

Zoologger: Old magpies get wise to freeloading cuckoos

Species: Pica pica

Habitat: almost all of Europe and much of Asia, giving side-eye to passing cuckoos

Eurasian magpies have a bad reputation. If you believe the folklore, they are cunning little swines that bring bad luck to anyone who sees them. In parts of the UK, you can still hear people reciting incantations that are supposed to ward off this bad luck. *New Scientist* is unaware of any evidence that this works.

Regardless, this bad reputation is all nonsense. In fact, magpies are often the victims of other, more ruthless species. They are regularly tricked by great spotted cuckoos into incubating and raising their young. When the magpie leaves its nest to forage, the cuckoo swoops in, lays its eggs and leaves the magpie to do the rest of the work.

But the magpies are no fools. It now seems they gradually wise up to the cuckoos' tricks, so older magpies are less likely to put up with a cuckoo egg in their nest.

Morning Mr Magpie

Eurasian magpies are not to be confused with Australian magpies, which belong to a different family of birds. The Australian birds are rather protective of their nests, swooping on people who pass by and sometimes attacking them.

The Eurasian birds are smart cookies, even if they are probably not as clever as their relatives, New Caledonian crows that seem to understand the laws of physics.

For one thing, they are members of a small club of animals that can recognise themselves in mirrors. So far, only humans, all four great apes, dolphins and elephants are known to do this.

Magpies also pass a psychological test that 10-month-old human babies fail: they can figure out that an object has been hidden in the last place they saw it, even if it had previously been put somewhere else. Furthermore, they have excellent spatial memories.

These mental skills may explain why magpies can learn how to deal with cuckoos.

Cuckold that magpie

We already knew that some magpies are better than others at spotting foreign eggs in their nests. "However it was not known if females would respond to parasitic eggs in the same way or change their response throughout their lives," says Mercedes Molina-Morales of the University of Granada in Spain. It could be something they learn, it could be genetic, or a combination of the two.

Molina-Morales and her colleagues followed 45 magpies over seven years, adding fake cuckoo eggs to their nests each breeding season. Every magpie that had never bred before accepted and cared for the fake eggs. They did so even if their mothers had rejected cuckoo eggs, so their behaviour was unlikely to be genetic.

Over the years, the team saw 12 magpies switch from accepting to rejecting the fake eggs. None switched the other way, suggesting they did learn.

"I think it does clinch the question for magpies," says Naomi Langmore at the Australian National University in Canberra.

Molina-Morales found that the change in behaviour didn't depend on how many times the magpies had been

tricked, but on how old they were and how many times they had bred. It may be that they learned what their own eggs looked like, not what cuckoo eggs look like, she says.

Journal reference: Evolution, DOI: 10.1111/evo.12471

If you would like **to reuse any content** from New Scientist, either in print or online, please **contact the syndication** department first for permission. New Scientist does not own rights to photos, but there are a variety of licensing options available for use of articles and graphics we own the copyright to.