Deer management and biodiversity in England: the efficacy and ethics of culling

This article examines the issues associated with controlling deer numbers in order to protect biodiversity. It concludes that culling is in danger of becoming increasingly indiscriminate and that a different perspective derived from ethology and philosophy demands a new approach. The impact of deer on other species is largely true for a narrow range of habitats upon which relatively few species depend, species whose habitat should nonetheless be safeguarded.

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The relationship of deer to the extinction of other species is an issue of growing importance; biodiversity losses continue unabated and deer populations continue to increase. There is a consensus between government and conservation non-governmental organisations (NGOs) that biodiversity can only be sustained by managing deer numbers, and indeed some evidence that co-ordinated deer management can improve the condition of woodlands classified as SSSIs. In response to increasing deer numbers government policy has recently moved to encourage more culling. But what of the deer themselves? Public interest in deer welfare was briefly ignited in October 2010 following media coverage of the Emperor of Exmoor and so-called ‘trophy hunting,’ but little concern is expressed for the 350,000 deer shot in the UK each year.

This article is written from the perspective of a woodland owner who sees at first hand the environmental damage caused by two deer species, fallow and muntjac. The consistent advice provided by different agencies is that deer culling is the prerequisite to good woodland management. However, research suggests that culling is ineffective in several respects and advocates generally exclude the inherent welfare dimension to killing deer.

Extinction abroad and closer to home

Richard Leakey coined the phrase ‘the sixth extinction’ and habitat deterioration and species loss seems to be confirmed consistently. Evolution Lost stated that across the world mammal, bird, reptile, fish and amphibian populations had declined by 30 per cent in the last 40 years. In 2010 was the UN’s International Year of Biodiversity; many governments signed the Convention on Biological Biodiversity...
and the European Community aimed to halt biodiversity losses by 2010. Regrettably research suggests the Community is not succeeding and species loss in the UK may be continuing at between 5 and 30 species every year.1 One of the most wildlife rich habitats is woodland, and it is here that habitat degradation has caused 40 per cent of the UK’s species extinctions since 1800.6 Since 1990 broadleaved woodland has increased by 5 per cent, but this has coincided with a 34 per cent decrease in wild flowers and a calamitous 74 per cent reduction in woodland butterfly populations.7 More woodland yet apparently less biodiversity can in part be explained by the fact that ancient woodland - woodland with a continuous history since 1600 - comprises less than half of the UK’s woodland cover of 12 per cent,8 and new woodland does not have the flora richness of ancient woods. Another factor is, perhaps, the increasing presence of deer.

The impact of deer on biodiversity

Oliver Rackham makes the case against deer; “the biggest... threat to woodland is browsing animals... [they] subtract much of the woodland ground vegetation, replacing it with browsing-adapted plants, especially grasses. They render coppicing impracticable. They convert a woodland ecosystem into trees plus grass with no long term future for the trees”.9 He goes further; “deer are a really serious problem... [they] affect ground vegetation, small mammals, birds and invertebrates... Nearly all the efforts are anti-conservation; they subtract features from woodland without adding features.” Rackham provides evidence for his views, including studies attributing Oxlip declines to excessive deer browsing.10 He is not alone; Putman concludes “there is no doubt that... deer in sufficiently high density can inflict considerable damage of real economic consequence”.11

The consensus appears to be that excessive deer numbers inhibit woodland regeneration and damage the shrub understory and flora habitat necessary for many woodland species. However, some alternative perspectives can be found. The Woodland Trust has questioned the links between browsing and ground flora species richness and asserted that declines in bird numbers do not correlate with deer data.12 Greenwald’s research even suggests “the counterintuitive possibility that [deer] reductions could adversely impact some populations of common amphibians, reptiles and invertebrates”.13 More fundamentally Hambler has questioned the efficacy of some traditional woodland practices, such as coppicing, and has argued that these favour a limited number of charismatic light loving species (e.g. butterflies) and ignore the over 25,000 ‘decomposers’ which prefer high succession woodland. The optimum habitat is for half the woodland to be dead or dying, providing the necessary volume of deadwood required by most woodland species. Deer do not make dead trees anymore dead than they already are, and by far the greatest threats to this environment are woodland management practices – whether ancient or modern. Wood merchants will recommend removing dead standing trees as they ‘infect’ live trees destined for timber14 and the modern thirst for woodburning stoves and ‘green’ energy may be encouraging a revival of coppicing, but also removes the key ingredient necessary for most woodland species – dead wood.15 In this sense people not deer are the greatest threat to woodland biodiversity.

Increasing deer species and population growth

It is widely believed that there are more deer in the UK than at any time in the last one thousand years;16 there are estimated to be between 1.5 and 2 million deer.17 Red and roe deer are acknowledged as the only native deer, with fallow deer probably being introduced by the Normans. There are then some more recent arrivals, the most recent introduction of which is muntjac, reputedly an escapee from the Duke of Bedford’s estate in Woburn, Bedfordshire, in the early part of the last century though Putman argues there were additional deliberate releases.18 The Muntjac seems to have a real palate for our native wildflowers, and is consequently seen as a particularly damaging alien species. The reasons deer numbers are increasing may be several-fold, including more woodland areas being planted and especially the green corridors between woodlands, a previous run of milder winters and a greater variety of winter crops.

