

The Need to Manage Some Wildlife Populations

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Abstract

Fox, deer, mink and badger are almost without natural predators in the UK other than man. Thus, unless their populations are managed:

1. The “natural” death of such species will be by disease, starvation or injury
2. The health and vigour of such populations will inevitably deteriorate
3. Predation on vulnerable livestock, wildlife and crops (deer and hare) will be unrestricted.

A general overview will be given of the five species in respect of their current health status, their population trend and how they are currently managed. It will be shown that the present national fox and hare populations and the Red deer population of the West Country are presently in relatively good shape and under control. But the national mink population and some other deer species are giving cause for concern while the badger population is out of control and in some areas badgers suffer from serious endemic disease.

It is recommended that the present integrated methods of management for fox, hare, Red deer and mink be left in place but a radical reappraisal of badger management should be implemented that returns badger management to the discretion of the local landowner.

The conflict between the welfare of the individual and population will be illustrated by:

1. The current epidemic of phocine distemper around the coastline of the UK
2. Management of red deer in the West country.

Introduction

A general overview of the fox, deer, hare, mink and badger who, with the exception of the hare, are almost without natural predators in the UK other than man. Thus unless such populations are managed:

- The “natural” death of the species will be by disease, starvation or injury.
- The health and vigour of the populations will inevitably deteriorate as numbers rise.
- Predation on vulnerable livestock and wildlife (fox, mink and badger) and damage to crops and land (deer, badger and hare) will be unrestricted.

The misguided thesis that populations find their own level is to be rejected. Natural biological control of fox numbers and the other quarry species will not occur until two factors - shortage of food as a result of overpopulation plus disease - are so extreme as to suppress reproductive activity. Clearly this does not represent a healthy and vigorous wildlife species. Furthermore the population level of foxes, for example, at which this

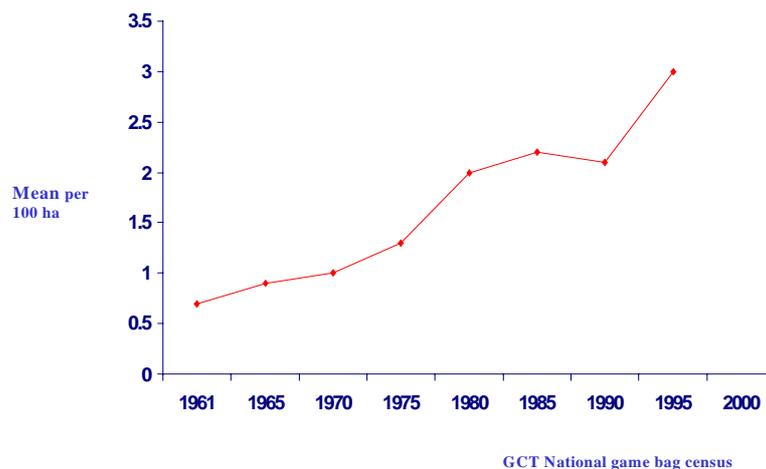
so-called 'control' might occur, would induce levels of livestock predation totally unacceptable to farmers and would also seriously disturb the overall balance of other wildlife.

Man has a responsibility to manage the countryside he has created and the wildlife population therein.

The Fox

The overall fox population is estimated to be 240,000 of which some 14% are in urban locations. Approximately 425,000 cubs are born each year and clearly to achieve a stable population this number of foxes must be culled or die each year. National estimates for annual fox deaths due to shooting (80,000) and hunting (16,000) account for less than 25% of this figure and it seems unlikely that other causes of mortality make up the necessary number for stability. The upward trend indicated in the figure below would seem to support this view.

Fox population density



Fox population and mortality data from Tapper (1999).

The rural fox population is presently in good shape and at an acceptable level in most regions, largely as a result of balanced management by shooting, snaring and hunting. Overall it is not regarded as a serious pest in the countryside. However in spite of this, data from the Game Conservancy Trust's (GCT) National Game Bag Census above, suggests that the overall rural fox population may be on the increase.

It should be borne in mind that apart from being a predator of vulnerable domestic livestock and wildlife, foxes carry several unpleasant diseases that are transmissible to man and domestic animals, e.g. Sarcoptic mange, leptospirosis, certain tapeworms,

canine distemper and rabies. As yet the tapeworms and rabies are not a problem in the UK but sarcoptic mange is a very real hazard and is on the increase through Southern England and the West Midlands. There is a need therefore to ensure that present management practices are not relaxed.

