

# Cuckoos evolve to fool angry birds

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Cuckoos on left, respective host on right. Credit: N. Langmore

(PhysOrg.com) -- Australian cuckoo birds have taken a new evolutionary step – mimicking the color of their host young to avoid certain death, according to a study by researchers from The Australian National University.

Researchers from the ANU College of Medicine, Biology and Environment focused on three species of the Australian bronze-cuckoo. Their study found that these birds have evolved so that they no longer simply lay eggs that mimic their hosts, but they also match the color of their young to avoid eviction from the nest.

[Cuckoos](#) are known for their parasitic ways. They lay their eggs in the nests of other species, leaving their young to fend for themselves. Once hatched, cuckoo nestlings evict all host offspring from the nest to ensure

the maximum chance of survival.

Dr. Naomi Langmore from the Research School of Biology, who led the research team, said that the host birds are unable to identify the cuckoos' eggs from their own, so their primary line of resistance is to kill the cuckoos once hatched.

“Field experiments have shown that nestlings that look different from host young are more likely to be rejected by host parents,” she said.

To ensure that their young survive, she added, the cuckoos have taken evolutionary steps so that their newly hatched young are the same colour as their host ‘siblings’.

“We have demonstrated that bronze-cuckoo nestlings have co-evolved to be striking visual mimics of their hosts,” Dr. Langmore said.

“Host parents will kill a parasite hatchling within the first two days of its life. But by matching the color of the host young, the cuckoos are accepted by their ‘parents’. The mimicry only lasts for eight days, which is long enough for the acceptance to occur. After that, the pin feathers appear on the body, and the young cuckoos begin to look like their own species.”

Each of the three species of cuckoo has their own choice of host bird. In turn, they have each evolved to lay different colored young, ranging from black, to yellow, to pink.

**More information:** The paper, ‘Visual mimicry of host nestlings by cuckoos’ is published in the current issue of the *Proceedings of the Royal Society B*.

Provided by Australian National University

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