The reality of culling and its variance from best practice

The Forestry Commission’s ‘deer management principles’ – and the view taken by the Deer Initiative – is that up to 25 per cent of deer should be culled each year and the focus should be on mature females.19 A well-organised culling programme should enable the maintenance of a healthy herd, keeping deer numbers to manageable levels and producing a sustainable source of venison. The Deer Initiative was set-up in 1995 and recommends the establishment of Deer Management Groups to coordinate the culling of deer over wider ranges. Best practice is perhaps epitomised by the approach taken by a well-known local deer expert (and BANC member), Peter Donnelly, who featured in the national press following the death of the Emperor of Exmoor, which Donnelly considered ‘unsporting’ because the stag was...
taken before the rut. Donnelly’s view is that deer must be harvested (sic) in what amounts to a sort of free range farming as stalkers know the deer on Exmoor well and are able to target individuals before they ‘go back’. A previous contributor to ECOS, David Blake, makes similar points and argues that culling has advantages over natural predation in so much as the stalker can cull evenly across age groups instead of ‘slaughtering the young and stupid,’ which habitually happens when ungulates are naturally predated.

But does deer culling work? The evidence suggests not. First, deer numbers are rising; officers from Natural England and the Deer Initiative estimate that the deer population will double in 10 years. The Deer Initiative may be a logical approach, but the reality is that co-ordinating a range of disparate elements is hard to achieve. Additionally, in the author’s experience stalkers simply wish to shoot deer, and in the small privately owned woodlands which form the habitat of many of Britain’s deer it is not a question of shooting older deer or does rather than bucks – it is about shooting what comes in sight, safely and hopefully cleanly.

One Oxford academic, who sits on the Wytham Woods management committee, advised that deer management in the woods constitutes fencing an area targeted for re-generation and then shooting all the deer within the fence. He said this occurred in many woods. When mentioned to a scientist based at the Game & Wildlife Conservation Trust he commented “this sounds pretty sound to me.” Is this a description of indiscriminate slaughter or a pragmatic approach to culling the remaining few deer foolish enough to remain within a fenced enclosure?

Research conducted for this article included contacting The British Deer Society (BDS), The Forestry Commission (FC), The British Association for Shooting & Conservation (BASC) and individual stalkers. Data on deer management in England is limited in part because unlike Scotland there is no statutory duty to report culling data. However, while the data are partial, clearly mature females are not the only focus of stalkers. The latest BASC survey suggests as many as 173,000 deer are culled in England each year. This does not specify age or gender, but the FC reported that in the season ending March 2010 of the 11,000 deer culled on FC land 5,000 were adult females, 4,000 males and 2,000 (gender unspecified) juveniles. British Deer Society data also suggest a 51:49 split between genders. Data from stalking carried out on the author’s land confirmed more males than females were culled. The published diary of a professional stalker, Colin Elford, confirmed that while older females will be targeted instead of younger deer, essentially he shot what came in range. What this data collectively evidences is that the ‘harvesting’ approach adopted by stalkers such as Donnelly is not the pattern predominating in England. Moreover, in order to increase the number of deer culled the Government has legislated to lengthen hunting seasons and even gone so far as to allow dependent fawns to be culled when deprived of their mother – further indicating that the key concern is cull numbers, not best practice.

In summary, in response to the increasing deer population evidence from both hunting organisations and other sources, coupled with the trajectory of government thinking, is to cull increasingly indiscriminately – basically to kill as many animals as possible – in contrast to the ‘principles’ promoted by the FC and Deer Initiative which espouse maintaining balanced populations. That this approach continues to fail in appreciably reducing deer numbers should be no surprise. As Putman observes, the natural response of population decreases is an “increase in productivity”, through reproduction, immigration and increased survival. “If population levels are lowered artificially, the density-dependent brake is released: reproduction increases, mortality declines”. He also stresses that culling animals of the wrong age or gender can be counter-productive, because if the normal social structure and organisation is disrupted, damage to trees increases as deer display abnormal behaviour.

Whether deer suffer and if so how much and how many

The degree of suffering might be supposed to hinge on how cleanly deer are shot, but there is dissent on this very point. Following submissions to the Burns enquiry on hunting with dogs, veterinarians took issue with Sir Patrick Bateson’s and Elizabeth Bradshaw’s view that “the welfare costs associated with hunting Red Deer [with hounds] were higher than those associated with stalking”. This included a discussion on whether shot deer do not feel pain in the way humans have avoided experiencing in some circumstances. Depending upon how and where a deer is shot clearly impacts on when it loses consciousness. The British Deer Society has tried to establish how often deer are wounded or killed cleanly. From an on-going survey, and what the Society admits is a small sample of just over a 100 hunters, it
Controlling deer populations through non-lethal means

The Government alludes to non-lethal methods of deer control by stating that they may make a “valuable addition to lethal methods, but [are] unlikely to replace them”. This is not the position of Dr Jay Kirkpatrick who argues that a technique called immuno-contraception can “achieve zero population growth relatively fast but it takes some time to actually reduce the population, but it can – and has been – done”. In one trial 88 per cent of females did not become pregnant in the first year. Other research cited by Kirkpatrick indicated a 60 per cent total population reduction in White-Tailed Deer. This coupled with more traditional techniques of providing mineral licks and sugar blocks have the effect of ‘holding deer’ in given areas and reducing their propensity to strip bark. There are numerous captive deer populations in England such as those in Richmond Park, London. The park is closed for culling operations and the local community is not likely to oppose piloting immuno-contraception techniques from America. Kirkpatrick’s views are not, however, shared by all experts; Jonathan Reynolds of the Game and Wildlife Conservation Trust does not believe ‘that immune-contraception is just around the corner and only needs a bit of money to make it a workable technique.’

