

Birds around airports may be deaf and more aggressive

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Credit: chiffchaff by Herman Berkhoudt

Birds around airports are more aggressive and sing as if they have hearing loss. Collaboration between researchers of Manchester Metropolitan University and the Institute of Biology Leiden has led to surprising new findings about the impact of anthropogenic noise on birds around airports. Publication in *Journal of Animal Ecology*.

Associate professor Hans Slabbekoorn from the Institute of Biology Leiden is involved in the study that was recently published in the *Journal of Animal Ecology*. The study revealed that chiffchaffs (*Phylloscopus collybita*) sing at [lower frequencies](#) when their territories are closer to

the noisy runways at Manchester Airport or Amsterdam Schiphol Airport. The reason for this may be deafness at [high frequencies](#) due to the extreme exposures to airplane noise that happen every three minutes, throughout the day.

Too loud

Earlier studies on great tits (*Parus major*), chiffchaffs and many other [bird species](#) have reported noise-dependent upward shifts in song frequency for a more moderate range of sound level variation along highways and in urban areas. The explanation for that finding was a potentially adaptive one: singing higher improves audibility by avoiding the low-frequency masking noise of traffic. Aircraft noise, in contrast, is so loud and covers all frequencies, that it does not allow such a benefit, no matter how the singing bird shifts to different song frequencies.



Chiffchaff on speaker. Credit: Javier Sierra

Angry birds

Playback experiments of birdsong also showed more aggressive responses by territorial chiffchaff males at the British [airport](#) compared to the quiet control area. According to the researchers this may be due to noise-induced physiological stress, disturbed communication, or some other unknown impact. Physical fights, instead of settling conflicts by song, drain energy from [birds](#). In result, this energy will not be available for reproductive efforts and makes the birds more vulnerable to injury and predation.

Worldwide concern

The researchers think there is no reason to believe that these findings are confined to this particular study species or the specific research areas. Slabbekoorn: "Estimates by our team for the avifauna just around Manchester Airport within the [noise](#) exposure zone are that probably about 16.000 individuals of 100 species experience aircraft-related hearing loss. Considering that airports all over the world are still growing and spreading, this is a worldwide concern."

Provided by Leiden University

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