

The role of color in animal courtship uncovered

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Parotia lawesii. Image: Wikipedia

Researchers at UQ's Queensland Brain Institute are one step closer to unlocking the role of color in animal courtship rituals after identifying a unique feather structure in birds of paradise.

The New Guinea-based birds of paradise have long been famed for their elaborate forest floor dances.

With their feathers producing dazzling iridescent and metallic effects as they catch the light, these courtship dances are designed to showcase the birds' brilliant plumage to prospective mates.

Now scientists within QBI's Sensory Neurobiology Group have uncovered exactly why the dance moves of one kind of bird of paradise – the male Lawes' parotia – create even larger and more abrupt [color](#) changes than is possible with “ordinary” iridescent plumage such as that possessed by peacocks.

Researcher Professor Justin Marshall said that the novel effect was due to the unique structure of the parotia's [feathers](#), which function like multi-layered reflective mirrors.

“The feather 'barbules' have a special boomerang-shaped profile that allows them to produce not the usual one but three colored mirrors,” he said.

“These reflect yellow and blue light in different directions to make dramatic color changes as the bird displays on the [forest floor](#).”

The research, to feature in the latest edition of the *Proceedings of the Royal Society B*, provides insight into the evolution and function of color and color vision in the avian world.

Further research is needed to establish exactly what information these dramatic displays provide to female birds of paradise, but it seems certain that hue changes play a crucial role when it comes to how to choose a mate.

Though colour is not quite so important in human courtship rituals, comparative neurobiology suggests that snappy dressers and dancers are still more likely to succeed in the reproductive stakes.

“The take-home message for men is to wear the Armani suit rather than your Stubbies and thongs,” Professor Marshall said.

Provided by University of Queensland

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