thomas

MA, VetMB, PhD, FRCPath, MRCVS

Professor W.R. Allen

CBE, BVSc, PhD, ScD, DESM, FRCVS

Dr. L.H. Thomas retired in March 2000
after 32 years in large animal disease research
as a veterinary pathologist.

He became secretary of the newly formed
Veterinary Association for Wildlife Management (VAWM) in 2004

Professor W.R. Allen was formerly Professor
of Equine Reproduction at Cambridge University
and Director of the Thoroughbred Breeders' Association
for Equine Fertility Unit at Newmarket.

He is still actively engaged in research into equine
and camelid reproduction.

First Published in July 2002 © Dr L H Thomas 2002

Second edition published in September 2017 © Dr L H Thomas 2017

Pictures kindly supplied by Edmund Vesty, John Bullock,
Jim Barrington and Michael Sagar of Hounds magazine
taken by: N. Broom, R. Bird, J. Townsend, T. Crate, L. Pound,
L.R. Cheeseley, D. Osborn, R. Carter, and A. McDiarmid.

Additional pictures by author (LHT)

Printed by Amber Business Services 01635 865 029

Contents

Foreword	2
Introduction	3
Rationale and Observations	4
Hunting	
-Autumn Hunting	5
- Winter Hunting	5
-The kill and cause of death	7
- Terrier culling or digging out	8
Other Methods of Culling	
- Shooting	9
- Trapping	10
- Snaring	11
- Leg hold trapping	11
- Killing traps	11
- Poisoning or gassing	11
Welfare of Hounds and Horses	12
Impact on Other Stock and Wildlife	12
Discussion	
- Stress and physiology	14
- Stress in final phase	14
- Scientific studies	15
- Wild versus domestic animals	16
- Hunting compared with shooting	17
- Health and vigour of the species	19
Footnote	21
Conclusion	21
References	22
Appendix	24



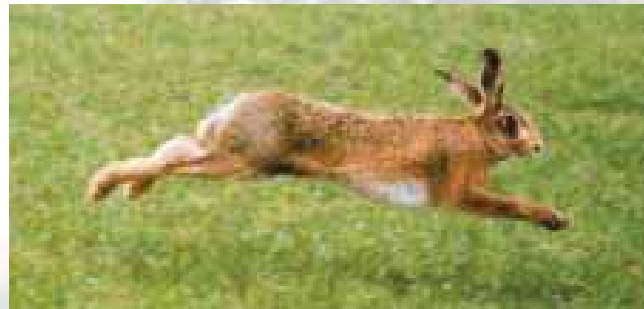
Foreword

Since publishing *A Veterinary Opinion on Hunting with Hounds* in 2002, the Hunting Act (2004) banning the use of dogs, with certain exemptions, to hunt the quarry species has been passed. The following description of the various forms of hunting should therefore be read with this in mind. Trail hunting remains *pro temp* the only form of hunting practised legally in England and Wales. Nevertheless the account resubmitted below of the various physiological and pathological aspects of hunting remains as true as when it was published in 2002.

Furthermore since publication of the first edition, a comprehensive review *The Natural Chase* (2007) has been compiled and written by Katie Colville MRCVS and endorsed by the late Professor Lord Soulsby. And the paper *Life in the wild* (Barrington and others 2012), enlarges on the differences between wild and domestic animals discussed below.

Introduction

The following submission on the humane aspects of fox hunting, which also touches on hunting of the three other quarry species, deer, hares and mink, is an updated version of that originally submitted in February 2000 to the Committee of Inquiry chaired by Lord Burns and is supported by some 400 members of the Royal College of Veterinary Surgeons. Following the report of the Inquiry in June 2000 it has been expanded particularly in the sections on: i) *the kill and cause of death*, ii) *other methods of culling* and in the discussion on iii) *wild compared with domestic animals*, iv) *wounding and pain* and v) *the physiological responses of hunted red deer*.



The submission is based largely on careful observation and informed opinion since, except for the two studies on the physiology of hunted Red deer (*Bateson 1997, Harris and others 1999*), and the review submitted to the Inquiry by Bateson and Harris (*2000*), there is little scientific evidence on the subject of hunting, especially fox hunting. Nevertheless this opinion comes from widespread clinical experience both in general veterinary practice and in research, involving a range of wild and domestic animals under normal and adverse conditions and comes in many cases from first hand experience in the hunting field.



Rationale and Observations

The submission starts with the premise that there is an accepted need to control the rural fox population, which will involve culling. First, the fox is virtually without natural predators in Britain, other than man. **The natural death of such a wild animal will therefore occur by starvation, disease or injury, none of which can be described as humane.** Second, if fox numbers are not controlled there will be progressive and increasing predation on vulnerable farm animals and wildlife. Third, overpopulation has a detrimental effect on the health and vigour of any animal species, particularly in respect of disease. This may already be seen with the steeply rising numbers of urban foxes, many of which now suffer from endemic mange. Epidemics of mange are also seen in rural foxes. Man has an obligation to address this situation in the most humane and environmentally friendly way. *Laissez faire* will not do!

