



Policy headlines

- No compelling evidence exists to support badger culling as a method to control bovine tuberculosis (bTB) in cattle. The Trust is in favour of a sustainable approach to bTB control, including measures such as cattle and badger vaccination, tighter mandatory biosecurity controls, cattle trading restrictions, and improved cattle testing.
- There is very little evidence to support the theory that badgers actively predate lambs. Multiple factors can impact on lamb survival rate many of which can be managed through changes to husbandry practices.
- Hedgehogs and ground-nesting birds are primarily affected by human factors such as habitat loss and climate change. The Trust does not believe that a cull of badgers to protect these species would be justified.
- The Trust would like to see public awareness raised around the common misconceptions regarding badgers and bTB, badgers and livestock predation and badger predation of native wildlife to improve the acceptance of badgers by land managers and reduce incidences of illegal persecution.

Definitions

Cull	To reduce the population of a wild animal by selective slaughter.
Biosecurity	Procedures or measures designed to protect the population against harmful biological or biochemical substances.
Predation	The preying of one animal on others.
Taxa	Plural of taxon. A taxonomic group of any rank, such as a species, family, or class.

Scope

The Eurasian badger (*Meles meles*) is one of Britain's best loved, but also most persecuted species. Since the 17th century, badgers have fallen victim to the illegal and extremely cruel bloodsport, 'badger baiting', which continues to this day. The species is also culled under license in England and Wales, and illegally culled throughout the UK, as a perceived pest to agricultureⁱ.

The main reason for badger culling in an agricultural context is the species' status as a carrier of *Mycobacterium bovis* (bovine TB or bTB). Bovine TB is a chronic respiratory illness that primarily affects cattle. Outbreaks of bTB on farms can lead to the loss of whole herds of cattle and the mental, emotional and financial toll that this takes on farmers, their families and communities can be great. In England, badger culling is one of the main ways in which farmers respond to, or attempt to prevent, outbreaks of bTB. However, the degree to which badgers should be implicated in the spread of bTB in cattle is hotly debated^{ii,iii}. Scotland has held Officially Tuberculosis Free (OTF) status since 2009^{iv}

and as a result there is no official cull of badgers carried out in Scotland^v.

The Trust advocates for the continuation of strict biosecurity measures for cattle to ensure that Scotland retains OTF status. If bTB were to become prevalent in Scotland again, the Trust would want to see badger culling used only if the available evidence indicated beyond reasonable doubt that a cull would be an effective course of action and only employed as a last resort following attempts to use other mitigation methods. We believe that a sustainable approach to disease control should be prioritised. Such an approach should include the vaccination of cattle and badgers, tighter mandatory biosecurity controls, cattle trading restrictions, and improved cattle testing.

Badgers are also perceived to be a predation threat to other livestock, such as lambs, but there is very little evidence to support the theory that badgers actively prey on lambs^{vi}. Claims have also been made of the need to cull badgers to protect hedgehogs and ground-nesting birds^{vii}. However, it is widely agreed that human factors such as habitat loss and climate change are primarily responsible for declines in these taxa^{viii,ix}, not their interaction with another native species with which they have coexisted for thousands of years^l.

Much of the illegal persecution of badgers that happens in Scotland is likely to be driven by the common misconceptions described above. The Trust would like to see public awareness raised on these topics to reduce the demonisation of badgers and improve acceptance of the species among land managers.

The Issues

Bovine Tuberculosis

Although Scotland currently has OTF status, there is an ever-present risk that this situation will change^x. OTF does not mean that there are no cases of bTB in Scotland, just that the number is small and under control. Scotland imports cattle from areas of England with high incidences of bTB so it is possible that infected cattle could be brought into Scotland. A lapse in testing regimes or complacency with biosecurity measures could, therefore, quite easily lead to a bTB outbreak in Scotland^{iv}.

Since 2013, badger culling has been one of the main ways in which farmers respond to, or try to prevent, outbreaks of bTB in England. The decision to begin mass badger culling was made despite the results of the Randomised Badger Culling Trial (RBCT; 1998-2005) which concluded that “badger culling can make no meaningful contribution to cattle TB control in Britain”. The study found that reactive badger culling (culling badgers on and around farms with outbreaks of bTB) could actually increase incidences of bTB due to badgers that survive culling roaming beyond their usual range and therefore spreading bTB further (the perturbation effect)^{xi}.

In the years since the current cull began more evidence has emerged to discredit the policy of badger culling as a measure to control bTB. The prevalence of bTB in badger populations has been found to be as low as 5% and an even smaller percentage are actually infectious^{xii}. Cattle to cattle transmission of bTB is much more significant than badger to cattle and cattle have been found to be around 800 times more likely to spread bTB to badgers than badgers are to cattle^{xiii}. A recent statistical analysis of trends in bTB outbreaks in cattle from 2013 to 2020, which attributed a 56% reduction in new bTB cases in herds to badger culling^{xiv}, has been found to be flawed. The study didn't take into account the rise in improved animal husbandry and biosecurity measures which had taken place over the same period^{xv}.