If all animals are equal, are deer less equal than others?

There appears not to be a consensus concerning the merits of immuno-contraception, but perhaps different values are at play here as much as scientific evidence. In the UK discussions about conservation and deer management centre
on the need to maintain balanced deer populations and the research undertaken for this article has identified some concern for animal welfare. However, within this discussion no commentator, to the author's knowledge, has suggested "that we extend to other species the basic principle of equality that most of us recognise should be extended to all members of our own species". 42 Darwin suggested that the difference in minds between people and animals was one of degree not kind 43 and Bentham argued that the capacity for suffering was the vital characteristic that gives a being the right to equal consideration. 44 These ideas have been expanded by the philosopher Peter Singer and others. More recently Bekoff and Pierce, a scientist and philosopher respectively, have gone further suggesting that "new information that's accumulating daily is blasting away perceived boundaries between humans and animals" 45 and argue that animals have the capacity for moral lives. This intervention makes an already complex area much more so.

If deer are viewed as ‘game’ or relatively anonymous herd animals, or even as pests, then most readers would probably still advocate management methods which minimise suffering. If, however, the view is taken that animals in general and deer in particular are different from ‘us’ in degree not kind 46 the corollary is that suffering should not be minimised but avoided. Immuno-contraception techniques may well need perfecting, but there is evidence that they work in some circumstances and certainly their use could be explored more vigorously than at present.

Avoiding unintended consequences

Some commentators promote the happy convergence of hunting and its economic and environmental benefits. This is one argument put forward by ECOS author David Blake who suggests hunting is somehow part of people’s ‘evolutionary biology.’ 47 The combination of ethology and philosophy provides a different if for some rather inconvenient perspective. It is not enough, however, to only argue that hunting should stop and that deer numbers could be reduced by limiting their effectiveness to breed – individual deer would then grow old and become infirm and die a lingering death. This is arguably less humane than continuing to cull and as a potential nightmare of unintended consequences has to be avoided.

Conclusion

With increasing deer numbers it is likely that government agencies and NGOs will call for greater and more co-ordinated culling. Although the Government has abandoned plans to sell off FC forests the countryside is not likely to remain static in the years ahead – ownership may become more diffuse and organised culling based on the best ‘deer management principles’ increasingly challenging. If, as evidence suggests, this will mean increasingly indiscriminate culling and possibly more suffering, how can this be reconciled with the view that people share more in common with deer than not. With deer numbers predicted to increase it is time to draw on the experience of non-lethal forms of population control carried out in other parts of the world. This will have the added benefit of avoiding the suffering entailed in stalking deer however much organisations like the Deer Society try to minimise it.

Most woodland species require high succession woodland cover which deer affect rather less. Although this perspective conflicts with the widely received view held by most conservationists about what woodland management is all about, the fact remains that high deer densities adversely impact on understory shrubs and light loving plants upon which many other woodland species depend. This only reinforces the need for an effective population control mechanism to replace ineffective culling.

Insufficient eclectic thought is being given to the issue of species’ overabundance; ethology and the insights offered by philosophers such as Singer compel us to look at the problem afresh.

References

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Wild rights – campaigning for the Tay beavers

A Facebook campaign to celebrate wild nature taking its course is gathering pace...

LOUISE RAMSAY

On 26 November 2010 Scottish Natural Heritage announced that it intended to trap and remove the beavers living free in the Tay river system. The news was disappointing, but came as no great surprise. It had been known that beavers were living in the catchment since May 2001 when a group of people, including wildlife conservationists, saw a beaver swimming in the Earn while out canoeing. Over the years it has become apparent that beavers were breeding successfully and that this was becoming widely known.

Gathering support via the web
The Facebook campaign ‘Save the Free Beavers of the Tay’ was started by me shortly after the SNH announcement. I began it because I had seen our son, Adam Ramsay, have great success with a Facebook campaign a year ago and felt it was a good starting point to disseminate information and provoke discussion. An early outcome, as membership was growing, was the support of the local newspaper, the Blairgowrie Advertiser, which is now selling T shirts with a ‘Hands off our Beavers’ slogan. Since then we have had considerable coverage in the press. My husband Paul and I have administered the group and added information to it in ways that have kept the discussions lively, but otherwise we have largely left it to its own devises.

We held our first meeting in Blairgowrie in January. It was well attended, and the discussions lively, but otherwise we have largely left it to its own devises.

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