

The use, misuse and abuse of science in support of the Hunting Act 2004





"They launched their tendentious findings at a party political conference; they used them in public forums; they undoubtedly influenced the political process. This is a clear example of the corruption of science for political purposes."

Charlie Pye-Smith

Rural Rites: Hunting and the Politics of Prejudice

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1. Summary of Key Points

- The Burns Report was incorrectly and frequently cited as justifying a ban on hunting with dogs on the grounds of cruelty, despite the authors' denial of this conclusion. (section 3)
- The only peer-reviewed scientific study into wounding in shot foxes was ignored by the majority
 of MPs during the hunting debates. (section 5, para 5.1.4.)
- A study designed to counter the results of this research, which was commissioned by an antihunting group and which is based on flawed methodology, has not passed the peer-review test, yet was used in Parliament and the media. (section 6, para 6.1.6.)
- The bio-diversity benefits of hunting with dogs and the possible conflict with the European Union's *Biodiversity Conservation and Habitats Directive* were ignored by MPs. (section 5, para 5.2.3.)
- The authoritative Veterinary Opinion on Hunting with Hounds, supported by some 550 members
 of the Royal College of Veterinary Surgeons, was largely overlooked by both the Burns Inquiry
 and the Portcullis House hearings. (section 5.3.)
- In submissions and statements to both the Burns Inquiry and the Portcullis House Hearings, evidence was given that could not be validated and was no more than opinion. Philosophical and moral views that were irrelevant to science were allowed to be made and placed on record. (section 6)
- There is now a large body of cognitive neuroscience, much of it generated since the Burns Inquiry, that gainsays the precautionary principle and the notion of critical anthropomorphism advocated at the Portcullis House hearings. (section 6.3.8 & 6.4.6)
- The automatic assumption was made throughout the Burns Inquiry and Portcullis House Hearings
 that the chasing of a wild mammal caused distress and unacceptable suffering, whereas an
 emerging scientific view is that such an experience could be beneficial in terms of survival in the
 wild. (section 6, paras 6.4.6 & 7)
- In numerous campaigning reports and documents from animal rights/welfare groups, genuine scientific research was presented side-by side with non-scientific opinions and views, thereby leaving the reader unsure of what can be regarded as scientifically validated and what cannot. (section 6, para 6.7.3.)
- Two scientific studies in North America by the same researcher were grossly misinterpreted and described as one piece of work. The false conclusions were then reported in the national media and used in various submissions to the Burns Inquiry and the Portcullis House Hearings, despite a strong denial of these conclusions by the researcher. (section 7)
- Two studies into the effects of hunting deer with dogs produced findings that were essentially similar. However, the second study by scientists specialising in the relevant subjects of physiology and pathology interpreted the findings differently and concluded that they were normal for a strenuously exercised animal. Despite this, the minister in charge of the hunting issue regarded the evidence in support of a ban as being "incontrovertible". (section 7, para 7.9.7.)
- Flawed methods to monitor the fox population, which were commissioned by anti-hunting groups, were used at various times, including during the Foot and Mouth epidemic in 2001, in an attempt to prove hunting plays no part in population control. The results and conclusions were presented to Parliament and the media in the period running up to the passing of the Hunting Act 2004. (section 8)
- The claim that there is "...a large body of scientific and technical evidence..." to justify a ban on the use of dogs in wildlife management cannot be substantiated. (section 6, para 6.1.2.)

2. Introduction

During the numerous debates and discussions leading up to the passing of the Hunting Act 2004, groups opposed to hunting with dogs often referred to 'scientific research' in support of their case for a ban. This paper examines these claims and analyses the scientific evidence which was used in the media and in Parliament to justify the passing of a law that has the aim of preventing the hunting of wild mammals with dogs in England and Wales. Furthermore, in subsequent legal proceedings and similar claims were made. These examples are also included.

3. Background – the Burns Report, Portcullis Hearings and the Hunting Bills

- 3.1. When the Labour Party came to power in 1997, the prospect of anti-hunting legislation became reality and a Private Members' Bill was introduced in that year by Michael Foster MP, though it failed due to the lack of parliamentary time. Backbench pressure and a manifesto commitment to resolve the matter then forced the Government to address the issue. The Home Office was responsible for hunting at that time and the then Home Secretary, Jack Straw, initiated an inquiry under the chairmanship of Lord Burns to examine the possible effects of a ban on hunting with dogs. The Report of the Committee of Inquiry into Hunting with Dogs in England and Wales (The Burns Report) was completed in 2000.
- 3.2. In its conclusions, the Burns Report stated, "None of the legal methods of fox control is without difficulty from an animal welfare perspective. Both snaring and shooting can have serious adverse welfare implications." (Paragraph 6.58) The report cautioned, "Consideration should be given to whether any ban would be manifestly unjust, bearing in mind the activities caught and not caught by it." (Paragraph 10.28) The report called for further research into wounding and comparative methods of control.
- 3.3. Later in 2000, the Government introduced a Bill containing three options, self-regulation, statutory regulation and a ban. The House of Commons and the House of Lords failed to reach agreement on the options contained in the Bill and it finally ran out of time when the 2001 General Election was called.
- 3.4. A 'vote of intention' took place in the new Parliament and once again the two Houses failed to agree on an option. The new minister in charge of the hunting issue, Alun Michael, arranged a three-day hearing in Parliament to focus on "the key principles of preventing cruelty and recognising utility in the management and control of wild mammals" using the findings of the Burns Report as a starting point. The Portcullis House Hearings were held in 2002.
- 3.5. Despite the above statements from the authors of the *Burns Report*, the Campaign for the Protection of the Hunted Animal (CPHA) an alliance of the RSPCA, the League Against Cruel Sports (LACS) and the International Fund for Animal Welfare (IFAW) used the conclusions of the *Burns Report* as the basis for the abolition of hunting with dogs. A CPHA Update document distributed at each of the main political conferences in 2000 blatantly announced that the *Burns Report* supported a ban. The CPHA chairman, Douglas Batchelor, confidently said, "We now also have the findings of the Burns Inquiry, which support the case for a complete ban."
- 3.6. Yet Lord Soulsby, who was part of the Burns Inquiry committee, said in the House of Lords on 12 March 2001, "... many bodies have erroneously repeat the word "erroneously" quoted the Burns Report, stating that it clearly demonstrated that the practice of hunting wild animals with dogs caused cruelty. The report did not state that."
- 3.7. Lord Burns reiterated his view that further research was needed when he attended the Portcullis House Hearings in 2002, stating, "I was particularly struck considering the emotion that was generated by this whole debate by how really very little science has been done, either in terms of the welfare effects of hunting or indeed the other methods of control."
- 3.8. Nevertheless, the overall and totally unsubstantiated conclusion that hunting seriously compromises the welfare of the hunted animal was widely interpreted to mean that hunting was cruel and the Burns Report continued to be cited by certain organisations and politicians as giving grounds to ban hunting. Despite this, Lord Burns said on 12 October 2004 in the

House of Lords, "...there may still be a way forward, through a combination of licensed hunting and further reform of animal welfare legislation. I hope that it is not too late for a determined attempt to find a way forward on the issue that is evidence based; gives the courts a clearer role; reflects the realities of farming; has a chance of commanding support on both sides of the debate; and, above all, will stand the test of time."

