

# Better looking birds have more help at home with their chicks

June 25 2012

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In choosing a mate both males and females rely on visual cues to determine which potential partner will supply the best genes, best nesting site, best territory, and best parenting skills. Credit: Katharina Mahr

In choosing a mate both males and females rely on visual cues to determine which potential partner will supply the best genes, best nesting site, best territory, and best parenting skills. New research published in BioMed Central's open access journal *Frontiers in Zoology* shows that male blue tits' (*Cyanistes caeruleus*) parental behavior is determined by female ornamentation (ultraviolet coloration of the crown), as predicted by the differential allocation hypothesis (DAH).

DAH makes the assumption that aesthetic traits indicate quality and arises from the needs of a parent's current need to ensure current

[reproductive success](#) and the reproductive success of their offspring. [Ornamentation](#) and its maintenance is a cost which reduces energy available for reproduction, but without the ornamentation an individual may not be able to secure a mate. Ornamentation also plays a role in competition between males and between females, as well as signaling potential reproductive success.

But reproductive success does not only depend on the best genes and the best nest, it also depends on [parenting skills](#). Researchers from Konrad Lorenz Institute of [Ethology](#), supported by the "Sparkling-Science" Program, investigated the effect of female ornamentation on the chick-rearing behavior of their mates. Both males and female blue tits have feathers on the top of their heads which reflect UV light. After their chicks had hatched, female blue tits were captured and their crowns smeared with either duck preen gland oil containing UV-blocking chemicals or the oil alone.

Although the UV-blocking chemicals did not alter the behavior of the females, their mates made fewer hunting trips to feed their brood. However the males made the same effort to protect their nest and defend their chicks as males with oil-only treated females.

Dr Matteo Griggio, co-author of this study, commented, "This is the first study to show that male blue tit behavior depends on female ornamentation. Even though our experiment was minimally invasive to avoid partners not being able to recognize each other, the behavior of male blue tits in this study matched the DAH. DAH also predicts that less attractive females should increase their parental investment but we found no compensatory female behavior."

Provided by BioMed Central

Citation: Better looking birds have more help at home with their chicks (2012, June 25) retrieved 9 June 2023 from <https://phys.org/news/2012-06-birds-home-chicks.html>

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