Natural biological control of fox numbers and the other quarry species will not occur until lack of nutrition, due to overpopulation, and probably disease are so extreme as to suppress reproductive activity. This clearly does not represent a healthy and vigorous wild life species. Furthermore the population level of foxes at which this so-called control might occur, would see levels of predation totally unacceptable to farmers and the overall balance of other wildlife.

Fox hunting may be conveniently considered under three headings:

1. Autumn hunting, sometimes known as cub hunting
2. Full season or winter hunting
3. Terrier culling or digging out
- and considered in three phases, the pursuit phase, the final phase and the kill.

Hunting

Autumn hunting

The purpose of autumn hunting is, in part, to cull the number of young foxes born during the close season to numbers that a particular part of the countryside can reasonably sustain and in part to break up groups of young foxes and spread them more evenly across the countryside for the same reason. Autumn hunting will also cull weak and diseased foxes that may have become less than vigorous during the close season, some of which may have been injured by the less attractive methods of culling listed below. Approximately 50% of foxes killed by a hunt during the calendar year will be during the period of autumn hunting.

With autumn hunting, which is carried out in the early morning to avoid the relative heat of the day, the hunt rarely lasts more than 10 minutes and often is shorter. For the fox the first, longer pursuit phase of the hunt, is a period of heightened activity in which all the **natural** responses of fright and flight are brought into operation. The animals cannot therefore be considered to be under any unnatural stress at this time. The kill, if it is achieved is brought about often by the fox making a tactical mistake allowing the hounds to overtake. **Fatigue and physiological stress clearly play a part in the relatively short final phase but the fox is not, as commonly believed, hunted to the point of exhaustion.** The kill occurs almost instantaneously (see below)



Winter hunting

Winter hunting, a day-long activity, contributes to the control of the fox population throughout the season, which is usually from the end of October until the end of March. In sheep rearing areas hounds may be “on call” to catch sheep worriers during the whole of the lambing season. The hunt is usually longer than with autumn hunting, largely because the fox has by now become a more mature, vigorous animal that has come to know its territory better and better as the season progresses. The average time for the hunt



is around 20 minutes but clearly this will vary depending on: the nature of the terrain, the scent on the day, the vigour and cunning of the quarry and the skill and training of the hounds and huntsmen. Longer hunts may occur but they often involve a sequence of different foxes. The majority of foxes (up to 85%) will evade capture by the hounds. Some of these will go to ground and, if requested by the farmer or landowner, they will be dug out and shot by the licensed hunt terrier men (see below).

As with autumn hunting, the first and major part of any hunt, the pursuit phase, is a period of heightened activity for the fox with all its **natural** fright and flight responses brought into operation. Again, it cannot be considered to be a period of unnatural stress to the fox. An indication of the degree of control that the fox exerts on the situation, during this first phase is evidenced by the wide variety of evasion tactics it will employ to avoid capture, many of which are carried out at a leisurely pace after the initial flight. Hunted foxes may also perform a variety of natural functions such as urination and defaecation during the pursuit phase of a hunt, some have even been observed to kill the occasional chicken. Again, as with autumn hunting, **the short final phase of the hunt, usually less than 2 minutes, will involve stress but this, in physiological terms, will be no more than that experienced by the extended athlete or racehorse.** The animal is not hunted to the point of exhaustion rather to the point when still running hard it is overhauled by the fitter and more durable hounds and again often because the fox makes a tactical mistake. The kill occurs as a swift, almost instantaneous, procedure made possible by the considerable power weight advantage the hound has over the fox. The powerful exercise-induced analgesic actions of centrally released endorphins and encephalins, generated during the hunt, will mitigate or eliminate any pain.



The kill and cause of death

Neither wild nor domestic animals appear to have any premonition of death. Thus cattle and sheep are distressed by the clamour and confines of the slaughterhouse but this behaviour is not premonition of death since it occurs to a similar degree in the market place. Furthermore when a gun or captive-bolt pistol is applied to their heads in the slaughterhouse, animals make no obvious attempt at evasion. Even the spillage of blood in the slaughterhouse does not appear to disturb other animals awaiting slaughter. Further evidence that animals fail to recognise death is demonstrated by their complete indifference to cadavers. Thus the recently dead carcass of a herd or flock member has no more apparent significance to the remaining members of the group than a bale of straw. And similarly up to and at the point of capture the fox also shows no outward evidence to suggest it perceives death.

Post mortem evidence submitted to the Inquiry included 2 cases commissioned by the Inquiry and a further 13 submitted by two veterinary practitioners, one from mid Wales (Jones 2000) and the other from Buckinghamshire (Baskerville 2000). Cause of death in 10 of the 15 cases was diagnosed as cervical dislocation and fracture while the remaining 5 foxes died from massive trauma to the thorax and abdomen. In either event **one may conclude, as did the Committee of Inquiry, that death was almost instantaneous.** It should be noted that much of the hound-induced damage to the carcass including disembowelment will have occurred after death. Three inadequately documented cases submitted to the Inquiry by the League against Cruel Sports, in which saboteurs were assumed to have prevented hounds from making a quick kill, have been excluded from this assessment as being atypical. Three other autopsies carried out some years ago and reported more recently by Cunningham (1999) ascribe the cause of death to cervical dislocation.

