

TALKS

Do badgers eat lamb? Using DNA and post-mortem analysis to investigate lamb predation on Scottish farms

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In recent years, concerns have grown in the Scottish farming sector over suspected predation of lambs by badgers. In one survey, badgers were implicated in 11% of livestock attacks and in another, 20% of farmers reported attacks on livestock by badgers. While these surveys reveal strong opinion about the role of badgers in sheep predation, supporting evidence for such attacks remains scarce. To further investigate the potential role of badgers in predation or scavenging on lambs and sheep, a study was conducted in spring 2022, involving 21 farms from across Scotland where farmers suspected they had lost lambs due to predation by badgers.

Post-mortem analysis of 17 lambs found that six had wounds consistent with predation, i.e., evidence of bleeding at the wound site and in surrounding tissues. These wounds were most commonly in the form of small puncture wounds to the head, neck and jaw. Due to extensive scavenging, predation could not be ruled out for two further lambs, and the remainder showed evidence consistent with scavenging after death (i.e., no predation). Wounds associated with scavenging after death included missing head, limbs and/or organs, broken bones, open abdomen and injuries to eyes and tongue.

DNA analysis was carried out on swabs from 22 lambs, of which 17 also had post-mortem results available. Fox DNA was found on swabs from 19 lambs, including the six that exhibited evidence consistent with predation. Badger DNA was obtained from the remains of one lamb. No carcass was available for post-mortem so it was not possible to determine cause of death of this lamb. Dog DNA was present on three lambs. On two occasions, dog DNA was present alongside fox DNA and on one occasion alongside badger DNA. It is likely that this is a result of sample contamination by farm dogs. It was not possible to retrieve predator DNA from two lambs, one of which was stillborn and one of which was alive but was found with facial injuries.

This first year of data has shown the importance of post-mortem in distinguishing between scavenged and predated carcasses. We have also shown that predator DNA can be reliably retrieved from lamb carcasses, that farmers themselves can collect these samples and that the results can help inform suitable predator control. However, sample size was small, and almost half of samples came from one farm so the study would benefit from an additional year of data from a greater number of farms.