

University biologist publishes book on bird speciation

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A University of Chicago biologist and world-renowned expert on bird speciation has compiled eight years of research and writing into a recently published book, *Speciation in Birds*.

Trevor Price, professor of ecology and evolution at Chicago, evaluates the contributions of sexual selection and natural selection in bird speciation, and the roles of geographical isolation, ecological differentiation and genetic drift. He discusses how nearly 10,000 bird species originated and which factors influenced this process. The author also reviews many publications on bird speciation, with more than 1,000 works cited.

“As the literature in any field explodes there is simultaneously an increasing need for synthesis yet an increasing difficulty in achieving it,” said Peter Grant, ecology and evolution professor at the Princeton University. “This is certainly true for the ever-popular subject of ornithology. Trevor Price takes up the challenge to explain how birds speciate, and succeeds magnificently.”

Price discusses the biological species concept, which defines species as “groups of interbreeding populations reproductively isolated from other such groups.” He further explains when the biological species concept works well and when it needs to be modified. He analyzes causes of premating and postmating reproductive isolation, and explains why reproductive isolation is probably the most crucial component of evolution.

“Without reproductive isolation,” Price said, “only one species would be found at each location in the world, placing a severe limit on the total number of species”.

This book deals with many other questions, including: Which factors contributed to species diversity" How do these factors led to huge bird diversity in South America, the continent with almost one-third of the world's bird species" And what led to endemism on isolated islands"

According to Price, the idea for this book came in 1997 with an invitation from the organizers of a Royal Society of London meeting to review sexual selection and speciation. The literature was diverse and too scattered for a proper review, so “I set about doing this in a more systematic way,” he said.

“Speciation in Birds is a significant advance in our understanding of the genesis and maintenance of biological diversity,” remarked evolutionary biologist Jonathan Losos of Harvard University. “It will be a must-read not only for ornithologists, but for evolutionary biologists of all stripes.”

Source: University of Chicago

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