Terrier culling or digging out

Terrier culling follows when a fox goes to ground following a chase by hounds. The hounds are immediately called off and a terrier, fitted with a radio transmitting collar, is put into the tunnel to hold the fox at bay. Signals from the collar then enable the handler to dig down to that position, extract the terrier and shoot the fox *in situ*.

While the fox is underground, where it was born and raised, there is no reason to presume it suffers any more distress than that of the heightened activity of the hunt. Indeed having gained the sanctuary of the earth, the heightened activity may even subside. And while the entry of the terrier may act to maintain the state of heightened activity **the confrontation between the two equally sized animals is not one of aggression but rather a stand off, holding situation**. Even when the fox is located by digging and the terrier extracted, the fox does not show signs of severe distress or fear as might be evidenced by involuntary urination or defaecation. Rather it appears remarkably calm and secure in its partially exposed hole where it is immediately killed humanely by a close range shot to the head.



Other methods of culling

Shooting

The government's preferred method for fox control is also widely used for culling deer and hare. However, shooting is intrinsically fallible and inevitably produces a percentage of animals that are wounded. Shooting can only be as certain and quick as death by hounds when a close or point blank shot is applied directly to the cranium, as happens in the slaughterhouse or when the hunted deer is brought to bay. Clearly, this is not possible for foxes, stalked deer or hares. Even the most experienced marksmen, whether “lamping” for foxes at night, or stalking deer by day do not aim at the head; it is too small a target. Instead, they aim for the chest or sometimes, in the case of deer, for a “stopping shot” to the neck, which drops the animal and allows a second, close range shot to dispatch the animal. The semi-lethal neck shot is also less damaging to the carcass and allows exsanguination.



Data on wounding rates for the quarry species are limited and estimates vary:

Foxes: Morgan (2000), in his submission to the Inquiry, from records over the last few years, estimated that, for a Welsh gun pack using hounds to drive foxes towards waiting shotguns, around 15-20% of foxes were wounded and not killed outright. E.Marriage (personal communication), using data from a variety of sources, has estimated of the 135,000 foxes shot annually in the UK as many as 40% are wounded. And experimental research by Fox and others (2005) has shown that up to 60% of foxes maybe wounded by shotgun shooting and up to 48% by rifle shooting. What percentage of foxes that are shot, escape wounded and are not dispatched, is uncertain. In the case of a gun pack the majority will be caught since hounds are available to follow up and kill wounded foxes. But in the case of lamping, which happens at night and does not involve hounds, none will be followed up.



Deer: Although it is likely that not more than 5% of shot deer escape wounded, a much larger percentage are not killed outright by the first shot and run some distance before succumbing. Often

hounds are needed to track these wounded animals and a second shot is needed to dispatch the animal many minutes, even hours, after the first shot. Bateson and Bradshaw (1999) estimated the wounding rate for Red deer escaping wounded and not retrieved to be as low as 2% but this figure met with some incredulity by deer stalkers in subsequent correspondence in the same journal. Although recent data from Scandinavia gave a similar figure of 2.8% for moose shot at and not retrieved (Ericsson and von Essen 2000).

Bateson and Bradshaw (1999) estimated the percentage of deer not killed outright by the first shot as 14.6%. The Scandinavian study gave a similar figure for moose of 13.2%. But [the Joint Universities Study recorded as many as six of 12 deer \(50%\), shot by one of three experienced stalkers, that were not killed outright](#) (Harris et al 1999). An experienced deer stalker, Major K.C.G. Morrison in a paper to the British Deer Society (1979) stated: *"It should not be supposed by any one who has no experience of stalking that any animal fairly struck by a bullet drops dead on the spot. It would be gratifying if this were the case but many factors combine to make this the exception rather than the rule"*



Hares: Wise (2000), from considerable personal experience of shooting, estimated that some 25-30% of hares are seriously wounded by shotguns and are thereby easily retrieved. However as many as 10% escape wounded and are not retrievable, even by well trained dogs. These will frequently have been hit by pellets across the back and hindquarters and many will have sustained a broken hind leg.



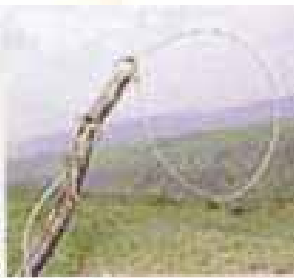
Mink: Shooting is not a practical method of culling mink.

