

Beautiful plumage: Feather color and sex start the species revolution

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Faculty of 1000, the leading scientific evaluation service, has highlighted research providing evidence for the evolution of a new species.

Birds use plumage colour to recognize and select potential mates. A mutation of a single [DNA](#) base can lead to a striking colour change, as demonstrated by two closely related flycatcher populations in the [Solomon Islands](#). According to a report in the *American Naturalist* -- selected and reviewed by Faculty of 1000 member Rebecca Kilner (University of Cambridge) along with Associate Rose Thorogood -- this tiny genetic difference can potentially lead to the evolution of new species.

Two *Monarcha castaneiventris* sub-species have the same body shape, but different colored bellies and distinct songs. Birds from these sub-species could mate, but these differences stop them recognizing each other as potential sexual partners. This is evidence of incipient speciation: the beginning of the evolution of new species. Other flycatchers in the Solomon Islands also vary their plumage colour, but the [genetic basis](#) is not always as clear as this single mutation.

Dr Kilner highlighted this intriguing paper because it shows how a single gene can cause colour change in birds, affecting the selection of potential sexual partners. This leads to reproductive isolation and eventually speciation, but, she says, "in ways that are more complex than previously appreciated".

More information: The scientific article is available at [dx.doi.org/10.1086/600084](https://doi.org/10.1086/600084) in the [American Naturalist](#), *Am Nat* 2009. Vol. 174, pp. 244-254.

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