- 3.9. The Burns Report was completed in a remarkably short period and unfortunately some of its statements and conclusions were open to wide interpretations. For instance, the shooting of deer and foxes, if carried out to a high standard and resulting in an instant kill, is obviously a humane practice. However shooting, particularly with shotguns, inevitably gives rise to a proportion of animals that are wounded. The implication that the best case scenario of an instantaneously fatal shot is an achievable and reliable method of culling wild animals allowed anti hunting MPs and others to state with misguided authority that shooting is preferable to hunting.
- 3.10. The report also addressed the matter of deer hunting, noting that "there seems to be a large measure of agreement among scientists that at least during the last 20 minutes of a hunt the deer is likely to suffer as glycogen depletion sets in." This statement is wide open to misinterpretation: first by the use of the word "suffer", which to the general public means unbearable pain and distress and second from the implication that the "suffering" automatically switches on in the last 20 minutes of a hunt. As Professor Roger Harris explains in his conclusions to the Joint Universities study (see section 7.9) the process is a linear one rising to the point when the deer runs out of muscle glycogen and stands at bay.
- 3.11. The Inquiry fell into the anthropomorphic trap when it assumed that it is intrinsically undesirable to chase a wild animal. It assumed that the response of a wild animal to being chased would be the same as that of human or a domestic animal.
- 3.12. The Inquiry concentrated almost entirely on the welfare of the individual and ignored the welfare of the population as a whole. Thus, the vital search and dispatch role of hunting for maintaining the health and vigour of the population whereby the weak, the sick and the injured are caught up and humanely dispatched in direct relation to their debility was overlooked. This is one of the most important justifications for the use of dogs in wildlife management and omitting it from the report clearly simplified the arguments of the anti hunting lobby.
- 3.13. Finally, in line with the points made in this section, the following statement was agreed by the majority of committee members in the Burns' Inquiry in May 2005, "In particular I would draw your attention to Lord Burns' comment that the Committee of Inquiry did not have sufficient evidence to reach a clear conclusion on whether hunting involves significantly worse welfare effects than any other legal methods of control and that the evidence available continues to fall way short of the sort of evidence needed to make substantial political interventions. The report was careful not to reach conclusions about cruelty as we felt there was insufficient evidence upon which to do so. Describing, as we did, the final moments of a hunt as 'seriously compromising the welfare of the hunted animal' should not be taken as a suggestion that hunting was measurably worse than other legal methods, or that abolition would improve the plight of wild animals in the countryside."

4. Evidence or Opinion?

- 4.1. In a number of campaigning documents a reference is often given that is no more than the opinion of an individual or organisation. There will sometimes be occasions when views based on eye-witness accounts or personal experiences are included and these can be relevant, provided they are seen as such. However, there are instances of a particular work being quoted that imply that it is scientifically valid when it has not passed the test of being peer reviewed and published in a scientific journal. It is therefore important to distinguish between work that has passed this test and work that has not.
- 4.2. Anti-hunting groups argue that they have formed their policies on the "basis of a large body of scientific and technical evidence" which justifies the prohibition of hunting with dogs. What has become apparent in compiling this report is the manner in which a misinterpreted piece of work, or a view that is no more than an opinion, is quoted again and again in numerous documents to a point where there appears to be a significant body of evidence. Many of the statements included here have been quoted in the national media and in Parliament.
- 4.3. Evidence or opinion being misused or abused is divided into three categories below:
 - Examples of research being ignored.
 - Examples of opinion and non-validated data posing as science.
 - Examples of research being misinterpreted.

5. Examples of research being ignored

5. 1. Middle Way Group - Wounding levels in shot foxes.

- 5.1.1. Concerns about greater suffering being caused to foxes by shooting if hunting with dogs was prohibited have existed for many years. In 1951, a Government inquiry, The Report of the Committee on Cruelty to Wild Animals (known as the Scott Henderson Report), explained the RSPCA's fear of an outright ban, "...they feel that if hunting were abolished greater cruelty would be caused to foxes by the more widespread use of other methods, particularly shooting." (Paragraph 170)
- 5.1.2. Yet, with no scientific research into wounding levels being undertaken, the RSPCA changed its policy in 1976 to one of outright opposition to foxhunting and qualified support for shooting foxes.
- 5.1.3. The Middle Way Group (MWG) was concerned about wounding and commissioned a study to examine the likely wounding levels in a range of legal shooting regimes. The work was undertaken by a team of six scientists, under the direction of Dr Nick Fox, a wildlife biologist familiar with both hunting and shooting.
- 5.1.4. Wounding Rates in Shooting Foxes, was peer reviewed and published by the Universities Federation for Animal Welfare in its journal, *Animal Welfare* in May 2005.
- 5.1.5. The results, which indicated potential wounding levels much higher than those claimed by anti-hunting groups, were first made public in June 2003 at a press conference in Parliament (17 months before the Hunting Act was finally passed), along with a detailed report and video film showing methodology and findings.
- 5.1.6. The information was made available to every MP and Peer, with a number of day-long 'drop in' meetings booked in Parliament to allow Members to discuss the study's conclusions. Surprisingly, the Associate Parliamentary Group for Animal Welfare ignored this research into wounding, despite numerous requests for the issue to be discussed. No member of the group attended the 'drop in' meetings.
- 5.1.7. The conclusions of the report by Dr Fox and his team were supported by a poll of 600 sheep farmers (Kynetec Market Research February 2006). Though this poll is not a scientific study, it does seem to confirm that, in the real world, wounding levels are likely to be higher than those claimed by anti-hunting groups, where inevitably there will be errors by the beginner, the reckless and the unlucky.

5. 2. Professors Nigel Leader-Williams/Stuart Harrop and others Bio-Diversity.

- 5.2.1. The Biodiversity Conservation and the Habitats Directive is the European Union's main response to the United Nations Convention on Biological Diversity. It provides the legal framework to protect habitats and their species through the setting up of a network of European habitats.
- 5.2.2. In May 2003, Nature published a report by Professor Nigel Leader-Williams and Professor Stuart Harrop and others from the Durrell Institute of Conservation and Ecology (DICE) at the University of Kent. The study, Field Sports and Conservation in the United Kingdom (2003) looked at the bio-diversity benefits of hunting with dogs and other field sports by analysing aerial photographs taken over 65 farms on three sites in central England. The

study concluded: "We found that landowners participating in field sports maintained the most established woodland and planted more new woodland and hedgerows than those who did not, despite the equal availability of subsidies."