Trapping

Cage trapping - On the face of it, cage trapping may appear a humane and non-violent method of catching and culling small to medium sized mammals. But, in considering the humane aspects of wildlife management, it is important to have in mind that wild animals are at their most distressed when trapped or harassed in an environment that is strange and alien to them. Thus, whereas a domestic animal might accept the confinement of a cage, for a

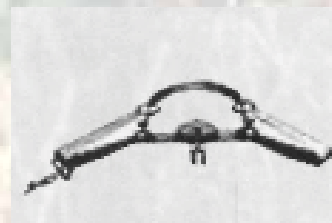


wild animal it can be a cause of acute distress even physiological shock, particularly when approached by man (Wise 1999). **Cage trapping therefore represents protracted and distressing incarceration for a wild animal with serious risk of self-mutilation in trying to escape.** Partly because of the expense of the equipment and partly due to the extreme wariness of the rural fox for man-made contraptions, cage trapping is not a practical method of catching foxes or hares but it is used for mink. And although the law requires that cage traps are inspected every 24 hours, this is clearly open to error and abuse, with consequent suffering of the trapped animal, particularly if the frequency of success may be as low as 1 catch per 100 days.



Snaring Free-running snares are the preferred and only legal type of snare for catching foxes. They can be relatively harmless but require careful siting and frequent inspection to ensure that captured foxes are unharmed (Reynolds 2000). There is also the very real danger of snaring other similar sized mammals including lambs, dogs, badgers or hares, which do not tolerate the snare as well as the fox (MacDonald et al 2000).

Leg-hold trapping This method of trapping, now illegal in UK, causes protracted and distressing restraint, as with cage trapping, but in addition, painful and progressive injury to the captured limb with risk of haemorrhage in heart and lungs, congestion of adrenal glands and kidneys and other biochemical disturbances (Kreeger 2000). Many leg-trapped animals escape after serious mutilation.



Killing traps - applicable only to mink. They carry a risk of killing non-target species.

Poisoning or gassing—presently illegal and may cause slow protracted death.



Since hunting with hounds has been banned, these less humane alternatives, particularly shooting, have been increasingly used by shepherds, farmers and gamekeepers countrywide to protect their stock from predation by foxes and their crops from damage by hare and deer.

Welfare of hounds and horses

There can be little doubt that the physical exercise undertaken by hounds and horses during a hunt is the proper realisation of all the physical attributes possessed by both species. However such exercise is not without risk of injury or even sudden death through cardiac arrest. But the risk is no greater than greyhound racing for hounds or cross-country eventing for horses. And huntsmen, kennelmen and horse owners can be relied upon to provide prompt and appropriate care when necessary. For the majority of hunting days the injuries are slight or non-existent. And back at the kennels or stables one may expect the standards of welfare to be first-class since poorly cared for animals will not be able to hunt properly. Indeed for hounds it can be argued that their husbandry and welfare far exceeds that of many overfed and under exercised domestic pet dogs.



Impact on other stock and wild life in the countryside

For the most part the impact of hunting with hounds on stock at pasture is negligible. Hunts will usually avoid passing through a field containing grazing stock, or even hunting in districts where stock are currently at pasture but in the event the grazing animals do little more than move to the other side of the field. The disturbance is relatively natural to them and is certainly far less disturbing than, for example, over flying balloons or motor-cross riders. Huntsmen exercise remarkable control over their hounds and are entirely capable of stopping or diverting the whole pack during a hunt. It is also remarkable how fox hounds will ignore other forms

of wildlife such as deer, pheasants or hares, when drawing covers. Although regrettable accidents do occasionally occur **the charge that hounds are largely out of control when hunting is completely without foundation.**

As indicated above, hunting produces only short-term, insignificant disturbance to wildlife. Gamekeepers, who are jealous guardians of their pheasant stocks, generally raise no objection to the hunt drawing through their woodland since they know the birds will return within a few hours. Deer, for example, have been



observed to run alongside the mounted followers of a fox hunt! But perhaps more remarkable hunting with hounds causes only limited disturbance to members of the same quarry species. Even the individual being hunted, after initial discovery by hounds and having bolted from the immediate vicinity to put distance of a field or two between it and the hounds, will then quickly return to normal undisturbed behaviour until the hounds come near enough again to be a renewed threat. Other wildlife similarly, will soon return to the scene of the initial disturbance.

Hunting is natural to wildlife. In contrast shooting will indiscriminately disturb all species of wildlife and can have the long term effect of producing a progressively shy and timid population. A report from the Devon & Somerset and Quantocks Stag hounds, following the two and a half year ban on deer hunting on the National Trust's Holnicote estate, noted just this effect on the local deer population (Anon. 1999). And in New Zealand, stalking was successfully employed as a noxious stimulus to deter Red deer from colonising valuable forests, the consequence of which was reduced body size, poor reproduction, lack of exploration and general spookiness (Batcheler 1968). The Deer Warden for the National Trust's Holnicote Estate on Exmoor, Charles Harding, in his submission to the Inquiry, also comments on the detrimental effect that the ban on deer hunting has had on the Red deer of Exmoor.

Discussion

Stress and Physiology

In considering the humane aspects of hunting with hounds it is important, as stated above, to have in mind that both wild and domestic animals are at their most stressed when harassed in an environment that is strange to them. Furthermore they do not appear to have any premonition of death.

