

# Cuckoo chicks in Zebra finches

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Image: Max Planck Institute for Ornithology, Seewiesen

(PhysOrg.com) -- Some female zebra finches foist a part of their eggs on their neighbours. Scientists of the Max Planck Institute for Ornithology in Seewiesen discovered that in every fifth nest there is one egg that is not produced by its social parents. The female birds act in a very well-targeted way: eggs are being placed in "foster-care" shortly before the hosts commence their own egg laying (online publication in *Animal Behaviour*, April 15, 2010).

Zebra finches breed in colonies and each pair cares for their own offspring. However, brood parasitism within the same species is relatively common, in captive populations as well as in the wild in Australia. Scientists of the Max Planck Institute in Seewiesen studied the parentage of all [eggs](#) in a captive population with genetic methods and

found out that in every 20 eggs there was one "cuckoo egg". Mostly the same females specialize in outsourcing parental work of some of their eggs. It is interesting that they combine brood parasitism with laying and raising their own clutches - a purely parasitic strategy was not found.

The female cuckoo-zebra finches have to time the egg-laying to a host nest very precisely: the [incubation](#) starts usually shortly after laying the first or second egg. When the parents are already sitting on their nest, it is hardly possible to foist a cuckoo egg on them. But if the female drops the egg too early to a host's nest, the latter might abandon the nest. Captive conditions in the aviaries made thorough studies of the chronology of egg laying easier for the scientists: "Most of the cuckoo eggs show up in the host's nest shortly before the host parents start breeding," says Holger Schielzeth, first author of the study. "That shows that the "cuckoo-females" seem to monitor the neighbours' breeding start". The researchers found no cues that the cuckoo females target specific host pairs. More the opposite was the case: a host pair was rarely hit a second time. That is a sign that host parents learn to defend themselves.

Cuckoo females usually lay more than one egg in host nests, but most of the time only one in each nest and shortly before they start laying their own clutches. However the cuckoo strategy is not as successful as it might sound: "Just one third of the eggs are finally being reared by foster parents", says Holger Schielzeth. "Females employing a mixed brood strategy lay more eggs but end up with as many fledglings as females with a pure brood strategy". If the brood [parasitism](#) would be a more successful strategy, the development of a pure cuckoo-specialist within the [zebra finches](#) would probably have evolved.

**More information:** Holger Schielzeth and Elisabeth Bolund, Patterns of conspecific brood parasitism in zebra finches, *Animal behaviour*. Published online April 15, 2010. [DOI:10.1016/j.anbehav.2010.03.006](https://doi.org/10.1016/j.anbehav.2010.03.006)

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