That is why

Why do birds raise cuckoo eggs?

Great spotted cuckoos may wreck the nests of magpies that throw out their egg, so accepting it can pay.

A An offer the magpie can't refuse



A great spotted cuckoo lays an egg in a magpie's nest.

the middle egg is the cuckoo's



Magpie keeps the egg

The nest is left alone. The cuckoo chick grows up alongside the magpie's own chicks.



Magpie throws it out

The cuckoo may come back and wreck the nest: eggs smashed, chicks injured.

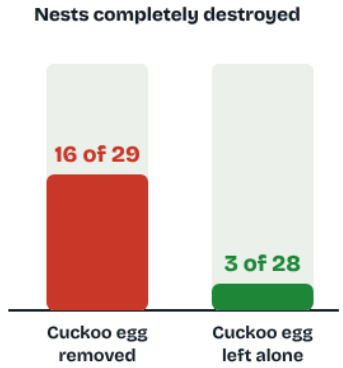
The mafia hypothesis

Proposed by biologist Amotz Zahavi in 1979: cuckoos get hosts to accept their eggs not by fooling them but by force. Comply, or lose everything.

Unlike some cuckoo chicks, great spotted cuckoo chicks do not push the host's eggs or chicks out of the nest.

B Testing the threat

In southern Spain, scientists took the cuckoo eggs out of some magpie nests.



More than half of the nests that lost their cuckoo egg were destroyed, against about 1 in 10 of the nests that kept it.

Soler and colleagues, Evolution, 1995; Hoya de Guadix, Spain

C Why wreck a nest?

1 Punish rejecters

Hosts that throw out the egg pay a price, which can push them to accept it in their next clutch.

2 Make them start over

Cuckoos also wreck nests they have not used. The host builds again: a fresh nest to lay in (farming).

3 Not seen everywhere

Reported from Hoya de Guadix in Spain; studies in Israel did not find the same behavior.

Throwing out the cuckoo egg can cost the whole nest.

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