So it is with the fox – incarceration in a cage trap overnight, or transport and relocation, particularly when wounded, causes severe distress (Edwards 1999). But when hunted by hounds in its own territory and in an environment that it knows, the fox is in control. Even at the point of capture, when the physiological stress may have become severe, the level of stress is not overwhelming and is almost certainly reversible. **There is no scientific evidence** (discussed in more detail below) **that foxes or any of the quarry species suffer irreversible physiological or pathological damage as a result of being chased, any more than does the extended human athlete or racehorse.** Nor are there frequent reports of unexplained deaths in healthy foxes shortly after hunting that can be ascribed to physical exhaustion. Furthermore irreversible myopathy in hunted foxes, which was alleged in an article in the *Sunday Times*, was refuted entirely by the research worker, Dr.T.J.Kreeger, who was misquoted, both in an unpublished reply to the *Sunday Times*, (appendix 1) and in his submission to the Inquiry (Kreeger 2000).



Stress in the final phase

It must be accepted that with any hunted animal a variable period of physiological stress will occur in the short final phase of the hunt when it could be argued that the animal may be suffering. Lord Soulsby of Swaffham Prior, in his speech to the House of Lords during the second reading of the Hunting Bill, on 12 March 2001, said on behalf of the Committee of Inquiry, “A compromise of animal welfare was found only in the terminal stages of the hunt”. Webster (1994) defines that period as when the intensity or complexity of stresses exceeds or exhausts the capacity of the animal to cope, or when it is prevented from taking constructive action. This final phase will be, relative to the duration of the hunt, brief and usually less than 2 minutes for a fox hunt.

Scientific Studies

Scientific studies have only been undertaken on hunted deer (Bateson 1997, Bateson and Bradshaw 1997, Harris and others 1999). And the findings for some twelve physiological and pathological parameters based on blood and tissue samples taken at the time of death were remarkably similar. For example glycogen levels in muscle were depleted and levels of non-esterified fatty acids in serum, the hormone cortisol and body temperature were all raised. Mild, and in a few cases moderate, muscle damage and some destruction of blood cells (haemolysis) were also observed, although most of the haemolysis was subsequently accepted as artefact due to poor sampling technique (Bateson and Harris 2000). From comparison with human athletes and studies in other athletic animals, Harris and others (1999), Wise (1999) and Bateson and Harris (2000) concluded that **all of the changes observed are the normal physiological expression of arousal and exercise. All are reversible and none are of clinical significance to the hunted deer.** It is probable that similar reversible responses would be found in hunted foxes, hares and mink. The opinion expressed therefore in the review (Bateson and Harris 2000) that “*Taken together with the physiological effects of hunting, it is clear that hunting with hounds would not be tolerated in other areas of animal husbandry*” would appear to go substantially beyond that justified by the findings from the two experimental studies and also indicate an imperfect knowledge of animal husbandry, particularly of markets, transportation and slaughter houses.

Wise (1999) has discussed the difficulty of interpreting these physiological parameters as measurements of stress or suffering in hunted deer and he pointed out that it is only when these otherwise normal responses occur in conditions of constraint or captivity that severe suffering occurs. That is when the animal is prevented from taking constructive action, as defined by Webster (1994). Paterson (1996) reported that the effects of evoking a fright and flight response in the absence of exercise produced, in man, a high risk of cardiac arrest. And Wise (1999) interpreted this observation for animals by observing that trapping, physical restraint and transport of wild animals in constrained conditions puts them at risk of succumbing to shock, while pursuit *per se* does not do so.

Apart from the impossibility of obtaining meaningful sequential data in wild animals, we believe that it is futile to attempt to correlate physiological parameters with stress and suffering. Welfare is not an objective science. It is common sense based on clinical observation, combined with humanity, which the veterinary profession has been practising for centuries past.

Wild versus Domestic animals

Opponents of hunting and, to some extent the Committee of Inquiry, have also failed to appreciate the fundamental difference between wild and domestic animals and the part played by hunting in the ecology of a wild animal. Instead they have tended to regard the wild animal in the same light as a domestic animal thrown into an alien environment and hunted. One notable veterinary opponent of hunting even raised the somewhat ludicrous question “would you hunt your own dog?” (Morton 2000), which drew some criticism for its lack of reality (Hughes-



Ross 2000, Scruton 2000). Wild animals are used to hunting or being hunted. What might be a shocking experience for a domestic animal or man is part of the pattern of daily life for the wild animal. In addition to the clear behavioural differences between domestic and wild animals, there is also evidence of fundamental biological differences between the two. Thus there is in domestic animals, relative to their wild cousins, reduced adrenal gland size plus other endocrine changes, altered brain size

and sense organ structure (Hemmer 1990, Belyaev and Trut 1975). In short, a dog is not a fox! The dog has undergone selection by humans over thousands of years to fit it for domestic life, in the absence of predators; the fox has undergone natural selection for infinitely longer to fit it for life in the wild, in the presence of predators.

