

## Hard of hearing

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□ Did you know that there are scientists who study deaf budgies? I didn't. But this mysteriously titled paper has brought the field to my attention: "Perception of complex sounds in budgerigars (*Melopsittacus undulatus*) with temporary hearing loss."

It had me imagining greying pet birds clutching hearing horns in their claws. And the abstract of the paper, which leads off with the plight of deafened parrots, left me none the wiser.

Turns out the work isn't really about hard-of-hearing pets (so please don't write in if you have a deaf canary). Instead, songbirds such as budgies are thought to be quite a good model for human hearing and speech.

Like us, budgies learn complicated sounds and use them to communicate. They also, like us, have sound-sensitive hair cells in the inner ear, and their ability to talk or sing is affected when those hair cells die. Unlike us, however, they can sprout new hair cells in their ears. This ability offers researchers an opportunity to study the recovery of hearing after a bout of deafness.

### Memorable tunes

Robert Dooling at the University of Maryland in College Park is an expert in this odd field, having studied the hearing of budgies for many years. In this latest investigation he and his team taught the birds to distinguish between two similar budgie calls, and then used a large dose of antibiotics to kill off the birds' hair cells.

A month or so later, when the hair cells grew back, the birds more or less recovered their hearing but had lost some of the ability to distinguish these same sounds. It took them a few days to re-learn the skill.

So the study supports the idea that if we can get hair cells to regrow in the human ear, something medical researchers are trying to do, they may connect up to the brain properly such that hearing can be restored. But that still might leave people having to re-learn some aspects of speech. "With a new set of cells the world doesn't sound the same," says Dooling.

My world has shifted a bit too, thanks to the knowledge that deafened budgerigars can serve a greater cause for mankind. Who knew?

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### References

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1. Dooling R. J., Ryals B. M., Dent, M. L. & Reid T. L. . *J. Acoust. Soc. Am.*, **119**. 2524 - 2532 (2006).