Lamb predation

Badgers are perceived by some livestock managers in Scotland to actively predate lambs. Badgers are broadly omnivorous, opportunistic feeders with 60-80% of their diet being composed of earthworms. Insects, small mammals, carrion, amphibians, cereals, nuts, fruit and tubers also contribute to their diet^{xvi,xvii}. Badgers have been observed scavenging on sheep carcasses and there may be isolated incidents of individual badgers killing lambs, but the lack of sheep remains found in badger faeces/stomach contents suggests that such events are rare^{xviii}. This has been backed-up further by a recent study which used post-mortem and DNA analysis of lamb carcasses to determine whether badger predation was the cause of death. The study found that foxes were responsible for the predation or scavenging of all of the lambs sent for post-mortem examination and found no direct evidence of badger predation on any of the

lambs. Badger DNA was found on the partial remains of two lambs which couldn't be sent for post-mortem, but fox and dog DNA was also found on the same remains^{vi}.

Predation of native wildlife

Some stakeholders are concerned about the impact that badger predation has on populations of native wildlife such as hedgehogs and ground nesting birds^{vii}. Although badgers are the main predator of hedgehogs in the UK, hedgehogs only make up a small proportion of the badger's diet. The same is true for ground-nesting birds^{xix}. The badger's preferred prey species is the earthworm. Badgers may be more likely to take small birds and mammals when the supply of earthworms is low. Badgers may affect hedgehog distribution in other ways, namely through competition for shared food sources and avoidance by hedgehogs of areas where badgers are present^{xx}. Be this as it may, the interspecies relationships between badgers and hedgehogs, and badgers and ground-nesting birds, have existed for millennia and are not likely to be the main driver of the declines seen in these species since the Industrial Revolution.

The Solutions

Bovine Tuberculosis

The fact that Scotland has maintained OTF status since 2009 shows that it is possible to prevent bTB outbreaks without resorting to badger culling. Scotland has been successful in maintaining OTF status through stringent, risk-based testing regimes, including pre- and post-movement testing of animals brought in from high-risk areas of England and a zero-tolerance policy on tests being overdue. In Scotland we also have the advantage of farms being spaced further apart and farming practices being less intensive than they are in Englandⁱⁱ. The Trust has a herd of Shetland cattle that are used for conservation grazing on our reserves. The herd's bTB risk factor is assessed annually by the Animal and Plant Health Agency (APHA) and, due to its small size and lack of cattle being brought in from high-risk areas, the herd is classed as low-risk and is therefore exempt from routine bTB testing.

The Trust advocates for a sustainable approach to disease control. We want to see cattle vaccination programmes brought in to eradicate the risk of future bTB outbreaks happening in Scotland. Badger vaccination programmes would also be beneficial to eliminate the species as a potential vector. Additionally, biosecurity measures should be tightened up on farms, efficiency and accuracy of cattle testing should be improved and cattle movement restrictions continued. In the event of a future bTB outbreak in Scotland, all of the above measures should be ramped up. With all of this in place, and judging by the science to date, it is very unlikely that a badger cull would be a necessary or effective measure for managing any potential future outbreak of bTB in Scotland.

Lamb predation

High levels of early lamb mortality are an issue for sheep farmers around the world. Around 10-25% of lambs die soon after birth^{xxi}, usually owing to factors such as birth trauma, starvation, hypothermia, hypoxia, maternal malnutrition, parasitic infestations and diseases^{xxii}. Wild mammal predation has been found to contribute to only around 2% of lamb deaths^{xxi,xxii}. The Trust believes that to improve lamb survival rates, farmers should follow the advice of flock health scientists^{xxii,xxiii}, the meat industry^{xxiv,xxv} and farm vets^{xxvi} who suggest the most effective approaches to drive down lamb losses and diseases include collecting routine post-mortem evidence, maintaining systematic farm records, and implementing tailored scientifically based veterinary plans.

Predation of native wildlife

It is widely accepted that the monumental declines in Britain's wildlife since the Industrial Revolution are the result of factors such as habitat loss, agricultural intensification, urbanisation and climate change^{xxvii}. The Trust believes that restoring ecosystems and the habitats within them is the best, most sustainable way to reverse the decline of struggling species. We accept that, in the absence of large predators, there can be circumstances where some common generalist predator species may need to be controlled to protect less common species which are vulnerable to predation. However, in the case of badgers preying upon hedgehogs and ground-nesting birds, given these taxa are known to

make up a very small proportion of the badger's diet, and are only consumed opportunistically, we do not believe that a cull of badgers to protect these taxa would be justified.

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