



MEDIA RELEASE

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Deakin researchers closer to answers about what causes colour variation in birds

The amazing diversity of colours in birds and how climate change may affect this is the subject of a major study by Deakin University.

The study is also looking into how and why birds see more colours than humans.

Deakin University's Professor Andy Bennett leads an international team of scientists who have been studying parrots, in particular the Crimson Rosella, in a hunt for answers to these questions.

The team – which also includes the CSIRO and Dutch and UK scientists – has been studying this parrot for five years, with field sites across Victoria, NSW, South Australia and Queensland.

“Explaining diversity of colour is a fundamental question in biology,” Professor Bennett said.

“We’re trying to explain what maintains colour variability in parrots, particularly the Crimson Rosella which in southern Victoria is deep crimson red but along the Murray and Murrumbidgee is a pale yellow. In South Australia it is a splotchy orangey-yellow,” he said. The Crimson Rosella is known in some localities as the Yellow Rosella and Adelaide Rosella.

To date the research has found that around Albury-Wodonga, yellow versions of the parrots meet red forms and yet they are genetically the same. Further west along the Murray River, they are genetically different, but all pale yellow.

“There is no simple link between the geographic distribution of the colour forms and the separate genetic groups,” Professor Bennett said.

The researchers are looking at other possibilities which might explain colour variation, such as whether differences in light in forests and habitat might have an impact.

“In more arid parts the birds are more pale yellow and in higher rainfall areas they are crimson red,” Professor Bennett said.

“So part of our work facilitates some predictions about how colouration and distribution should change with increasing climate change.”

The research team is also looking at whether red and yellow individuals preferentially choose mates of the same colour, and if mating preferences are influenced by different acoustics in different forms of the parrot.

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The research has special personal significance for Professor Bennett, who has admired these birds since childhood. "I grew up in the Adelaide Hills and these birds were in our garden when I was a kid, and it always intrigued me why they were so highly variable in coloration," he said.

Professor Bennett said the team was also researching how and why birds see more colours than humans, and how they use the extra 'dimensions' to their colour vision.

"Building a colour television for birds, is much more difficult than building one for humans," he said.

Ends

Professor Andy Bennett is the Head of Deakin's School of Life and Environmental Sciences. He will be speaking on his research on 16 October during DeakinWeek – www.deakin.edu.au .

Professor Bennett is available for interview and can be contacted on (03) 522 72647.

Pictures are available.

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