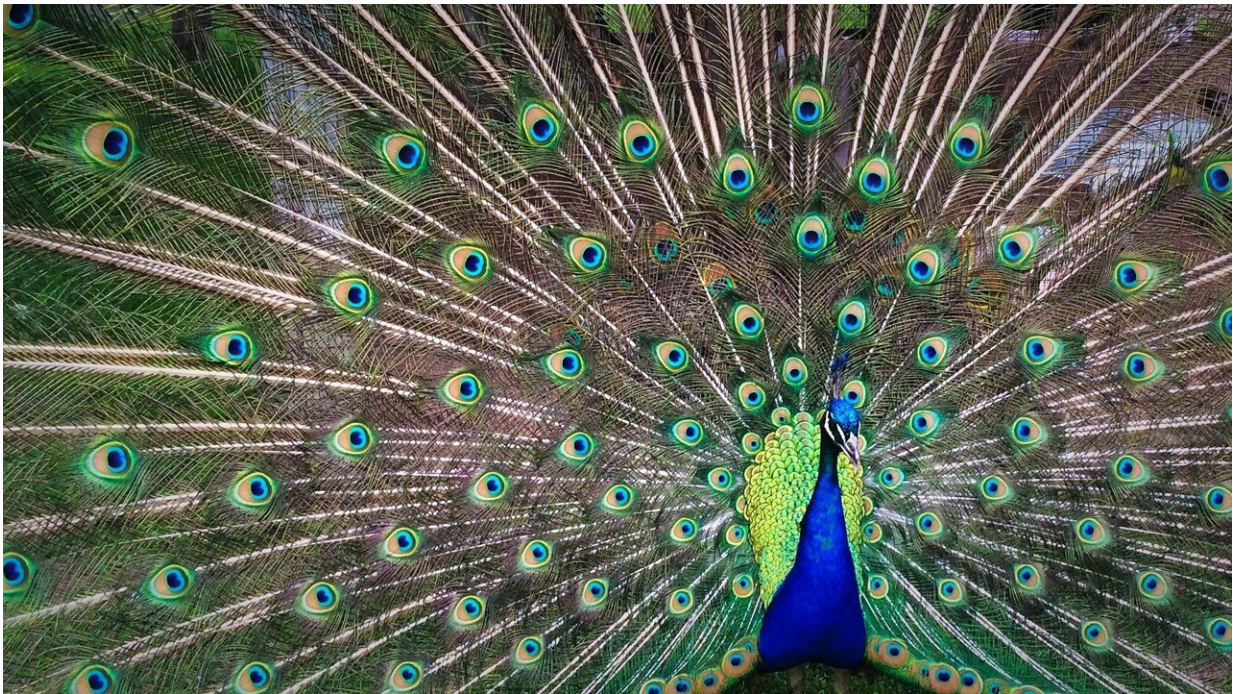


Males give up on trying to attract females when they are in poor condition, study finds

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Male animals are less likely to try to attract a mate when they are in poor condition, a paper published in *Nature Ecology and Evolution* has found.

The study looked at how individual condition influences investment into [courtship](#) behavior in [animals](#). Its author, Dr. Liam Dougherty (University of Liverpool) studied a sample of 147 [animal species](#),

obtaining data from eight taxonomic groups, with insects, fish, amphibians, and birds making up the majority of species.

The project involved searching for published data linking animal courtship behavior to a range of traits related to individual condition, including their diet, body size, whether they had any parasites, and how old they were.

The study was inspired by the fact that biologists have two opposite predictions for how condition could affect investment in courtship behavior. From a survival perspective, it makes sense for animals in poor condition to stop trying to attract a mate, in order to conserve energy. But from a reproductive perspective, animals in poor condition could increase their [reproductive success](#) by investing as much as they can into one 'last-gasp' attempt at reproduction.

Across 228 studies and 147 species, animals (who in almost all cases were male) invested significantly more into attracting a mate when they were in good condition. In other words, males in poor condition seem to prioritize survival at the expense of reproduction.

Dr. Liam Dougherty, Leverhulme Early Career Fellow in the Department of Ecology, Evolution and Behavior said: "These results show that in general males are more cautious than we thought- when down on their luck, they spend less energy trying to attract females. This strategy makes sense if males that do this live longer, increasing the chances that their condition improves in the future.

"Importantly, it also means that a male's courtship behavior is often an honest reflection of his condition. This means females could benefit from choosing to mate with those [males](#) that display the longest or most intense courtship displays"

The paper is titled "Meta-analysis reveals that animal sexual signaling behavior is honest and resource based."

More information: Liam R. Dougherty. Meta-analysis reveals that animal sexual signalling behaviour is honest and resource based, *Nature Ecology & Evolution* (2021). [DOI: 10.1038/s41559-021-01409-z](https://doi.org/10.1038/s41559-021-01409-z)

Provided by University of Liverpool

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