- 5.2.3. The European Directive states "...if developments of overriding public interest are to take place, compensation must be provided, primarily through habitat restoration or re-creation." Yet MPs, both inside and outside the Government, ignored this requirement when passing the Hunting Act, despite a warning in the DICE report, which said, "...additional public funds may be needed to increase subsidies for habitat conservation..."
- 5.2.4. The Burns Report warned of the apparent conflict with the above directive when it stated, "on those estates which favour hare coursing or hunting, rather than shooting, a ban might lead farmers and landowners to pay less attention to encouraging hare numbers. The loss of habitat suitable for hares could have serious consequences for a number of birds and other animals." The report goes on to say that "because hare numbers tend to be maintained at high levels in areas where hare coursing occurs, the impact of a ban might well be that, in the absence of other changes, the population would decline in those areas".

5.3. Veterinary Association for Wildlife Management (VAWM).

A Veterinary Opinion on Hunting with Hounds by Thomas and Allen was submitted to the Burns Inquiry in February 2000 and was almost totally ignored, reputedly because it only constituted an opinion. However this did not apparently inhibit the Inquiry from repeatedly quoting the unsubstantiated opinions of Professors Bateson, Broom and Morton and was still the more surprising since it was supported by the collective evidence and professional opinion of some 300 (now over 500) members of the Royal College of Veterinary Surgeons. An authoritative opinion, which must be second to none in the hunting debate.

The Veterinary Opinion gave a balanced assessment of all the various methods of culling the four quarry species and came to the conclusion that hunting constituted the natural and most humane method of controlling all four quarry species. Following the report of the Burns Inquiry, the Veterinary Opinion was updated and published as a booklet in July 2002. It was submitted to the Portcullis House hearings held later that year by the Minister, Alun Michael, and again largely overlooked. Nor were the authors called to give any evidence to the hearings. However the booklet was later much referred to by Tory and Lib Dem members of the House of Commons Committee and clearly had a considerable influence on debates on the Hunting Bill in the House of Lords.

5.4. Independent Supervisory Authority for Hunting (ISAH).

- 5.4.1. ISAH was formed after consideration of the Phelps Review of Hunting with Hounds, commissioned by Sir David Steel and published in 1997, which recommended an independent authority to oversee the activities of the hunting associations.
- 5.4.2. Sir Ronald Waterhouse, Chairman of ISAH, appointed a Protocol Committee under Professor John Webster, Emeritus Professor of Animal Husbandry Bristol University. Sir Ronald and Professor Webster gave presentations to the Burns Inquiry, the Portcullis House hearings and to both Houses of Parliament.
- 5.4.3. On 19th October 2004, Lord Mayhew hosted a presentation made by Professor Webster to peers on the progress of the ISAH Protocol. He stated that the ISAH Protocol was founded on three central pillars.
 - Humanity: avoidance of unnecessary suffering;

- Utility: effective management of the quarry species;
- Stewardship: sensitive management of the living environment.

Professor Webster referred to his preliminary report of September 03:

"The hunting communities have the potential to become the most effective contributors to the monitoring, management and conservation of wildlife in England and Wales by virtue of their numbers, their widespread distribution their resources and their commitment."

"Legislation that simply bans the use of dogs in the killing of foxes, hares and deer, will seriously compromise policies and actions that are already making a significant positive contribution to the quality of the living countryside, and which have the potential to do so much more."

One year later Professor Webster was able to add:

"In response to ISAH's request to the member hunts ISAH is already in possession of perhaps the most spatially comprehensive survey of wild mammals such as fox, badger, hare and deer that exists in the U. K."

"The volume of information from hunts covers some 133,000 square miles. This compares very impressively with some scientific studies which have been based on quadrants as small as 250 square mile total."

"if this project is able to proceed (a hunting ban will bring it to a halt) it will become an invaluable source of evidence relating to the health and welfare of wildlife populations, gathered throughout the country, by those who are closest to the land. If it is lost, then we shall be less wise."

6. Examples of opinion and non-validated data posing as science

6.1. The RSPCA.

- 6.1.1. There have been many occasions when anti-hunt groups have stated that there is an enormous amount of scientific evidence that supports the case to ban hunting with dogs. This is an extract from one of the letters sent from Jackie Ballard, the Director General of the RSPCA to Lord Donoughue, "The RSPCA's policy on hunting, which has been developed over many years on the basis of a large body of scientific and technical evidence, is clear..." (8 April 2004).
- 6.1.2. Yet despite numerous requests from both Lord Donoughue and Lembit Öpik MP to the RSPCA over a two-year period requesting them to provide just one valid scientific study that shows hunting with dogs causes an unacceptable degree of suffering to the quarry, no such research has been produced.
- 6.1.3. In what appears to be a total reversal of science versus opinion, Jackie Ballard said in a letter to Lembit Öpik MP, "As you will be aware it is impossible to prove, absolutely, suffering in another living thing, even in another human. There is not absolute proof that wounded foxes suffer." (9 May 2005)
- 6.1.4. It has often been claimed by anti-hunt organisations that shooting is more humane than hunting with dogs. This chimes well with the public, who, in the main, have limited knowledge of the wide range of shooting regimes, ammunition, distance and skill required.
- 6.1.5. The issue of wounding became an important matter in the various hunting debates and anti-hunt organisations claimed that in the case of foxes, there were very low wounding levels. When challenged on what basis this assumption was made, the RSPCA explained its methodology. Foxes that were found injured from a variety of incidents were taken to wildlife hospitals and examined. Only the injured part of the animals was X-rayed and, if signs of previous wounding through shooting were seen, the matter was recorded. This, not surprisingly, resulted in a very low wounding level, because the areas where foxes are shot are not likely to be frequented by members of the public: the fact that injured foxes seek the security of an underground refuge; the difficulty in catching a wounded animal; and the likelihood of knowing where to take one. These reasons all indicate that any 'research' extrapolating such numbers to present a national picture is severely flawed.
- 6.1.6. This methodology was regarded as 'unsafe' by Professor David Macdonald and Dr Jonathan Reynolds, who said, "Even if data on different types of injuries were collated, we have no basis for knowing what proportion of foxes wounded by shooting (or other means) are likely to be taken to a wildlife hospital, and therefore no way of extrapolating from numbers in hospitals to numbers wounded in the field." (Managing British Mammals: Case Studies from the Hunting debate. (2000)).
- 6.1.7. In the legal action Countryside Alliance and Others vs HM Attorney General and the Secretary of State for DEFRA, which was brought to challenge the legitimacy of the Hunting Act under Human Rights legislation, the RSPCA made a clear statement to the court in relation to the research undertaken on wounding levels. The RSPCA's Director of Animal Welfare Promotion, said in his witness statement of 25 May 2005, "There is no real evidence that shooting wounds large numbers of foxes and what evidence there is suggests the opposite." (Paragraph 158)
- $6.1.8. \ \ This is simply untrue. The only peer-reviewed research on this issue is the Middle Way Group$

- commissioned study. Yet the RSPCA was prepared to dismiss the MWG study in favour of non-peer reviewed work that is clearly flawed. It was then prepared to feed such information into the legal system via a witness statement.
- 6.1.9. It is impossible to say exactly what effect such a statement had on the judges, but they said in dismissing the case, "We consider that there was sufficient material available to the House of Commons for them to conclude that hunting with dogs is cruel." (Paragraph 341). The judges go on to say, "There was, in any event, a reasonable basis on the evidence for a conclusion that, on the whole, hunting foxes with dogs causes more suffering than shooting them." (Paragraph 342).

