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Reprod

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How does the parental investment affect the malaria infection status of the collared flycatcher?

Abstract

The life-history theory states that there is a trade-off between the current and the future reproduction. This trade-off is often caused by a negative correlation between the reproductive effort and the immune function because both are energetically costly for the individual. If an individual allocates more energy into the current reproduction then less energy will be available for the immune defence. Thus the individual's resistance to infections decreases and this negatively affects its future survival. Several scientific studies have investigated the effect of parental effort on parasitism but many of them have failed to find any correlations perhaps because the majority of these studies have examined only short-term effects of the reproductive effort. The aim of our research was to investigate the short and long-term effects of parental investment on malaria infection in the collared flycatcher (*Ficedula albicollis*). Therefore we experimentally manipulated the parental investment by increasing or decreasing the brood size of the parents and then we determined the prevalence of malaria blood parasites (*Haemoproteus* and *Plasmodium* genus). According to our results the manipulation did not affect significantly the infection status of the individuals in the experimental year and the next year.

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