We question therefore the assumption in the report of the Inquiry that to chase a wild animal is necessarily detrimental to its well being. Indeed Fraser and others (1997), suggest that there is a need for any animal to have the opportunity to use all its genetically encoded behaviours. The opposite school of thought comes from Bateson (1997) who described the Red deer as a sedentary species, which should therefore be left undisturbed. **Simply to look at the anatomical conformation of the Red deer is to realise it is an animal supremely designed for speed and flight.** And this view is



comprehensively endorsed by Professor Geist, Emeritus Professor of Environmental Science at Calgary University, using the extensive bibliography cited in his submission to the Inquiry (Geist 2000). Professor Geist was also extremely critical of the non scientific approach and unwarranted assumptions made by Professor Bateson in his physiological studies of Red deer.

Hunting compared with shooting

We accept that hunting with hounds has, at present, a variable impact on the culling of foxes across the country but this is not because hunting is necessarily less efficient than other methods of culling. Rather, it is not exploited to its full potential (Reynolds 2000, MacDonald 2000). **Given the full support of all land owners and using a combination of “mounted” packs, terriers and sporting dogs, hunting could probably achieve near 100% control of the fox population.** But more important from the veterinary point of view we firmly hold that, of the culling methods considered above, hunting is the most humane. While shooting of foxes by experienced marksmen with rifles or the stalking of deer can be as humane and perhaps more efficient it carries with it an inherent risk of wounding and subsequent suffering, especially in the hands of unskilled operators. The risk is greatly enhanced when shotguns are used. It is questionable even whether a shotgun is an appropriate weapon for the humane killing of mammals the size of foxes or hares.

As indicated above it seems likely that 40-60% of foxes shot by rifle and shotgun each year are wounded. Most of these are left to suffer and many of those wounded and incapacitated in the spring will be pregnant or lactating vixens. Similar figures are likely for hares. Accurate figures for wounding are clearly difficult to compile but **commonsense, together with some consideration of the difficulty of shooting and cleanly killing an elusive target such as a fox, deer or hare, must suggest that a significant proportion are injured and not killed outright.** Even the lower figure of 15% for foxes, from the gun pack (Morgan 2000) and a similar figure of 14.6% for deer not killed outright (Bateson and Bradshaw 1999), represents an unacceptable degree of animal suffering, particularly if, as with foxes and hares, the wounded animal is not followed up and dispatched. No such risk of failure occurs with hunting. The quarry species are not injured and abandoned. They either live or die and if they escape the worst they have suffered is a test of their stamina and cunning.

Furthermore not only are many areas of the country impractical or unsafe

for lamping and the rifle shooting of foxes (Morgan 2000) but there exists the well known phenomenon of “lamp shy” foxes that requires many man-hours per fox killed – at best, 2 to 5 hours and increasing as the pool decreases (Reynolds 2000).

Opponents of hunting have suggested that because wildlife hospitals receive very few wounded foxes or hares, they are therefore rarely wounded by poor shooting. But anyone informed about wild animals would know this to be spurious since wild animals “go to ground” when wounded and are unlikely to be found by anyone other than hunts or game wardens using hounds, who would humanely kill such animals that they discover. The carcasses of those that remain undiscovered and eventually die would be rapidly dispersed by carrion eaters and decomposition.

Acute pain must also be assumed to be an inevitable consequence of shooting. However Bradshaw and Bateson (2001), by analogy with soldiers shot and wounded in the heat of battle, of whom 70% reported no pain, suggest that this would be the case in deer. Even supposing their analogy is correct, that still leaves 30% to suffer acute pain and distress. But the analogy is not correct. Soldiers shot in the heat of battle not only benefit from the well recognised phenomenon of stress analgesia, mediated by centrally released endorphins and enkephalins, they are also shot with hard-nosed bullets. These exact much less tissue damage than the soft-nosed bullets used in stalking, which are designed specifically to cause maximum shock and damage on impact and exit and thereby reduce the chance of escape. Unlike soldiers in battle, stalked deer are shot unsuspecting and unstressed, in the absence therefore of any stress induced analgesia and so may be expected to suffer acute, severe pain, which remains unameliorated until they finally succumb. The same situation will pertain for foxes shot by night (lamping) and although hares may benefit from stress analgesia induced during the drive to the guns, this will do nothing to mitigate the long term pain and suffering of those that escape wounded. All animals that escape wounded may be assumed to suffer varying degrees of protracted pain, either to die eventually through starvation and sepsis, or to adapt to their wounds, that is unless they are found by hounds and humanely killed at some later stage. Shooting will always be necessary, in addition to hunting, for controlling numbers of the quarry species but any preference for shooting would seem therefore not to be based solely on considerations of animal welfare.

In contrast, except where there is interference by saboteurs, hunting produces no wounded survivors and, as described above, death is almost instantaneous. It must be emphasised that any subsequent savaging of the carcass, although not a particularly edifying sight, is carried out on a dead animal. Opponents of hunting, particularly during the debate in the House of Commons on the Foster Bill in 1997, made great anthropomorphic play of the unpleasant sight that it undoubtedly is but it has no relevance to the dead animal or to the case against hunting.