6.2. Professor Stephen Harris.

- 6.2.1. Professor Stephen Harris has made no attempt to hide his apparently unshakeable views against hunting with dogs, to the extent that he has made an obviously ridiculous claim in relation to shooting and wounding foxes. He said, "There simply aren't any wounded foxes from shooting in the countryside as far as I'm concerned" (Shooting Times 12 June 2003). His position is evident from appearances in the media, on platforms organised by anti-hunting groups and being photographed applauding Michael Foster MP after a successful vote on his anti-hunting Bill. He has also attended a number of events for the League Against Cruel Sports and suggested work to further the anti-hunting cause. Professor Harris' position might be summed up in his paper to the Portcullis House Hearings in September 2002, "I have already demonstrated in my earlier evidence that hunting makes no contribution to regulating fox numbers, that there is no case for widespread fox control, that there is no evidence that widespread fox control has any significant impact on fox numbers..."
- 6.2.2. In making this statement, Professor Harris is apparently rejecting out of hand the very substantial work undertaken by the Game Conservancy Trust, which has been peer-reviewed and published in the Journal of Zoology (2002).
- 6.2.3. In direct response to the MWG shooting study, the findings of a study by Professor Stephen Harris were announced at a joint IFAW/RSPCA/LACS fringe meeting at the Labour Party conference in September 2003.
- 6.2.4. This study, which was funded by IFAW and based on the flawed fox X- ray methodology as mentioned above, found very low wounding levels. The work has never been published, despite numerous claims from both Professor Harris and IFAW that it was about to be peer reviewed. Repeated requests for details of the work have not been successful.
- 6.2.5. Despite the Harris/IFAW work not being validated, it has been referred to in the national media by IFAW, included in an article in the New Scientist, and was used to counter the findings of the MWG study in Parliament. It has been quoted and referenced in the RSPCA/IFAW/LACS document "Time to Deliver a Ban", clearly implying that it was a study from Bristol University and that it was validated and published in 2003. (Welfare Aspects of Shooting Foxes in Britain. Bentley, Baker and Harris. School of Biological Sciences, University of Bristol, 2003)

6.3. Professor Donald Broom - The Burns Report.

6.3.1. During the Burns Inquiry, certain reports were commissioned to assess particular issues. One of these was *The Welfare of Deer, Foxes, Mink and Hares - a Review* by Professor Donald

Broom of Cambridge University (Animal Welfare Information Centre). He stated the following in his initial summary: "In the case of foxes, mink and hares there are few data available from field studies involving dogs. However, there is considerable information relating to their basic biology, including the mechanisms which affect welfare and it seems likely that the welfare of these animals would also be poor when they are the subject of a chase."

- 6.3.2. Note the wording "seems likely" in Professor Broom's statement rather than stating such a view is established fact. His view may well be based on studies of the welfare of domesticated animals which have a much changed biology compared to their wild cousins. In particular, the 'fight or flight' instinct and coping mechanisms have been deliberately bred out of the former to increase their docility.
- 6.3.3. No reference was given in relation to the research that gave a basis for this remark, given that wild mammals are constantly chased by predators and do not appear to suffer any biological damage if they escape. (see section 6.4.6) Broom's claim that "... there is considerable information relating to the basic biology including the mechanisms which affect welfare ..." is pure wishful thinking. Animal welfare is not a fully objective scientific discipline since, except possibly in behavioural terms, suffering and welfare cannot be measured unambiguously given the present state of knowledge. Professor Broom reveals the basic flaw in so called animal welfare science when, in place of measurement, he refers to "poor welfare". But one may note no such reservation as to the limitations of animal welfare science in the report of the Burns Inquiry which states in Chapter 6: "Animal welfare is a scientific discipline which has developed rapidly in recent years". Indeed the report goes on to use the term "poor welfare".
- 6.3.4. In 1993 Professor Broom wrote a book with Dr. K.G.Johnson in which the authors attempted to use a whole range of physiological, biochemical even immunological parameters to indicate the state of an animal's welfare and we are asked to comprehend 4 levels of welfare that vary between the terms "very poor" to "unaffected". The authors singularly fail to provide any evidence how the various parameters may relate to these subjective levels of welfare and the clinical condition of the animal. Thus the statement by Professor Broom "....and it seems likely that the welfare of these animals would also be poor when they are the subject of a chase" can have no basis in science. It is simply his opinion.
- 6.3.5. In relation to shooting, live traps and snares, Professor Broom goes on to say, again without giving any specific scientific basis, "On average, hunting by chasing with dogs will result in considerably poorer welfare than these methods". He concludes by saying "A hunt using dogs, whether with hounds or digging with terriers, would be bound to cause fear and distress in the hunted animal". Note that the term "distress" (as opposed to stress) is used, implying that the quarry animal cannot cope with the situation and that this is presented as axiomatic, i.e. not needing evidence. Similarly, this statement should be regarded only as an unsubstantiated opinion.
- 6.3.6. In the booklet *Utility and Cruelty* published in September 2000 by Countdown to a Ban, the coalition between the RSPCA, IFAW and LACS, a section entitled *Is foxhunting humane?* begins with the bold statement, "The chase alone causes suffering to the hunted fox." The final sentence in this section uses Professor Broom's quote above to justify this view. His work is listed as a reference in the booklet, giving the impression that this is peer reviewed science. Though Professor Broom's view was sought by the Burns Inquiry, it is not backed up by evidence and the LACS ought not to present this or any other opinion as validated science.

- 6.3.7 Many reports and statements fall into the anthropomorphic trap when it is thought that it is intrinsically undesirable to chase a wild animal. It is assumed that the response of a wild mammal to being chased would be the same as that of a man or a domestic animal. On the contrary, there is now a strong body of scientific evidence, which shows that wild animals almost certainly lack the complex brain and mental abilities necessary to perceive the human concepts of fear and death.
- 6.3.8 Indeed, the philosopher Professor Roger Scruton in his paper Ethics and Welfare: The Case of Hunting makes the most pertinent statement in respect of hunting when he compares it with shooting and trapping. "They differ from hunting by using technology that neutralises the quarry's innate means of defence. Hunting is a managed adaptation of a natural form of predation, which the quarry avoids by instinct." (Philosophy, 2002). Hunting and the chase is entirely natural to the wild animal and because we know from modern cognitive neuroscience that non primate mammals have little or no capacity to think beyond the immediate moment (Roberts 2002 and reviewed by Addison 2006) and since they have never been caught before, they always expect to get away.

