

19,274 Number of badgers culled in England in 2017.

44,681

Number of cattle slaughtered in Great Britain in 2017/18*

Left: there is evidence of hen harriers ahandoning a roost due to disturbance. Right: the

policy to cull oadgers aims to reduce bTB levels in cattle, Below: Bewick's swans inhabi a cull zone.

increasingly vulnerable migratory European

Langton goes further on NE's failings.

"The wider question is why a government

backwards to help the government pursue

the single biggest, planned, public-funded intervention in the British countryside in

The problem, he continues, is we don't

know what the impacts of culling could be.

"Could it mean more stoats and weasels,

resulting in fewer rabbits and therefore

changes in the environment and habitat,

and that hits a species of, say, butterfly?

The second Judicial Review brought by

Langton relates to the decision by Defra to

allow eight months a year of

'supplementary culling'

for five or more years

in the 21 completed

badger cull areas.

Langton's

the past 50 years, and one that over 80

per cent of the public rejects."

a failing policy," he says. "The badger cull is

swan diminishing rapidly in the area.

agency appears to be bending over

view is there is no justification under the RBCT for this.

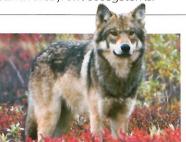
"There is only twisted science and star gazing in this," he says. "The RBCT says kill them guickly then leave them be. The wider point is the destruction of statute [in this case, the Protection of Badgers Act 1992] by stealth. How can you kill 200,000 mostly healthy badgers with public money just because you hope it might help a bit, when at the same time the tried and tested solutions to eradicating bTB are being avoided?"

BBC Wildlife asked NE to comment on all the issues raised by the campaigners in these Judicial Reviews, and they gave this statement: "Bovine TB is one of the greatest animal health threats in the UK and has a devastating impact on our farmers. It is a slow moving, insidious disease which presents many challenges, and there's no single measure that will provide an easy answer. That is why we are pursuing a wide range of interventions, including cattle movement controls and a cull of badgers in areas where disease is rife." It would be inappropriate, it added, to comment further on this ongoing legal matter.

FIND OUT MORE Courts and Tribunals Judiciary: https://bit.ly/2szNdcM; Natural England: https://bit.ly/2JmR7Mk; European Birds Directive: https://bit.ly/1nahKR3

Winners & losers

Studies on the impacts of losing carnivores from ecosustems.



WOLVES & COYOTES

It's been known since the 1920s that when wolves decline, coyotes increase. Studies in Alaska have also found that greater numbers of coyotes in turn greatly reduce the survival rates of Dall's sheep lambs.



SHARKS & CORAL

Reduced numbers of Caribbean sharks led to an increase in the grouper fish population, which in turn suppressed parrotfish numbers. The latter feed on algae, resulting in reefs in a poorer condition.



SEA OTTERS & KELP

A widely quoted study of how carnivore loss has a trophic cascade - the hunting of sea otters for their pelts led to an explosion in sea urchin numbers. The sea urchins fed on kelp, causing the seaweed to decrease.



BABOONS The loss of lions led to

an increase in baboon numbers, which led to increased transmission of intestinal parasites to humans.

NE had to consider the impact it would have had on these two protected species and others. It failed to do so sufficiently comprehensively, according to Woodfield.

"Natural England has said: 'Which sites list them as occurring there?' Not: 'Where are they?" he says. "By referring to local records, I've been able to demonstrate just how far they range. In effect, NE has failed to protect the known habitats of sensitive birds from the impacts of shooting taking place in the vicinity as part of the cull.

The impacts, according to Woodfield, are that raptors could easily abandon a site if sufficiently disturbed, and since there was to be shooting going on throughout the area. they would have had nowhere else to go.

Anti-cull campaigners say there are more subtle impacts of culling badgers than scaring or disturbing wildlife. Ecologists believe that when you reduce the population of one species – particularly mid-trophic predators - you have a potentially huge, but difficult-topredict, impact on other species with which they share their ecosystem, as a result of what is known as a mesopredator carnivore release effect (CRE). A paper published by the Food and Environment Research Agency (FERA)

looked into the impacts of the Randomised Badger Culling Trials (RBCT) on six other species - foxes, hedgehogs, hares, rabbits, skylarks and meadow pipits.

The paper revealed that fox numbers had increased by up to 57 per cent over a two-year period in cull areas, probably because they were able to use badgers' setts to breed, while hare numbers decreased by 35 per cent. This is not surprising, as foxes prey more readily on hares - especially leverets - than badgers do.

NE, say Langton and Woodfield, had a duty under British and European laws to assess whether this trophic cascade might impact protected species - and it failed to do so. They cite the example of Bewick's swans in the Severn Estuary SPA, that move between a number of sites, including Ashleworth Ham in the Gloucestershire culling zone.

"Read the SSSI citation for Ashleworth Ham and it clearly identifies Bewick's swans as an interest feature, but Natural England has failed to make any connection between those swans and ones within the wider Severn Valley area," says Woodfield. "Let's say shooting or the increased threat of fox predation resulted in swans wholly abandoning the site, that could lead to pressures on other sites." He feels a Doomsday scenario could see this

Making the connection

What is a Judicial Review?

A Judicial Review can only be taken out against a public body, such as a local council or a government agency - in the subject of this article, Natural England. In a Judicial Review, the judge hearing the case is not being asked whether the

organisation made the right decision but whether it followed the right processes in

reaching that decision. In these cases, the applicants are saying Natural England failed to carry out the mandatory Habitats Regulations Assessments (HRAs)

correctly and wrongly interpreted the conclusions of the Randomised Badger Culling Trial (RBCT).

If a judge were to rule in the campaigners' favour, it may mean that badger culling will have to stop while they do the HRAs again.

58 BBC Wildlife