Health and vigour of the species

Two further important justifications for hunting exist in contrast to other culling methods. It is selective and seasonal. The importance of the selective element of hunting, already mentioned above, whereby the weak, the diseased and the injured are detected and killed, cannot be emphasised too strongly. No other method of culling performs this function and, since



hunting has been banned, the welfare implications for all hunted species are profound. An uncertain but unacceptably large number of animals are condemned to a lingering death through disease, injury, malnutrition or illegal poisoning. To illustrate the point it may be added that hare hunts are often scheduled to occur shortly after hare shoots over

the same ground for the express purpose of culling wounded animals. A similar humane follow up practice used to exist in the New Forest for deer. A.McDiarmid (personal communication) reported that in the 1960s he had the opportunity to examine 12 fallow deer. These animals, reported as having been hit by motor cars, were located and dispatched by the forest keepers, on foot, using selected, experienced buck hounds (Tufters). Many were found lying up in thick undergrowth, all were alive and all had severe injuries, mainly broken bones, consistent with motor car injuries. This humane service is now lost since the buck hounds have been forced to disband because of the relentless harassment by so called animal protectionists. Similarly it is reported that, for the Devon & Somerset and Quantock Stag hounds, which still operate, in some years the majority of deer caught are casualty deer (Savage 1993).

The intrinsic humanity of allowing the fox and the other quarry species a close season during the spring and summer for breeding is self evident. No

other method of culling allows the fox respite during this time. On the contrary culling by shooting intensifies in some areas during the spring leading to orphaned cubs, which can die of starvation. Hunting therefore not only controls the fox population but both by selectivity and breeding maintains the health and vigour of the species. In all respects, for all four quarry species, hunting is therefore consistently more humane than any of the other culling methods.



Footnote

Whereas the forgoing submission has been concerned largely with fox hunting similar observations and conclusions may be reasonably extrapolated to deer, hare and mink hunting. Thus the three species are hunted in their natural environment, they are not under any unnatural stress for the majority of the hunt, there will be no premonition of death and the kill is quick and certain. The case for hunting deer is arguably even stronger than that for the other three quarry species since instantaneous death comes from a close range shot to the head when the animal is at bay. Hunting for Red deer and hares is also selective and seasonal. Hunting is also the only realistic method, in some areas, of controlling mink, a particularly vicious predator of poultry and ground-nesting birds.

Conclusion

As members of the Royal College of Veterinary Surgeons we submit therefore that **hunting by hounds is the natural and most humane method of controlling the population of all four quarry species in the countryside (fox, deer, hare and mink).** **Natural** because the animal is hunted by a method (pursuit) evolved over millennia and in the environment that it knows; natural also because it doesn't use any alien technology (guns or traps) for which the wild animal has no natural defence or coping mechanism. **Humane** because there is no wounding with hunting - the animal is either killed almost instantaneously or it escapes unscathed. The relatively short period of physiological stress that may be suffered in the final phase of the hunt is well within the capacity of a wild animal; humane also because it is selective and culls the weak, the aged, the sick and the wounded in direct

relation to their debility. Hunting is the only method of culling that selectively maintains the health and vigour of the species and which allows the quarry species respite during the breeding season.

Pursuit or *The Natural Chase* (Colvile 2007) followed by the almost instantaneous kill must in animal welfare terms be the preferred method of culling. It is environmentally friendly to other wildlife and is the natural, balanced, biological method of controlling wildlife. It is a vital and essential tool in wildlife management which should be returned to the countryside.



References

- Anon.** (1999) Memorandum from the Devon and Somerset Staghounds and the Quantock Staghounds to Council members of the National Trust.
- Barrington J.H., Addison I.E. and Thomas L.H.** (2012) Life in the Wild published by the Veterinary Association for Wildlife Management at: www.vet-wildlifemanagement.org.uk
- Baskerville R.E.** (2000) Second stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London.
- Batcheler C.L.** (1968) Compensatory responses of artificially controlled mammalian populations, *Pro. N.Z. Ecol. Soc.* **15**, 25-30
- Bateson P.** (1997) The behavioural and physiological effects of culling red deer. Report to The National Trust, London.
- Bateson P. and Bradshaw E.L.** (1997) Physiological effects of hunting red deer (*Cervus elaphus*). *Proceedings of Royal Society, London.* **264**, 1707-1714
- Bateson P. and Bradshaw E.L.** (1999) How often do deer stalkers wound red deer? *Deer* **11**, 180-181
- Bateson P. and Harris R** (2000) Report of contract 7 on welfare to the Committee of Inquiry into hunting with dogs, Home Office, London.
- Belyaev D K and Trut L N** (1975) Some genetic and endocrine effects of selection for domestication in silver foxes. *Canids* ed M.W.Fox, 416- 26 Van Nostrand Reinhold
- Bradshaw and Bateson** (2001) *Letter to Animal Welfare* **10**, 115-116
- Colvile K** (2007) *The Natural Chase*, published by The All Parliamentary Middle Way Group and the Veterinary Association for Wildlife Management at: www.vet-wildlifemanagement.org.uk
- Cunningham J.A.** (1999) Post mortem findings in 3 foxes killed by hounds. *Veterinary Record* **144**, 483
- Edwards R.** (1999) Findings in a fox rescued from hounds. *Veterinary Record* **144**, 243
- Ericsson G and von Essen H** (2001) Moose shot at and not retrieved in Sweden, proceedings of the 24th International Congress of Game Biologists. In press
- Fox N.C. Blay N. Greenwood A.G. Wise D.R. Potapov E** (2005) Wounding rates in shooting foxes. *Animal Welfare* **14**, 93-102.