6.4. Professor David Morton - Portcullis House Hearings.

- 6.4.1. Professor David Morton is the Director of Biomedical Studies at the University of Birmingham and gave evidence on suffering to the Portcullis House Hearings. During these hearings Professor Morton made the following statement, "I think that shooting itself has its downside, and sometimes that can go wrong. The question is: can we ensure that shooting is made more efficient and more effective so that, in fact, we do get clean kills. I understand there are figures from some Scottish estates which looked at over five years of shooting foxes and found that 99 per cent were shot with the first shot, 95 per cent with the second shot, and the remaining I am not sure what happened to."
- 6.4.2. The claim that 95% of the 1% of foxes not killed outright are then killed with a second shot bears no relation to either the Middle Way Group's wounding study or the information obtained from farmers, who deal with the day-to-day realities of fox control. No reference to any study or survey was made regarding the "99%" success rate figure. Also, while everyone would agree that clean kills are the ideal, there is no way that this will always be achieved. Inevitably there will be a finite failure rate, so it is difficult to understand how shooting can be advocated in place of a method hunting that does not wound.
- 6.4.3. Professor Morton also made the automatic assumption that chasing a wild mammal causes suffering and that this 'suffering' justifies a prohibition of hunting with dogs. Note again that the "stress" (a normal physiological response to challenge) has now become "distress" i.e. inability to cope. Professor Morton said, "My concern is that I think chasing an animal is going to cause fear and mental distress on the part of that animal, and I do not see that that is at all avoidable".
- 6.4.4. Professor Morton goes on to say, "However, I believe behavioural data is also hard. I do not think that simply measuring a certain level of a hormone or an enzyme in the blood is any more hard data than animal behaviour. So I am somebody who says to people who measure hormones 'Fine, that is good, supportive evidence, but it is how the animal behaves which convinces me'. I do not want people to go away thinking behaviour is soft data." Given that Professor Morton accepts that the Kreeger study is the only 'hard scientific' evidence (see section 7.), 'hard behavioural data' cannot be regarded as scientific, a view which is held by numerous experts.

- 6.4.5. When pressed to name that evidence, Professor Morton said, "The evidence is an animal runs, and runs faster and tries to escape and is doing all these escape mechanisms. That behaviour is the evidence." When pushed again he said, "The evidence for that is partly based on the work I was telling you about that animals just run away and then they try and hide and go to earth. What more evidence do you want?"
- 6.4.6. Comparative neuroscience and experimental psychology have recently gone a long way towards supporting the observation that hunted animals appear remarkably unconcerned at being hunted. Professor David Morton has however suggested (Morton 2002) that because we cannot be certain (a scientific impossibility) of the extent of animal cognition we should apply a "Precautionary Principle" giving animals the benefit of the doubt. Professor Morton also espouses the principle of "Critical Anthropomorphism": that we should assume that animals think, feel and behave as man unless firm evidence can be produced to demonstrate otherwise. However, there is now a large body of scientific knowledge, much of it acquired since the publication of the Burns Report, that indicates animals lack the complex brain and mental abilities necessary to understand concepts such as fear and death as a human would (although some doubt remains with respect to higher non-human primates such as apes). Moreover, that body of scientific knowledge comes from a number of different scientific disciplines, including neuroanatomy, neurophysiology and experimental psychology, which approach the subject from different angles, but nevertheless support the same conclusions as to the limitations of animal awareness. Professor Morton is thus either ignorant of or in denial of this large body of scientific knowledge.
- 6.4.7. Does the fact that an animal is chased by either a human or animal predator automatically mean that it is suffering? Here is an interesting statement from John Webster, Emeritus Professor of Animal Husbandry at Bristol University. In his book Animal Welfare a Cool Eye towards Eden, Professor Webster says: "Fear is one of the most useful properties of the conscious mind because it is conducive to survival. Sentient animals are born curious because they need education to survive and acquire this education usually while under the protection of a parent or parents. They learn to discriminate between real and apparent dangers and, as they mature, become progressively cautious. Having lost the protection of a parent, they rely on their own sense of fear to direct their actions towards survival. When the gazelle learns that the charge of the leopard is truly frightening but once again, manages to escape, it may come to recognize fear as a constructive motivating force that produces its own reward, not as a source of suffering."

6.5. Rev. Professor Linzey - Portcullis House Hearings.

- 6.5.1. The Portcullis House Hearings were an attempt to debate the scientific evidence available on the issue of hunting with dogs. Yet the Rev Professor Andrew Linzey, Senior Research Fellow in Theology and Animals at the University of Oxford, was permitted to take part, despite being a moral philosopher rather than a scientist, practitioner or activist in the hunting field. He said at the hearings, "I do not accept we have an obligation to police nature. We have an obligation, I think, to leave them alone as far as possible, except when our own previous interferences cause problems. We have an obligation to leave them alone and to disrupt their lives as little as possible." Such a view demonstrates ignorance of wildlife in modern day Britain. A balanced wildlife population will not result from a 'hands off' approach. In fact, doing nothing might cause unnecessary suffering through neglect.
- 6.5.2. Professor Linzey has written many papers on issues relating to philosophy, religion and

- animal welfare, highlighting a wide variety of animal use and abuse. Yet he concludes his submission to the Portcullis House Hearings by saying, "hunting mammals for sport is the clearest example of the least justifiable, and the most objectionable, of all current practices in the United Kingdom."
- 6.5.3. In a document published by the Christian Socialist Movement (CSM), Professor Linzey argued that there is no moral defence for hunting as sport and that it should be completely banned. "Causing suffering for sport is intrinsically evil" he says. "Hunting, therefore, belongs to that class of always morally impermissible acts along with rape, child abuse and torture..."
- 6.5.4. Many people will consider such a comment unworthy of a response, but it should be noted that the quarry animal has no concept of the human motive. The following statement from Dr Nick Fox is pertinent; "In pest control, welfare is treated as a secondary priority over efficiency in many cases...it appears, across the board, that 'pest control' has been the justification for some of the worst excesses in animal welfare." (Welfare Aspects of Shooting Foxes Report (2003))

6.6. Dr Andrew Butterworth -Portcullis House Hearings.

- 6.6.1. Dr Butterworth is a Veterinary Research Fellow at Bristol University and gave evidence to the Portcullis House Hearings, appearing in the "Methods which cause least suffering in controlling quarry species" section. Dr Butterworth produced a paper in which he included a table indicating how various methods of killing wild animals could be reproduced, predicted and controlled.
- 6.6.2. The reason for inclusion of this simplistic table is questionable, as it does not address the issue of suffering, but it did serve to place hunting with dogs at the same level as the use of the harpoon on whales and at a level worse than the snare or illegal leg hold trap. Once again, no peer reviewed paper has been published, so it can only be admitted as unsubstantiated opinion.

6.7. Professor Stephen Harris and others - The Foster Bill.

- 6.7.1. In 1997, during the Parliamentary debates on the anti hunting Bill put forward by Michael Foster MP, two booklets were produced for the International Fund for Animal Welfare (IFAW) written by Professor Harris, Phil Baker and Robbie McDonald. Both booklets, *Is the Fox a Pest?* and *How will a ban on hunting affect the British fox population?* were presented as written by scientists from the School of Biological Sciences, University of Bristol, thereby giving the reports an impression of academic origin. The *Is the Fox a Pest?* booklet states that it summarises "available scientific information", yet many of the numerous references and literature cited, such as a public opinion poll and quotations from books, are not validated science. No new research was included in either document.
- 6.7.2. The conclusions in these booklets were reproduced in editions of the LACS' paper Wildlife Guardian. One issue carried a comment from anti-hunting MP Michael Foster, whose Bill was then at its Committee stage in Parliament, stating that "members of the Committee will be encouraged to accept the hard evidence produced by wildlife academics and campaigners".
- 6.7.3. Placing peer reviewed science alongside what is, in effect, opinion in one publication can only

lead to confusion as to what can genuinely be regarded as fact. As Dr Jonathan Reynolds and Dr Matthew Heydon said in reviewing the Is the Fox a Pest? report, "...34 out of the 72 citations are to unrefereed publications, unpublished reports or word of mouth. The authors give equal weight to all sources of information. This may sound objective, but it means that evidence of first-class experimental studies is ranked equal with that of poor studies that lack any experimental design at all."