The urban fox is a highly adaptable animal able to colonise a wide variety of urban habitats. It has become a bold, scavenging animal that thrives on waste food and one which has lost much of its instinctive fear of man. Associated with these clear behavioural changes there is now DNA evidence that urban foxes have become a discrete population (Dr.J.C.Reynolds, personal communication).

The urban fox population is largely unmanaged and, as a result, out of control in many towns and cities where it has become a public nuisance through damage and fouling of property and predation on domestic pets. Such populations are susceptible to disease epidemics, which can lead to wide fluctuations in numbers. The risk of transmission of diseases such as Sarcoptic mange and canine distemper to man and domestic animals is increased in the urban situation.

The urban fox has become a pest and is a potential disease hazard for man and domestic animals. A substantial reduction in numbers is therefore desirable.

Deer

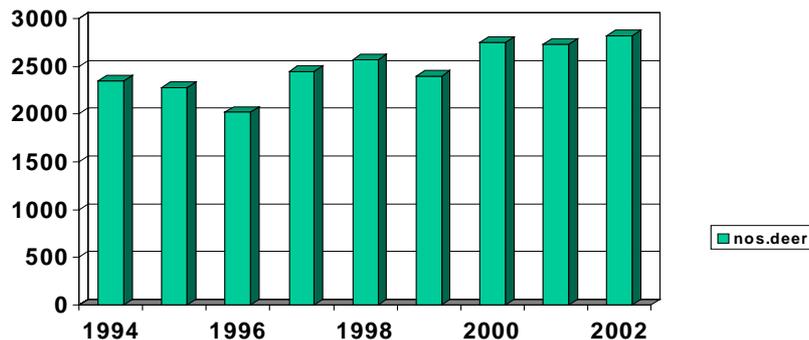
The majority of Red deer in the British Isles, approximately 300,000, are in Scotland. Numbers are controlled by shooting, with an annual cull in the region of 50,000. The management is coordinated by, amongst others, the Deer Commission for Scotland.

The population of Red deer in England and Wales is estimated at 12,500, of which 10,000 are in the West Country with around half in the hunting territories. This latter population has been for many years in good shape and at an acceptable level as a result of careful management by hunting and shooting. However the overall management, which is largely carried out by the hunts, has been severely compromised since 1997 by the local ban on deer hunting imposed by the National Trust and the Forestry Commission. On Exmoor this problem is exacerbated by the presence of a 220 acre 'sanctuary' owned by the League Against Cruel Sports, where deer are now reported to be suffering severe health problems due to overcrowding.

Overall numbers of Red deer on Exmoor and the Quantocks (see figure below) where hunting takes place appear to be stable. However there are a number of serious concerns about the health and quality of the herd. Firstly, that the proportion of males to females is becoming distorted due to an increase in shooting which is disproportionately culling mature males for trophies, a practice driven by the high price obtainable for stalking rights and the depression in farm incomes. Secondly, in areas where hunting is no longer possible deer are no longer being moved around, so farmers are having to fence off land to prevent excessive damage to crops and trees with the result that there has been a significant net reduction in available grazing for the deer. Thirdly, and perhaps most

critically for the welfare of the deer, the hunts are unable to exercise their unique search and dispatch service for weak, sick and wounded deer over those areas where a local ban is in force.

