

To the Minister for the Environment, Climate Change and Land Reform
cc. Secretary of State Roseanna Cunningham

18th September 2020

Dear Ms Gougeon

Forestry and Land Scotland's September culls of female red deer

The British Deer Society exists to promote understanding of the biology of deer in the British Isles with particular reference to their impacts on the natural habitat, forestry, agriculture and areas to which the public have access, and to develop and promote understanding of effective and humane methods of management both of deer populations and their impacts. We have over the past few weeks received a great number of emails from members and others expressing their concern about the decision of Forestry and Land Scotland to cull red deer hinds throughout the month of September under the provision of their General Authorisation. Our correspondents are primarily concerned about the welfare implications for those juveniles not shot with the mother who are thus orphaned.

While we are in no way critical of FLS for their actions, and appreciate that they are acting entirely lawfully under their General Authorisation, the amount of concern we hear expressed makes it clear that many members of the public are unhappy about the situation which makes us wonder if perhaps the whole matter of Authorisations in general –and the earliest cull date to be permitted under such authorisations - may require re-examination.

As you will be aware, just after Scottish Natural Heritage took over the duties of the former Deer Commission for Scotland, an advisory Deer Panel was established to include representatives of the deer sector who could advise the Directors of SNH of the likely sectoral reactions to SNH initiatives, developments and proposals. The BDS was represented on this Panel by the Scottish Secretary John Bruce. The Panel met frequently through 2010 and 2011 to consider various reviews and proposals arising from ongoing changes to the Act. However, the development and completion of the concept of General Authorisations and Specific Authorisations went ahead swiftly without any consultation, not even with that appointed Deer Panel. A consultation was held in 2013, to consider the experiences of the recently implemented arrangements, but we were advised that there had been insufficient public interest in the dates selected as to warrant any alterations, despite our personal attempts to persuade SNH otherwise. A further wider consultation of all Authorisations was undertaken in 2016, but concluded that such authorisations are required and that no changes were required to the dates of the General and Specific Authorisations. We might note however that the recent report of the Deer Working Group convened by Government, concluded, at paragraph 5.57: *"In reviewing the dates for the restricted close season for female deer, the Group's view is that the season should not start before the current date of 1st April and should not end before the current date 31st August. However, the Group also considers there is a case for the delaying the start of the close season to 15th April and a case for delaying the end of the season to 15th September"*. Although these comments relate to the general open and close seasons, if the Working Group felt that there were indeed potential welfare issues arising from culls carried out before 16th September, then presumably these concerns should also apply to Authorisations.

The dates for the permitted start date (and end date) of culling under both General and Specific Authorisations were established in 2012 on the basis of what was then known about the period for which juveniles might remain nutritionally dependent on the mother and assessed to be on the average some 12 weeks. There is however considerable variation around that average figure; further it has become increasingly clear that, particularly in more social species (such as red deer) calves remain socially dependent on the mother for a much longer period and may suffer significantly if deprived of the dam. Some of these research findings are summarised in an Appendix to this letter.

Given the extent of public concern about the welfare implications of culling red deer hinds throughout September for any dependent calves, we would respectfully request that there should be a further review of the permitted dates under both General and Specific Authorisations to take full account of the recent relevant research on periods of nutritional and social dependency of juveniles.

Sincerely

A handwritten signature in black ink that reads "Tony Putman". The signature is written in a cursive style with a large, prominent 'T' and 'P'.

Chairman, British Deer Society

Appendix

Welfare implications of the culling of mature females in the period following calving

A.1. Where culling of adult females may be undertaken during the period of dependency of offspring there are once again, clear implications both from a population dynamics point of view and from purely welfare considerations.

In this context we should recognise a distinction between the period for which the young may be nutritionally dependent on the mother and the period during which the young are socially-dependent on the mother (which in social species, may be much longer than the period for which they are nutritionally-dependent).

A.2. Neither of these has, to our knowledge been adequately defined for any species. Even in terms of nutritional dependency the recorded period of lactation is not necessarily a particularly good indicator of dependency, in that although females may continue to lactate, and juveniles may continue to take opportunistic advantage of such lactation, for considerable periods, this does not necessarily imply a requirement for that nutritional subsidy. Fallow does for example may still be lactating some 7 months after parturition (e.g. Langbein, 1991), but this does not imply that fawns are actually dependent on that milk, or would suffer loss of condition were it not available.

A.3. To generalize, we would suggest that nutritional dependence ends when physical growth of the offspring is no longer depend to mother's energy budget. The period of 12 weeks is suggested as an average (across all species) by Irvine et al. (2004) but it is clear that there is considerable variation both between and within species.