7. Examples of research being misinterpreted

7.1. The research of Dr Terry Kreeger.

- 7.1.1. In the 1980s, Dr Terry Kreeger, a wildlife veterinarian working in the USA, and his team undertook a study of foxes in different situations in order to measure certain responses. Radio implants recorded the physiological responses in a number of different situations (sleeping, being awake, feeding, running and being chased). In one experiment, a fox was chased for 5-10 minutes by a dog in an enclosure. The animal's temperature and heart rate were recorded and both increased, as one might expect. There were no post mortem examinations and no evaluation of mental stress or long-term effects. The work, Monitoring heart rate and body temperature in red foxes, was published in the Canadian Journal of Zoology in 1989
- 7.1.2. In a second experiment, Dr Kreeger examined the physical effects of foxes to traps (foothold and box). Once again, the responses were recorded and again heart rate increased, though this time the foxes were subject to post-mortem examinations of internal organs and blood chemistry. The study, Pathological responses of red foxes to foothold traps, was published in the Journal of Wildlife Management in 1990.
- 7.1.3. With regard to the blood chemistry measures, Professor David Macdonald, Dr Jonathan Reynolds and others stated in their report *Managing British Mammals: Case Studies from the Hunting Debate (2000), "...the sample sizes were small and we have in any case no way of assessing how the values would fit onto the welfare continuum of foxes in their range of normal activities."*
- 7.1.4. These two studies have been grossly misinterpreted as described below and, despite objections from Dr Kreeger, have continued to be used as part of the 'scientific research' that justified a ban on hunting with dogs.

7.2. Professor Stephen Harris on Kreeger.

- 7.2.1. In How will a ban on hunting affect the British fox population?, the report written by Professor Stephen Harris and Phil Baker, the Kreeger studies are mentioned, but with two serious alterations. The first was that the two studies appeared to be combined into one piece of work, with the report stating, "yet studies in North America have shown that hunting (N.B. "chased" has been altered to "hunted") a fox for five minutes in a ten acre enclosure causes as much suffering as catching an animal in a leg-hold trap." The second was that the work was referenced as 'C.Waller (1997)', and an environmental website, without any reference to Dr Kreeger who had undertaken and published the two studies almost ten years earlier. Not to check the original data, easily available to an academic, was surely a dereliction of academic duty.
- 7.2.2. The result was that two separate pieces of genuine research were combined, with the conclusions of one study being transposed onto the other. This was then included as scientific data in a report, mixed with the opinions and views of organisations and individuals. Finally, the report was made available to MPs, Peers and the media via IFAW. The misuse of the Kreeger work did not end here, as can be seen below. It is hard to believe that the authors remained in ignorance of the true data over subsequent years.

7.3. The Sunday Times on Kreeger.

7.3.1. On 14 November 1999, within a week of the Government announcing that the Burns Inquiry

would take place, the Sunday Times published an article with the headline, "Foxes may die of stress after escaping hunt". It stated, "New research claims for the first time that hunted foxes suffer potentially fatal stress levels even if they escape the hounds." The story repeated the false results of combining the two Kreeger studies and further claimed that the work was new. It said, "Researchers in America carried out post-mortems on foxes that had been pursued by dogs for five minutes which showed that they suffered from capture myopathy, a muscle-wasting condition that can be followed by brain damage, paralysis and death."

7.3.2. The League Against Cruel Sports, who were quoted in the piece, said, "It is the strongest evidence we can give the inquiry." This drew a letter from Dr Kreeger to the Sunday Times stating, "Although a chased fox is physiologically stressed there was no evidence of any heart, lung or liver damage that would lead to mortality." Dr Kreeger's letter was not published, although a short retraction appeared in the newspaper two weeks later.

7.4. The RSPCA on Kreeger to the Burns Inquiry.

7.4.1. In a classic case of making an untrue statement and repeating it often enough so that it becomes 'fact', the RSPCA, in its submission to the Burns Inquiry, quoted the combined Kreeger studies section from Professor Stephen Harris's How will a ban on hunting affect the British fox population?, thereby giving further credibility to this totally contrived conclusion. The RSPCA cites a section from the booklet, again without referring to Dr Kreeger: "a North American study showing that hunting a fox for five minutes in a ten acre enclosure causes as much physiological suffering as catching one in a leg-hold trap." They add, however, "on post-mortem the foxes showed haemorrhage of heart and lungs and congestion of adrenal glands and kidneys. Blood analyses showed high levels of enzymes reflecting tissue damage." Once again, the reader is left to assume that this second statement refers to the chased animal, which of course it did not.

7.5. IFAW on Kreeger to the Burns Inquiry.

7.5.1. In its submission to the Burns Inquiry, IFAW perpetuated the misuse of Kreeger's work. Though they did not make the heinous transfer of data by Waller and the RSPCA and accepted by Harris, it is clearly implied by saying, "Thus, the data suggest that a short chase with dogs produces the same level of stress to that caused by leghold traps." But they then went further by adding, "This trap was condemned as long ago as 1863 by Charles Darwin. The use of the leghold trap to catch foxes was made illegal in England and Wales in 1958, yet over forty years later an equally cruel method of killing foxes is allowed to continue."

7.6. Professor David Morton on Kreeger at the Portcullis House Hearings.

7.6.1. Professor Morton refers to the work of Dr Kreeger to support his view that hunting with dogs causes an unacceptable degree of suffering. He said, "The evidence, as I know it, is that there is some work done in foxes which have radio-telemeters placed in them which measure heart rate. The measurements were taken when they either foraged or they were exposed to various threats, one of which was a dog and the heart rate went up a lot higher than when the animal was hunting on its own. That could have been because it was having to run faster and because it is running faster and exercising more so it has a higher heart rate. On the other hand, it could be that it was the fear of being chased that was causing that higher heart rate. Its body temperature went up as well. So that is the only, if you like, hard scientific data."

