

Scientists expose true extent of cuckoo's cunning

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Common cuckoo. Credit: Wikipedia/GFDL 1.2

The common cuckoo, notorious for evading parental duty by hiding her eggs in the nests of other brooding birds, is even more devious than previously thought, scientists revealed on Monday.

After laying an egg, the female distracts the owner of the nest—a reed [warbler](#) in this case—essentially by frightening the poor bird out of its wits, they said.

The cuckoo gives a "chuckle" that mimicks the call of the sparrowhawk—which loves to snack on warbler flesh—before abandoning her egg among the warbler's clutch and flying off to freedom.

"This hawk-like chuckle call increases the success of parasitism by diverting host parents' attention away from the clutch and towards their own safety," a duo of Cambridge University researchers wrote in the journal *Nature Ecology & Evolution*.

"As a result, the female cuckoo might have 'the last laugh' in this particular battle."

The bird whose behaviour gave us the word "cuckoldry", is an example of a "brood parasite"—birds, insects or fish that trick others into raising their young.

This is often at the expense of the foster parents' own offspring.

To avoid getting caught—which will lead to the imposter egg being kicked out of the nest—the cuckoo has developed some nifty tricks, including matching its egg colouring to that of its target, for camouflage.

The bird has also adopted "remarkable secrecy and speed" in depositing its egg, said the team.

For this reason, scientists have battled to understand why the cuckoo would risk exposure by "chuckling" so soon after committing its crime.

'Kwik-kwik-kwik'

The Cambridge team theorised the purpose was to distract the warbler with fear.

To test this, they played the recorded calls of male and female cuckoos, a sparrowhawk, and a random, non-threatening bird—a collared dove, to reed warblers.

Only the male cuckoo makes the signature sound copied in pendulum clocks. The female utters a laughter-like "kwik-kwik-kwik" not dissimilar in frequency to the sparrowhawk's "kiii-kiii-kiii".

The warblers, they observed, reacted with the same vigilance to female cuckoo calls as to hawk calls, and diverted attention away from their clutch.

The warblers ignored male cuckoo and collared dove calls.

In a further test, the team played the female cuckoo call to tits—[birds](#) which are also eaten by sparrowhawks but are not targeted by cuckoos for fostering duties.

In tits, too, "cuckoo calls increased vigilance as much as hawk calls" even though cuckoos pose no threat, said the team.

This suggested that both tits and warblers mistook the female cuckoo call for that of a sparrowhawk, they concluded, even though the two sound quite different to the human ear.

"Our results show that the female [cuckoo](#) enhances her success by manipulating a fundamental trade-off... between clutch- and self-protection," the authors concluded.

More information: Female cuckoo calls misdirect host defences towards the wrong enemy, *Nature Ecology & Evolution* (2017).
[nature.com/articles/doi:10.1038/s41559-017-0279-3](https://doi.org/10.1038/s41559-017-0279-3)

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