

This article appears in the March 2010 issue of **Bird Table**, the BTO magazine that goes out to its network of 15,000 Garden BirdWatchers. See www.bto.org/gbw for more information.



SONGBIRDS AND THEIR PREDATORS

Results from the biggest ever analysis of songbirds and their predators have just been published. Although it is widely accepted that, in some situations, predators of nests, chicks and full grown birds do affect the abundance of avian prey species, until now the evidence that such effects are widespread amongst songbirds has been weak, although this has been based on a relatively small number of studies.

This research, led by scientists from the British Trust for Ornithology and funded by SongBird Survival, uses information made available by partners in the Breeding Bird Survey (BTO, RSPB and JNCC) and Common Birds Census (BTO and JNCC). By looking at how prey and predator numbers have changed over nearly 40 years the researchers have been able to see if there are associations between trends for particular prey species and their predators in England. This is the most sophisticated, long-term and large-scale analysis of its kind ever undertaken. It examines the effects of three predators of juvenile and adult birds (Buzzard, Sparrowhawk and Kestrel) and of five nest predators (Great Spotted Woodpecker, Magpie, Jay, Carrion Crow and Grey Squirrel).

For 22 of the 29 potential prey species examined there was no statistically significant link between the increase of predator numbers and the decline of prey numbers. Thus, for the majority of prey species examined, the study provides no evidence that population changes have resulted from changes in predation. Amongst the seven species in which there were significant negative effects of particular predators, the relationships that are most worthy of further investigation are associations between the increase in the number of Sparrowhawks during the period 1967–2000 and declines in the abundance of Bullfinches, Tree Sparrows and Reed Buntings. These associations may help to identify priorities for future work on the effects of predation on songbird populations. Across the suite of prey species covered, predator effects were negative for three species, Sparrowhawk, Kestrel and Grey Squirrel. This suggests that studies of predation by Sparrowhawks, Kestrels and perhaps also Grey Squirrel should be priorities for future work.

There were a large number of positive associations between predators and prey, suggesting that predator numbers have largely increased as the amount of prey has increased. This is particularly the case for native nest predators (Great Spotted Woodpecker, Magpie, Jay and Carrion Crow). Although this largely exonerates these predators, as driving declines in the numbers of songbird species at a national level, it does not preclude individual predators as having local effects.

This is a high quality study based on unique long-term and large-scale datasets. For the majority of the songbird species examined, there is no evidence that increases in common avian predators and grey squirrels are associated with large-scale depression of prey abundance or population declines. It is also clear that, for the majority of declining species with unfavourable conservation status, population declines appear to be due to factors other than predation. Other studies have suggested that over the period of this study, songbird population changes have been influenced by a range of other factors, most notably changes in farmland and woodland management.

For more information. **Newson, S.E., Rexstad, E.A., Baillie, S.R., Buckland, S.T. & Aebischer, N.J. (2010). Population changes of avian predators and grey squirrels in England: is there evidence for an impact on avian prey populations? *Journal of Applied Ecology* 47: 244-252**