7.7. Professor Stephen Harris on Kreeger at the Portcullis House Hearings

- 7.7.1. Despite the misuse of his studies being exposed by Dr Kreeger himself (see section 7.8 below) and the extended length of time during which he could have checked the published data, Professor Harris continued to cite the false conclusions. During the Portcullis House Hearings, when challenged on his misuse of Dr Kreeger's work, Professor Harris said the following, "I have simply quoted to you exactly the data he published." He went on to say, "I have not drawn any comparison beyond that..... I have been quite honest."
- 7.7.2. However, this is not what Professor Harris said in his submission to the hearings. There he wrote, "the limited data available on this issue show that being pursued by a dog for 5 minutes (roughly half the average hunt time) led to considerably higher heart rates and body temperatures than recorded during any other activity (Kreeger et al., 1989). In fact the parameters they recorded were considerably higher than those recorded in foxes caught in leg-hold traps (Kreeger et al., 1990).
- 7.7.3. Harris then makes the assumption that an increase in heart rate and temperature equates to suffering and that this suffering is equivalent to that caused by a gin trap, "Since gin (leg-hold) traps were made illegal in England and Wales in 1958 on welfare grounds, we must assume that the level of suffering experienced during the pursuit phase of foxhunting has already been deemed unacceptable and that to continue to allow this level of suffering would be incompatible with welfare standards for foxes that were set 45 years ago."

7.8. Kreeger on Kreeger.

- 7.8.1. With regard to his work, Dr Kreeger said in 2000, "There has been a continuing problem with misinterpretation of my data that apparently began with an anti-hunting group in the U.S. That group's web page attributed changes recorded in trapped foxes to changes in foxes chased by dogs. This is blatantly incorrect and, I suspect, wilfully done."
- 7.8.2. In correspondence with the Middle Way Group on 6th December 2005, Dr Kreeger wrote, "At no time did we infer that trapped or chased foxes would suffer any morbidity or mortality as a result of being chased. On the contrary, it was our 'feeling' that the stress of being trapped or chased was probably inconsequential regarding the ultimate survival of the fox."

7.9. Professor Patrick Bateson FRS on Deer Hunting.

- 7.9.1. Following years of debate within the National Trust on the issue of deer hunting with hounds on Trust land, Patrick Bateson, Professor of Ethology at Cambridge University, was asked to undertake a study into the welfare effects on deer of hunting with hounds. The study looked at physiological parameters by analysing blood samples taken at variable times after the hunted deer was shot at bay. The findings led Professor Bateson to conclude that hunting deer with hounds caused unacceptable suffering. This unequivocal conclusion astonished many scientists since most of the physiological changes were regarded as the normal response of the body to strenuous exercise. Furthermore the blood haemolysis, which was one of the principal reasons for Professor Bateson's overall conclusion, and the Trust bringing in an immediate ban on deer hunting on their properties, was clearly a result of incompetent sampling post mortem.
- 7.9.2. Professor Bateson's report, *The Behavioural and Physiological Effects of Hunting Red Deer* (1997), was given to the Trust's ruling council with 24 hours to decide how to respond and, in

the glare of intense media interest, it chose to ban all deer hunting with dogs on Trust land.

- 7.9.3 The hunting bodies challenged the Bateson report and commissioned research, which duplicated and extended some of the Bateson tests on hunted deer. The subsequent Joint Universities Study was carried out by Professor Roger Harris, a world renowned expert in exercise physiology, in collaboration with several experts in the appropriate disciplines including a veterinary surgeon from Bristol University. The study looked at the same physiological parameters as Bateson plus some additional microscopic studies. Although the study broadly confirmed the metabolic measurements reported by Bateson, in contrast they were considered by Harris and his colleagues to be simply indicative of the normal body response to strenuous exercise. Blood haemolysis was notably not a significant finding in this study since the samples were taken properly by venepuncture, immediately after death.
- 7.9.4. Professor Bateson said in 1999, "Any scientific matter that impinges on an intense and highly polarized public debate will be interpreted in different ways. This is because science is an uncertain business and individuals will differ in their judgements about how well the evidence supports a particular conclusion. Some scientists hold strong views and have particularly well-developed evidence filters, and occasionally, as in the smoking and lung cancer battles, some scientists support the interests of the organisations which pay their salaries."
- 7.9.5. In 2000 Professor Bateson and Professor Roger Harris collaborated to review the findings of both studies in a report for the Burns Inquiry. It was noteworthy that their joint conclusions across some 13 different parameters almost entirely revised and modified the earlier conclusions from the Bateson Report. However before the report was submitted to the Inquiry and without Professor Harris's knowledge Professor Bateson added an overall conclusion 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". Professor Bateson cited no evidence for this conclusion, which goes substantially beyond anything justified by the findings of the two studies.
- 7.9.6. The Trust did not reverse its decision to ban deer hunting, although the use of two dogs to follow up wounded deer on Trust land, as permitted under the exemptions in the Hunting Act, was adopted at its AGM in November 2006.
- 7.9.7. Despite the confusion which arose over the views of Professor Bateson, his original findings were referred to by Alun Michael, the then Rural Affairs minister in charge of the Hunting Bill. Mr Michael said during the Committee stage of the Bill that the evidence to ban deer hunting was "incontrovertible". After hearing this statement, Professor Bateson wrote, "Only someone who was scientifically illiterate could argue that evidence from a new area of research was 'incontrovertible'. I shall write to Alun Michael to distance myself from that view." (21st January 2003) However, in his subsequent letter to the minister, Professor Bateson endorsed his original views on deer hunting and the minister did not retract his assertion. It remains on the public record.
- 7.9.8. Professor Bateson went on to argue that more research was needed on the physiological effects on deer of being hunted before it would be possible to conclude whether the practice should be banned

8. Fox population control - misinterpretations of research

8.1. League Against Cruel Sports (LACS) and Dr Ray Hewson.

- 8.1.1. In 1987, the LACS funded a three-year project to establish what would happen in the absence of fox control in a sheep rearing area. Dr Ray Hewson of Aberdeen University undertook the research and the area chosen was in a remote 70 km² area in the north of Scotland. The results claimed to show that fox numbers did not increase, nor did lamb losses. The details of the work were published in 1990 in the LACS document *Victim of Myth*.
- 8.1.1. LACS claimed that this study showed that as fox control was unnecessary in this part of Scotland, it was therefore unnecessary in the rest of the UK.
- 8.1.2. In the BBC's Countryfile programme broadcast in 1990, Dr Hewson publicly disagreed with the LACS official, stating that his research was relevant only to the specific project area and could not be extrapolated to the whole of Britain.
- 8.1.3. The *Victim of Myth* report was not peer-reviewed or published in a scientific journal, yet was quoted in the LACS' submissions to the Rural Affairs Committee of the Scottish Parliament in the anti-hunting campaign in Scotland and to the Burns Inquiry.
- 8.1.4. The conclusions contained in the *Victim of Myth* report were used in the LACS submission to the Burns Inquiry, though Dr Jonathan Reynolds and others were highly critical of the work stating, "First, Hewson's report refers to two estates, only one of which controlled foxes, but quantitative data on lamb losses and fox density were not presented from this site; the work was not, therefore, a controlled experiment in any accepted sense. Second, there was no measure of the fox population before, during, or after the study, on either estate. Four individuals were radio-tracked and two earths located, suggesting that the non-culling estate was big enough to hold 2-3 fox territories. Hence, at best, the study considered lamb predation by only nine foxes each year. Third, lambing on both estates was carried out on enclosed ground close to the farm, where supervision was intensive, and predation would be expected to be lower than on the open hill." Managing British Mammals: Case Studies from the Hunting Debate (2000)

