

# Science for Environment Policy

## Bird flu study: no harmful strains found in wild birds in Georgia

**The role of wild birds** in spreading potentially deadly strains of 'bird flu' is poorly understood. Recent research in Georgia examined an important crossover point of migratory routes, including routes into Europe, and found that only 1% of wild birds tested here carried avian influenza. None of these had the harmful, pathogenic strains.

**Most strains of avian influenza** are mild, and do not spread to humans. However, since the widespread emergence of the highly pathogenic strain H5N1 in 2003/2004, which has led to human deaths and killed tens of millions of birds, it has become crucial to understand how avian influenza is spread, especially by wild birds.

In this study, which ran from 2009 to 2011, researchers tested many different species of birds, including ducks, quails and gulls, for avian influenza at five sites across Georgia. Georgia is a particularly relevant area to study the spread of influenza by wild birds, because three major migratory routes (Central Asian, East Africa-West Africa and the Mediterranean/Black Sea flyways) crossover here. In addition, wetlands in the country are used as winter habitat by tens of thousands of ducks, and for breeding and wintering by hundreds of thousands of gulls.

Overall, researchers collected 8343 samples from 76 species, either as swabs from trapped or hunted birds or as fresh faeces. Eighty-four (1%) of these tested positive for avian influenza, and of these, 66% were taken from gulls, 30% from ducks and 5% from other water birds and quails. The numbers of positive samples tended to be highest in periods of migration, and during over-wintering, particularly on the Black Sea coast and eastern sites.

No pathogenic strains were detected in any of the samples. This is somewhat surprising, since outbreaks of pathogenic strains were reported from locations along the same migratory routes between 2009 and 2012.

The researchers suggest that this may be because the timing of migration can have a major effect on how such outbreaks spread. For example, if an outbreak occurs in central Asian countries in March, the strain is unlikely to spread to Georgia because birds migrate from south to north during that period. However, a possible alternative explanation is that wild bird movements do not contribute to the spread of avian influenza as much as previously believed.

The study concludes that monitoring of this kind can provide vital information on the role of wild birds in spreading potentially dangerous influenza strains. However, they call for more detailed, local-level data, particularly from Central and South Asia, to allow further research into how influenza strains move around geographical regions.



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**Contact:**  
[nsl25@cam.ac.uk](mailto:nsl25@cam.ac.uk)

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