

The Ultimate Scammers: How do Cuckoos Get Away With It?

Scams are a part of life, and some of us have unwittingly fallen victim to one or more. If we're clever, we learn to avoid these dodgy schemes, but as fast as we learn about one, another is concocted. In Nature, there are fraudsters too, in the form of species that evolve tricks to get the better of others.

In New Zealand, shining and long-tailed cuckoos lay their eggs in the nests of other bird species, letting the hosts do the hard work of rearing the cuckoo chicks. The hosts should learn to spot the scam, and the cuckoos should develop more subtle deception in return. In reality, however, the hosts have evolved almost no defences, and the cuckoos seem to be poor tricksters. Cuckoo eggs are poor mimics of the host eggs, and cuckoo nestlings look nothing like the real chicks of the foster parents. How do they get away with it?

Dr Mark Hauber from the School of Biological Sciences at The University of Auckland has been awarded a Fast-Start Marsden grant, to study this phenomenon in more detail. The Fast-Start programme is an initiative to give promising, early-career researchers the opportunity to explore an innovative idea, helping them to develop their skills and establish their careers.

Dr Hauber believes that the begging calls of the cuckoo chicks might be the key, as they sound just like those of the hosts' own chicks. Maybe the hosts of cuckoos, grey warblers, whiteheads, yellowheads and brown creepers, use chick calls to detect the cuckoos. If so, they are driving the evolution of ever better vocal mimicry by cuckoo chicks.

In the first year of the study, Dr Hauber and his team, Dr Rebecca Kilner from Cambridge University and Dr Brian Gill from Auckland Museum, will be based at Little Barrier Island, where they will survey the begging calls of cuckoo and host species nestlings. In the second year, the team will conduct a series of experiments to test the hosts' ability to discriminate between host and cuckoo nestlings.

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