Exmoor and district deer census

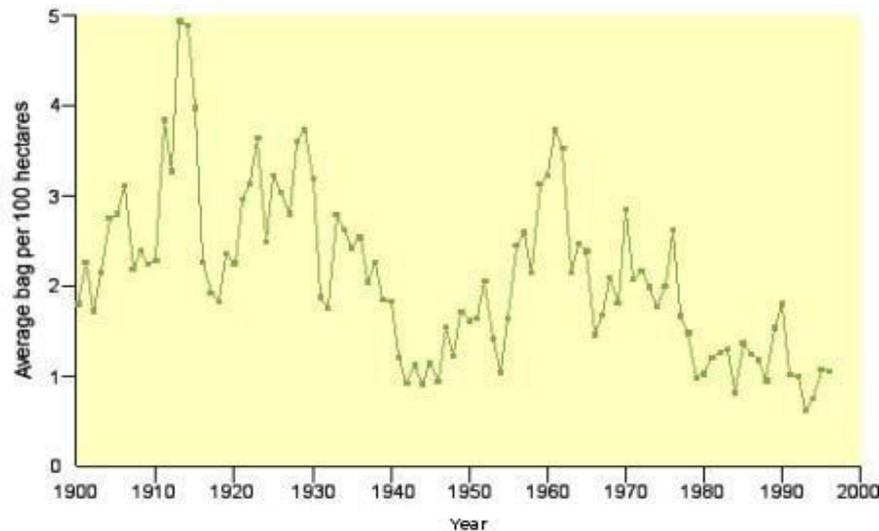


Source Exmoor & District Deer Management Society

Numbers of Red deer in England and Wales, estimated at 12,500, are generally regarded as being too high. However, along with the other species of indigenous deer - Sika (population data unavailable), Roe (5-600,000), and Fallow (100,000) - they are in relatively good shape due to management and culling by shooting. Wide regional variations occur and there is a need for more coordinated management of the kind operated by the Deer Commission of Scotland and the two hunts in the West of England. Sika deer represent a problem in Scotland since they will hybridise with Red deer. Muntjac (40,000) are giving cause for concern in England since they are a small species which live in relatively dense woodland as such are not easily controlled by shooting. Their habitat is expanding and numbers appear to be increasing. National estimates of deer numbers are taken from Tapper (1999) and MacDonald (2000)

The Brown Hare

Hares, particularly young leverets, are predated on by foxes but the impact on the population as a whole is relatively insignificant. Hare populations fluctuate widely, largely as a result of weather conditions and the impact this has on breeding and nutrition. Explosive regional overpopulation may occur in some areas of the country, necessitating control. The hare population, like the fox, is at present in good shape and at an acceptable level as a result of management, largely by shooting. Data from the Game Conservancy Trust's (GCT) National Game Bag Census below indicates that the hare population has been relatively stable in recent years.



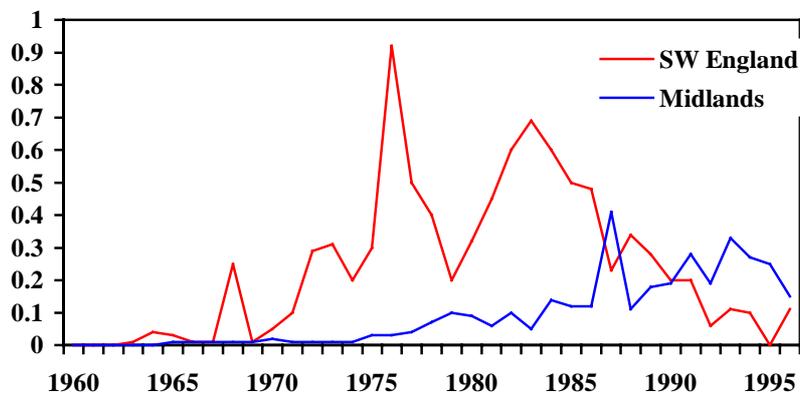
Research by the GCT has identified large areas of the British Isles which could support hares if a more sympathetic crop and pasture rotation were practised. It is estimated that a doubling of the present population of 800,000 could be achieved (Tapper 1999). There is a need to avoid harmful pesticides and to prevent illegal poaching of hares. The recent increase in numbers and spread of large raptors, particularly red kites and buzzards, could have a serious detrimental impact on hare numbers.

Hare hunting and coursing interests make a substantial contribution towards conservation and the enhancement of hare numbers. But compared with shooting, hunting has little impact on numbers *per se*. However it performs a vital function in detecting and dispatching wounded and diseased animals especially after organised shoots.

Mink

Mink, an exotic species that “escaped” in the 1950s, have very successfully colonised the waterways of lowland Britain. They are serious predators of vulnerable livestock and wildlife, particularly of water voles and ground nesting birds.

The population, estimated at 110,000 (Tapper 1999), is partially under control as a result of a combination of hunting and trapping. Data from the GCT below indicates that regional control in the South West of England is being achieved, which is coincident with a rise in the otter population.



