Corvid control can improve fledging success of farmland hedgerow-nesting birds

NEW research undertaken by the Game & Wildlife Conservation Trust (GWCT) shows that predation control of corvids can improve the breeding success of farmland hedgerow-nesting songbirds.

Image credit: David Mason Images

Scientists at the Trust carried out a large field experiment between 2011 and 2014, which is described in a recently published scientific paper. Over the four years, they worked with farmers and estate managers in southern England at 32 paired sites each around 4 km2 in area, studying four different pairs per year.

At random within each pair of sites, crows and magpies (corvids) were removed at one site by gamekeepers or other trained staff during the breeding season using best-practice trapping techniques; no removal took place at the other site. The nesting success of breeding birds was measured by the GWCT research team using a new fledged-brood counting method.

The key finding was that overall nest success of the hedgerow-nesting songbird community was down by 10 per cent in non-removal sites on average relative to removal sites over the four years. Excluding 2012 data because of exceptionally high spring rainfall that year, in the other three years nest success was down 16% in the non-removal sites on average relative to removal sites.

Previous research has indicated that, in these habitats, corvid control benefits songbirds.

Lead scientist on the experiment Dr Rufus Sage, head of lowland game bird research at the Trust, said: “We know that corvids, particularly crows, can reduce breeding output in some ground-nesting birds. Our field experiment indicates for the first time that controlling corvids can improve breeding success in hedgerow-nesting songbirds as well. For some, but not all, species this can affect population size. We suspect (but did

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not show) that magpies are probably more predatory of hedgerow-nesting songbirds than crows because they are smaller and more adept in this habitat."

Conservation of farmland songbirds is an important issue because of ongoing population declines and is fully in line with Defra Secretary-of-State's stated intent for future support of farming, post-Brexit.

And GWCT has led the way in devising a scientific experiment to investigate the impact of corvid predation on lowland farmland songbirds.

Robert Middleditch, chairman of SongBird Survival, said that the charity was delighted to have commissioned this project.

He said: "It has been a major undertaking, carried out over several years, so we would like to thank all those farmers, land owners/managers and fieldworkers who have helped contribute to the success of the project, and our members and donors who funded it.

"Predator removal experiments are acknowledged by many researchers as the best way to obtain evidence of whether predators limit the breeding output of songbirds. Evidence that songbird breeding success was limited by predation was felt by some, previously, to be weak. These research findings provide clear evidence that corvid control can increase hedgerow songbird breeding success."

SongBird Survival - an environmental bird charity that commissions research into the decline in Britain's songbirds - funded the project.

Full link to paper here: http://www.bioone.org/doi/full/10.2981/wlb.00375

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Notes for editors

The JNCC Farmland Bird Index, which includes many of the songbird species in this study, is down by 56% since 1970. It has continued to fall in recent years but at a reduced rate.

According to BTO Breeding Bird Survey Trends, magpie numbers doubled between 1970 and 1990 but have remained more or less stable since then. Crow numbers have doubled since 1970 and continue to increase. The decline in the Farmland Bird Index is thought to have been caused mainly by changes in farming practices. However the continued decline, despite the widespread adoption of Environmental Schemes in recent years, suggests that other factors such as increased predation may be involved.

The Game & Wildlife Conservation Trust – providing research-led conservation for a thriving countryside. The GWCT is an independent wildlife conservation charity which has carried out scientific research into Britain's game and wildlife since the 1930s. We advise farmers and landowners on improving wildlife habitats. We employ 22 post-doctoral scientists and 50 other research staff with expertise in areas such as birds, insects, mammals, farming, fish and statistics. We undertake our own research as well as projects funded by contract and grant-aid from Government and private bodies. The Trust is also responsible for a number of Government Biodiversity Action Plan species and is lead partner for grey partridge and joint lead partner for brown hare and black grouse.

ISDN radio broadcast line - at our Fordingbridge HQ we have an ISDN radio broadcast line, allowing us to conduct interviews remotely.

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