- Fraser D. and others** (1997) A scientific conception of animal welfare that reflects ethical concerns, *Animal Welfare*, **6**, 187-205
- Geist V.** (2000) First stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London.
- Harris R.C., Helliwell T.R. and others** (1999) Joint Universities study on deer hunting. R&W Publications, Newmarket
- Hemmer H.** (1990) *Domestication: The Decline of Environmental Appreciation*. Cambridge University Press.
- Hughes-Ross T.A.R.** (2000) letter of August 12, to the *Veterinary Record*, **147**, 199
- Jones I.G.** (2000) Second stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London.
- Kreeger T.J.** (2000) First stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London
- MacDonald D.W., Tattersall F.H., Johnson P.J., Carbone C., Reynolds J.C., Langbein J., Rushton S.P. & Shirley M.D.F.** (2000) Research report to the Committee of Inquiry into hunting with dogs, Home Office, London
- Morgan I.** (2000) Second stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London
- Morrison K.C.G.** (1979) Bullet placement and the behaviour of shot deer. *Journal of British Deer Society* **4**, 427-430
- Morton D** (2000) letter of July 15th, to the *Veterinary Record*, **147**, 83
- Paterson D.J.** (1996) Antiarrhythmic mechanisms during exercise. *J. appl. Physiol.* **80**, 1853-1862
- Reynolds J.C.** (2000) Fox control in the countryside, The Game Conservancy Trust, Fordingbridge, Hants, UK
- Savage R.** (1993) The conservation and management of Red deer in the west country. Report to The National Trust, London.
- Scruton R** (2000) letter of August 26, to the *Veterinary Record*, **147**, 251
- Webster A.J.F.** (1994) *Animal Welfare: A cool eye towards Eden*. Blackwell, Oxford
- Wise D.R.** (1999) *The Bateson report: Use or abuse of science?* Countryside Alliance, London.
- Wise D.R.** (2000) Second stage submission to the Committee of Inquiry into hunting with dogs, Home Office, London.

Appendix 1

Letter from Dr. T.J. Kreeger in response to article published in the *Sunday Times* 14 November 1999 (unpublished)

I am writing to clarify information that was printed in the November 14 edition of the *Sunday Times*. The article made several erroneous statements concerning studies of stress in foxes conducted by myself and others in 1984-1988. The primary purpose of this research was to determine the pathophysiological responses of foxes caught in different traps. We chased six of these foxes with dogs for approximately five minutes because they could not be trapped and we wished to determine their response to other stressors.

The *Times* article stated that “new research claims for the first time that hunted foxes suffer fatal stress levels even if they escape the hounds” The article further stated that foxes chased by dogs “suffered from capture myopathy, a muscle-wasting condition that can be followed by brain damage, paralysis and death” and that I concluded “that a hunted fox experiences significant stress and possible heart, lung and liver damage before it dies”

I was contacted by your American representative regarding the above “findings” and I refuted all of them. There was no evidence of capture myopathy in any of the chased foxes. Since there was no capture myopathy, any sequelae such as brain damage, paralysis and death were purely speculative on your part. Although a chased foxed is physiologically stressed, there was no evidence of any heart, lung, or liver damage that would lead to mortality.

I believe that most of your misinformation was based on an article previously published by an organization in America. Therein the author ascribed pathologies associated with trapped foxes to those of chased foxes, which was totally inappropriate and self-serving to that organization's bias against fox hunting.

The only findings of this study that were ever published in the scientific literature (*Can.J.Zool.* 67:2455-2458) were the elevated heart rate and body temperature experienced by chased foxes (findings not quite of Nobel prize-winning caliber!). Nothing can be said about any post-pursuit morbidity or mortality because we never examined those aspects.

Despite the emotional investment on both sides of the fox hunting issue, it is to the best interests of all parties to strive for accuracy and objectivity. I can only hope that you can partially rectify this misinformation by printing this clarification.

Terry J. Kreeger, DVM, PhD
Wyoming Game and Fish Department



www.vet-wildlifemanagement.org.uk



“A reasoned opinion based, for many of us, on a lifetime experience of animals, animal disease and wildlife. Furthermore we do not seek primarily to protect personal liberty, a country sport or however many jobs in the countryside. First and foremost we seek to protect the welfare of wild animals in the wild”

(extract from letter to The Times, 20 December 2000)

“The pro-fox lobby will do their infamous champion no favours if it brings about a ban on hunting”

(extract from letter to Country Life, 4 November 1999)