8.2. Professor Stephen Harris

- 8.2.1. Following the foot-and-mouth epidemic in 2001, Professor Harris produced a report for IFAW and the RSPCA, entitled British Hunting Ban had no effect on Fox Numbers. It was published under the name of The Mammal Society.
- 8.2.2. The report was also published in the science journal Nature in 2002 and stated that during the time this disease was prevalent in the countryside (approx. one year), and while hunting with dogs was suspended, there was no change in the fox population level when compared to a previous period. The conclusion of his report was that as there was no difference in fox numbers, hunting with hounds was ineffective and insignificant in terms of population control. "We conclude that there was no significant change in fox numbers during the one-year hunting ban," Harris said.
- 8.2.3. The report also made the claim, without providing any evidence, that other methods of fox control could not have increased. It stated: "Furthermore, due to FMD restrictions on a variety of rural activities, other forms of fox control could not be increased to compensate for the reduction in hunting pressure. Restrictions on access to farmland during FMD also meant that all forms of fox control were curtailed to varying extents, and certainly there was

no opportunity to increase other forms of fox control to compensate for the ban on hunting with hounds. Thus these data also suggest that there is no need to increase other forms of fox culling in the event of a longer-term ban on hunting."

- 8.2.4. There are several reasons to doubt the outcome of this report:
 - There was a fundamental shortcoming in the technique used for estimating fox numbers (faecal counts) and the study was strongly criticised by distinguished naturalists from the Game Conservancy Trust and Oxford University for lacking statistical rigour and a failure to take account of regional variation (Aebischer and others 2003).
 - The study took no account of the inevitable increase in culling by shooting that may
 be assumed to have taken place at the time in the absence of hunting; especially by
 gamekeepers who wished to protect their birds.
 - Since hunting is not spatially continuous throughout a hunt country considerable doubt
 must also be levelled at what proportion of the 160 km² sampled were actually hunted,
 before and after Foot and Mouth disease. Simply consulting a map of hunt boundaries is no
 guarantee that hunting actually took place at a given location within those boundaries.
- 8.2.5. Quite apart from the considerable doubts over the methodology employed by Professor Harris, this study has nothing to do with animal welfare and the debate about whether or not hunting with dogs is cruel.
- 8.2.6. In 2004, a further report on fox numbers by Professor Stephen Harris and others was published in the *Journal of Applied Ecology*. Once again, the work was funded by IFAW. The report, using the same faecal counting method, claimed to provide the most accurate number of foxes in Britain.
- 8.2.7. The main points of the study appear to be the comparison of the total number of foxes that exists at the end of each winter (258,000) with the number killed by hunting with dogs (20-25,000); thereby showing that control by hunting is irrelevant.
- 8.2.8. The report also makes the claim that the hunting world argued that the fox population would explode after a hunting ban. IFAW official states: "This research demolishes arguments by the hunting lobby that foxes need to be killed to prevent a population explosion." News of the report was carried in the national press and the BBC.
- 8.2.9. The report ignores the fact that hunting with dogs is a wildlife management tool, in which selectivity rather than numbers killed is important. It is also the case that the hunting world, along with many others, did not claim that the fox population would explode, but the exact opposite, with other less humane methods being used that are capable of killing many more animals, though not necessarily without wounding.
- 8.2.10. In January 2006, Professor Harris and Philip Baker produced a paper in the European Journal of Wildlife Research, which suggested that there was no evidence to show that culling foxes in forestry areas reduced numbers and that "restrictions on the use of dogs to control foxes are unlikely to result in an increase in fox numbers in commercial forests." The report was produced at a time when there were calls for the Welsh Assembly to call for gun-packs to be exempt from the Hunting Act and allowed IFAW, in its press release and literature, to state that the study "puts pay to the recent pro-hunt lobby for the Welsh Assembly to decriminalise gun-packs." An MP added that: "This study confirms once and for all that gun-packs deserve no special exemption and should not be legalised."

- 8.2.11. The problem with this study is again in the methodology. In autumn, foxes are more likely to be found in areas surrounding commercial forestry, where they can forage widely. They move to the denser forestry when cover diminishes as winter progresses. Fox numbers and fox culling in adjacent farmland were not assessed in this study. There is also concern about the method of fox counting (faecal counts), especially in terrain such as the Welsh hillside farms. One study, based on disputed methodology, surely cannot "confirm once and for all" that the use of gun packs is futile. The argument that gun packs are useless was not one that convinced the Scottish Parliament, which permits their use, despite voting to ban hunting with dogs.
- 8.2.12. In June 2006, IFAW published a report entitled After the Hunt The Future for Foxes in Britain written by Professor Stephen Harris, Piran White and Philip Baker, which purports to be a summary of "new scientific findings". On its release, an IFAW official said, "As this new report shows, the scientific evidence suggests that fox numbers in Britain are self-regulating and stable and the ban on hunting reinforces this view."
- 8.2.13. The report states, "There is some indication that effort expended on shooting may increase immediately following the ban on hunting, at least in the short-term...There is no evidence to suggest that this will cause any decline in fox welfare standards." The report, once again, dismisses the peer-reviewed MWG shooting study and relies instead on the Harris work on X-rayed foxes taken to wildlife hospitals, which has not been peer-reviewed or even published.
- 8.2.14. In relation to hunting, but not wounding, the report refers to three instances where it was thought that hunted foxes, which had escaped and found refuge underground, nevertheless still perished. The instances came from books were published over forty five years ago.

9. Closing statements from the Co-chairs of the All Party Parliamentary Middle Way Group (MWG) and the Veterinary Association for Wildlife Management (VAWM).

MWG "This report provides the first opportunity to scrutinise the various claims justifying a scientific basis for a ban on hunting with dogs and demolishes these claims.

For decades, groups opposed to hunting have produced documents that appear authoritative, often quoting scientists and their work in support of a ban. Yet, despite these claims of scientific backing, not a single study showing excessive suffering resulting from hunting with dogs could be provided when requested.

Nevertheless, chasing wild animals with dogs is automatically regarded as an act which causes suffering and the coincidental fact that it is also regarded by followers of the hunt as a sport only serves to attract further unjustified condemnation.

The Middle Way Group challenges both of these perceptions and seeks to produce scientifically sound information with the aim of genuinely improving animal welfare.

The dubious anti-hunting propaganda circulated to the media and Parliamentarians was welcomed by those who were determined to ban hunting for reasons other than animal welfare. However, for those who may honestly have felt that a ban would relieve animal suffering, it is important that the record is set straight.

Parliament does not make judgements based purely on science, but science can guide and inform those who create our laws. To invent, deliberately misinterpret or ignore evidence, the results of which are then fed into the legislative process, is a serious charge. This examination of the so-called science put forward to justify the Hunting Act demonstrates that Parliament, the media and the public were deceived."

VAWM "This carefully compiled document comprehensively puts the scientific record straight in respect of the hunting debate and demonstrates that there are not and never were any scientific grounds for banning hunting on the grounds of cruelty".



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