A.4. While it is difficult to identify an actual time period for that nutritional dependency, the effects of enforced early weaning have been widely studied in laboratory and domestic animals. If nutritionally-deprived, the young animal may die as a consequence, or may be half-starved so that it takes longer to reach good breeding condition (or fails altogether to reach breeding condition). Even if the animal survives, slower growth rate may imply a significant delay in reaching the mature bodyweight and perhaps the threshold for reaching puberty (see for example Hamilton and Blaxter, 1980; Albon *et al.*, 1986). Holand et al. (2012) document significant differences in overwinter body weight (if not mortality) between orphan and non-orphan reindeer calves; we should note however that in bighorn sheep, female orphans and non-orphans had the same weight as yearlings and the same probability of producing their first lamb at 2 years of age (Festa-Bianchet *et al.*, 1994).

A.5. It is clear that the significance of lactation in ungulates changes as the young grow and in the later stages of lactation may become more significant in social bonding than in actual nutritional terms (see as above Holand et al, 2012). Even when the period of nutritional dependence is over, the bond between mother and young in ungulates still has an important social meaning. Often these species are social and females can play a significant role in obtaining access to food (e.g. socially dominant mothers can favour optimal feeding of their young; Veiberg *et al.*, 2004), in teaching population traditions (e.g. migratory route from winter to summer areas: Festa-Bianchet, 1988; Nicholson *et al.*, 1997; Lamberti *et al.*, 2004) or in proper development of anti-predator behaviour (Childress and Lung, 2003; Li *et al.*, 2009; Pipia *et al.*, 2009). All these various social aspects related to social competence and proper exploitation of environmental resources, as well as the avoidance of potential threats, can be lost with the premature loss of the mother, producing individuals with limited chances of survival and reproductive success with obvious limitations to population recruitment.

A.6. In addition, since many animals "acquire" some of their social status within the group as a consequence of mother's status, a young animal whose mother has been killed before it is socially independent may also suffer from being rather low in the dominance ranking.

In red deer calves social rank was related to both body weight and mother rank (Veiberg *et al.*, 2004). Loss of the mother might thus result in an important decrease of social rank.

A.7. However, even within this context, it is again extremely difficult to determine what may be the actual length of this period of social dependency between offspring and their mother.

The time that mother and young stay together can not be used as any clear measure of such reliance since this may change with environmental conditions, habitat use – and differ from year to year. For example, after hotter summers the mother-young bond of Alpine ibex endures significantly longer (Grignolio *et al.*, 2003). Further, the period for which mother and young typically remain together does not necessarily mean that the young are dependent on the mother for that entire period, or that juvenile survival or social integration is actually compromised if the mother is killed before that time.

A.8. Even if there are no objective data clearly establishing the time at which juveniles are no longer nutritionally dependent on the dam's milk we may safely assume as above that *at least* three months are necessary for most species of British deer if the young are to survive at all. On that basis, any shooting of lactating females before this time carries with it a considerable risk of the death of the dependent young by starvation, unless the juvenile is already accompanying the mother and is shot with it. **Best practice would thus dictate that if a hunter is to shoot a female during the period of lactation, he/she must ensure that they also kill any accompanying calf.**

A.9. Problems arise, however, where the hunter may not be aware that there is a dependent juvenile, because it is not actually accompanying the mother. Immediately after birth, neonates of almost any species may not be accompanying the mother; in those species (e.g. roe deer, fallow deer) whose anti-predator strategy makes the offspring “hidiers” not “followers”, this period where dependent young do not accompany the mother may be considerably extended. In such situations culling of adult females will commonly lead to orphaning of dependent young, because the hunter is unaware of the existence of those offspring.

A.10. Such problems are of course most likely to be most acute early in the calving season simply because the hunter may not even be aware that there is a calf at all. But even later in the season, where offspring are accompanying the mother, a strategy of shooting both mother and calf, however appropriate in theory may prove hard to achieve in practice. Problems arise with such a strategy, simply technically (because of the need to shoot two animals in quick succession). Because calves usually linger for a few moments in confusion, after the death of the mother, many hunters advocate shooting the mother first and then shooting the calf while it is still disoriented. But from a purely welfare point of view (to avoid any risk of leaving an orphaned calf) it is actually more appropriate to shoot the calf first – and risk not being able to shoot the mother too.

A.11. As an additional problem, in many social species (for example chamois or roe deer) female groups often consist of a number of different females and their young. In this case it is not always possible to determine accurately the mother-young pair. In either case, whether due to lack of awareness that there are dependent offspring, or lack of ability to shoot both mother and accompanying calf, hunting during the period of dependency may lead to premature orphaning of juveniles. Overall, it is apparent that the killing of the mother before the young are fully independent (whether socially, or nutritionally) has clear implications and we would argue that there is need for further review of those seasons when culling of mature females should be permitted.

This review draws heavily on a report produced for SNH in 2013

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