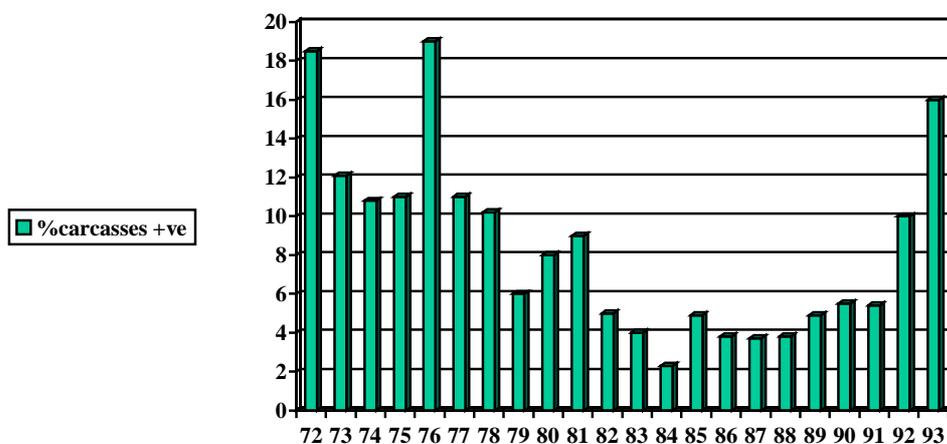
Mean numbers of mink killed per 100 hectares in two areas from Tapper (1999)

The Badger

The badger is a classic example of a population out of control through lack of management. Since the Badger Act of 1973 it has been a criminal offence for anyone to kill, snare or trap badgers. As a consequence the population has expanded unchecked. The last national estimate in 1997 put the population at 350,000. Tapper (1999) has estimated that this represents a 75% increase in the population since the 1980s. Since the 1999 study anecdotal evidence from farmers, gamekeepers and landowners across the country suggests that this population expansion is being sustained if not increased.

Population expansion causes family units to expand so young adults are forced to leave, especially young males, often with considerable fighting and wounding of badgers. Badgers which are forced out move on to new territory and the cycle continues. This cycle probably accounts for the largely unchecked spread of bovine tuberculosis presently occurring in the UK, which in turn is indicative of the rising and spreading national population.

Chronic, terminally fatal tuberculosis also represents a serious decline in the health and vigour of the badger population itself. Data below published by MAFF shows the proportion of badger carcasses examined that were positive for *Mycobacterium bovis* in South West England (1972-93). These are overall figures: localised areas with much higher levels of infection are likely to occur. The figures cannot be expected to have reduced in the last ten years.



Proportion of badger carcasses positive for *M.bovis* in South West England (MAFF).

Not only do badgers represent a reservoir of infection for cattle, they also represent a reservoir for wildlife, particularly deer, for which contact transmission will be greater in the herding deer such as red, sika and fallow deer.

Badgers are significant predators of ground nesting birds, hedgehogs and free-range piglets. This latter observation reveals an obvious route whereby bovine tuberculosis could establish in free-range pigs. Apart from spreading disease, the badger population expansion is leading to substantial damage to agricultural land and property through earth workings.

Badgers have now become, through lack of management, a serious and widespread agricultural pest and disease hazard to man, domestic animals and wildlife.

The Future – management proposals

Rural fox, hares and deer

Management of the rural populations of fox, hare and deer should be left largely as at present, using a balance of shooting, hunting and snaring (foxes only). Although, as mentioned above, the establishment of more, effective regional deer management schemes in England and Wales is desirable. All three wild mammalian populations are however generally in good shape and to remove any one of the present methods of control would inevitably cause an imbalance and lead to deterioration in the welfare of the species. An indication of the effect that may be produced by radical intervention is already being seen in the Red deer population of Exmoor and the Quantocks consequent on the regional hunting bans mentioned above.

Improved habitat management, as mentioned above, could encourage a rise and spread of the hare population. A need to restrict predation on hares by large raptors may become necessary.

The urban fox

The objective for the urban fox population must be to substantially reduce numbers both for reasons of public health and public nuisance. The urban fox is relatively easy to trap and can then be humanely destroyed. The present *ad hoc* policy of some urban authorities to trap foxes and subsequently release them in the countryside is to be deplored. It simply shifts the problem but more importantly leads to suffering of the released animals, which being unused to surviving in a rural environment are either readily shot because of their proximity to farm buildings or die of starvation being unable to scavenge adequately for food. The situation is exacerbated since many released animals are severely debilitated by sarcoptic mange. Their survival rate is consequently low.

