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AWARDS

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The American Ornithologists' Union is deeply honored to present the 2015 Elliott Coues Award to Dr. Scott Edwards, professor in the Department of Organismic and Evolutionary Biology and Curator of Ornithology in the Museum of Comparative Zoology, Harvard University.

Scott Edwards in the field in the Galápagos Islands. Photo credit: Courtesy of Scott Edwards

Scott's passion for birds took flight while he was a young intern working with Roxie Laybourne at the Smithsonian's National Museum of Natural History. He received his undergraduate degree from Harvard University in 1986 and his Ph.D. from the University of California in 1992. During the course of his career, Scott has made many major contributions to the study of avian genomic structure, molecular evolution, phylogeography, and systematics. He has extensive field experience, primarily in the Australo–Papuan region. He is recognized for his innovative research programs on the phylogeography of Australasian avifauna, the molecular evolution and disease interactions of the avian major histocompatibility complex, and pioneering work using coalescent approaches to assess gene versus species trees. He has creatively applied the most cutting-edge tools of molecular biology and data analysis to his research on birds and in his pursuit of answers to fundamental questions in his fields of study—often well before any other ornithologists had an inkling to do so.

Scott has provided strong oversight to the development and maintenance of frozen tissue and classical specimen collections at both the Burke Museum at the University of Washington and the Museum of Comparative Zoology at Harvard. He has also excelled in training and mentoring a large cadre of young scientists through his faculty and curator positions and through his courses in ornithology and comparative genomics. He has provided exceptional service to science via his positions on the National Geographic Society's Committee on Scientific Exploration; on the boards of NESCent, Cornell Lab of Ornithology, and National Museum of Natural History; as president of the Society for the Study of Evolution and of the American Genetics Association; through his substantial efforts to increase minority participation in science; and via his recent post as director of the Division of Biological Infrastructure at the National Science Foundation.

The most compelling reason for presenting the Elliott Coues Award to Scott is to recognize his successful and varied advances in, and applications of, molecular and statistical analyses to research on avian evolution, systematics, and conservation. These include the following major areas of study, covering most of his more than 140 publications.

Avian phylogeography in the Australasian region. This study began with Scott's innovative application of molecular methods that were just developing in the late 1980s to his dissertation work on genetic structure and long-distance gene flow in babblers (*Pomatastomus*; especially interesting because of their cooperative breeding and putatively localized population structure). He has since developed additional studies of other babblers, fairy-wrens (*Malurus*), and estrildid finches in the region, including more in-depth comparative analyses of the biogeographic barriers and the areas of endemism they create. Scott has more recently begun to collaboratively develop similar studies of birds in South America.

Avian immunogenetics and disease ecology. Beginning with his postdoctoral fellowship with Wayne Potts at the University of Florida, Scott pioneered the use of DNA sequencing and other molecular tools to assess the evolution and role of selection in immune-system genes of hosts and, ultimately, in virulence genes of parasites. He was the first to use these methods to study variation in the

major histocompatibility complex (*Mhc*) in wild songbirds, as a means to assess interactions of *Mycoplasma* disease and *Mhc* in House Finches, and also to further consider the hypothesized role of *Mhc* in kin recognition and mating systems of birds. His body of work has used a wide array of laboratory methods designed to understand the roles of gene duplication, translocation, and selection in *Mhc* evolution.

Methods for differentiating gene vs. species trees. Scott, along with Peter Beerli and other computational biologists, developed and applied a body of coalescent theory to assess how gene trees can vary from and provide misleading resolution of species trees, as well as software to carry out these analyses. Scott has successfully applied these methods in the rapidly burgeoning field of avian phylogenomics.

Avian molecular and genome evolution. Scott was among the first ornithologists to apply genomic methods to the study of avian evolution. He was a major contributor to the sequencing of the first songbird genome and to the development and implementation of bioinformatics methods to compare genomes, construct phylogenies from large datasets, and locate genes of interest for such aspects as sex determination in birds and their reptilian relatives, taste perception in hummingbirds, and intron size and distribution. Avian genomics is set to yield incredible insights into adaptation, population genetics, and systematics of birds, and Scott is ideally perched to continue as one of its effective leaders.

For his important, varied, and significant contributions to many novel areas of research in avian evolutionary biology and genomics; for his commitment to training and enhancing the diversity of students at all levels; and for his exceptional service to the scientific community, the American Ornithologists' Union is proud to recognize Dr. Scott Edwards with the 2015 Elliott Coues Award and medal.

Award criteria. The Elliott Coues Award recognizes outstanding and innovative contributions to ornithological research regardless of the geographic location of the work. The American Ornithologists' Union (AOU) established the award in honor of Elliott Coues, a pioneering ornithologist of the western United States and a founding member of the AOU. The award consists of a medal and an honorarium provided through the endowed Ralph W. Schreiber Fund of the AOU.