Artificial control of either the **rural or urban fox** populations by hormone treated baits or immunocontraception, although theoretically possible and attractive to research groups, is not at present a realistic option. Even if either method could be developed it would undoubtedly be expensive and difficult to implement and maintain as an ongoing exercise. Experience in Europe with immunisation of foxes against rabies using baits containing live vaccine has already revealed a reluctance of some countries to keep up the essential immunisation programmes due to cost. There seems little sense therefore in trying to develop unrealistic and potentially expensive methods of control when the presently available and proven methods of control - shooting, hunting, trapping and snaring - when applied properly, are more than adequate management techniques. Artificial control of animal populations also raises ethical and environmental safety questions.

Mink

The objective for mink must be to eradicate the species from the British Isles. Successful eradication of the coypu in East Anglia demonstrates what can be achieved. It is essential to retain both hunting and trapping to maintain the present level of control. Shooting mink is not a realistic method of control except perhaps in association with hounds to detect and flush the quarry into the open. Encouragement of the otter population may have a part to play in mink control.

The Badger

A radical reappraisal is required for the management of the badger in the British Isles to bring the present worsening situation under control.

At present although it is possible for landowners to obtain temporary licences to control excessive numbers of badgers the process is excessively bureaucratic and does not allow

the necessary flexibility for effective control. We propose therefore that the present badger legislation is modified to enable land managers or their nominees (and only them) to deal with their local problem by culling excessive numbers of badgers. Such a measure would ensure that the population of badgers remains at a reasonable level and numbers in setts are not allowed to build up causing fighting, upheaval in the groups with consequent migration to new areas and further spread of disease. This would bring the control and legislation relating to badgers in line with existing deer legislation, which since the early 1960's has been successful in maintaining a healthy deer population and at the same time has been a vital factor in managing their numbers. It should also include a close season.

Culling of badgers should be carried out using a rifle. Badgers represent an easy target for knowledgeable and experienced persons. Trapping is unreliable and less humane for a wild animal due to the period of incarceration. The same reservations given above for artificial control of foxes apply equally to badger control.

Conflict between the welfare of the individual and of the population

In the management of wildlife populations, particularly those that have no natural predators, it is necessary to reconcile the welfare of the individual with that of the population. This conflict may be illustrated by two examples:

1. Phocine distemper

This currently affects large numbers of seals on the East Anglian coast. It is caused by a highly infectious virus, similar to the canine distemper virus, and leads to acute systemic disease, debilitation and death.

So-called animal welfare organisations, such as RSPCA, attempt to treat affected seals. The attempts are likely to be futile. The suffering of the animals will be protracted. The few animals that survive the disease will probably die soon after release. But more important for the population, live infected animals represent an enormous reservoir of infection for healthy animals. The remedy is clear: immediate humane destruction of affected animals.

2. Deer management by the hunts

Whereas the culling of seals affected by phocine distemper removes *infected* animals, deer management by hunting removes *defective*, weakened or aging animals from the population thereby maintaining the health and vigour of that population. This highly selective system of management has evolved over the years and involves individual identification of the animal to be culled by the harbourers in the days prior to a hunt, who then inform the huntsmen of the animal/s to be culled and where they can be located. Hunting of the three other quarry species – fox, mink and hare - operates in a similar but natural selective manner whereby the weak and diseased are caught up with by hounds and culled in direct proportion to their debility.

These two examples demonstrate that whilst the immediate welfare of the individual animal is important it should not be allowed to prejudice the long term welfare of the population as a whole. Removal of diseased (infective) or defective animals minimises the suffering of individuals and benefits the population as a whole.

Conclusions

1. There is a clear need, indeed moral obligation, for man to manage some wildlife populations, especially those without natural predators – *laissez faire* will not do.
2. The present day balanced methods of control are effective for the four quarry species. In contrast, lack of management of the badger population since 1973 has led to spread of bovine tuberculosis nationally, serious agricultural nuisance and a marked deterioration in the health and welfare of the population.
3. Hunting supplies a unique and vital search and dispatch function whereby the weak, the sick and the aged are selectively caught up and humanely dispatched, in direct proportion to their debility, thereby maintaining the health and vigour of the species. It is the most important and overwhelming welfare argument for the retention of hunting in all parts of the country.
4. Radical intervention such as a ban on hunting could seriously upset the present balance of control for the four quarry species and lead to a marked deterioration in their welfare.
5. Improved and better coordinated regional management schemes are needed for deer in England and Wales.
6. A radical rethink is required to manage the badger population. Responsibility for control should be returned to local land managers.
7. The short term welfare of the individual should not be allowed to prejudice the long term welfare of the population.

References

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