

With the development of DNA analysis techniques, whole new areas of inquiry have opened within the field of ornithology. One of the people who has contributed in particular to exploration of these new horizons is John C. Avise. Beginning his career studying biochemical genetics of fishes, Avise soon added mammals and birds to his study repertoire. A series of six papers on evolutionary genetics of birds appeared in the early to mid-1980s (*Auk* 97: 135–147, 1980; *Systematic Zoology* 29:323–334, 1980; *Journal of Heredity* 7:303–310, 1980; *Biochemical Genetics* 20:95–104, 1982; *Evolution* 36:1003–1019, 1982; and *Genetica* 68:129–143, 1986), and bird papers have been scattered throughout Avise's bibliography ever since. With students, he has contributed to genetic analyses of selected invertebrates and of all major vertebrate orders, including birds such as rails, waterfowl, thrushes, sparrows, and others. In the course of using genetic tools to analyze evolutionary relationships, Avise also has contributed to the tool kit itself, through development of novel assay methodologies. One of the most significant contributions John Avise has made to ornithology is to synthesize the field of molecular genetics and its applications to the study of evolution. As an example, a plenary lecture at the 21st International Ornithological Congress in Vienna, Austria in 1994 (published in *Ibis* 138:16–25, 1996) discussed "Three fundamental contributions of molecular genetics to avian ecology and evolution." Here, Avise reviewed the influence of DNA markers, allowing detection of extrapair matings, on our understanding of avian mating systems. He also discussed the importance of mitochondrial DNA analyses in altering our views of population structure and gene flow, and the implications of the new findings for definitions of "species." Finally, he reviewed the contributions of DNA-DNA hybridization to studies of phylogeny and higher systematics.

Avise has contributed much original research to these fields and has helped develop the tools for their study, but also has added value to his own and others' research by placing results in a broader context that highlights their significance. Avise has contributed in particular to the debate on "biological" versus "phylogenetic" species concepts, proposing that more attention be paid to concordant differences in many genetic characters, as opposed to defining species on a few traits or on existence of reproductive isolation alone. These subjects and others have been developed at length, using examples from a wide variety of organisms, in Avise's 1994 book "Molecular Markers, Natural History and Evolution" (Chapman and Hall, New York). This synthesis is a resource that frequently is cited by ornithologists, and is the work by which Avise is best known to those working in other areas of the science. Much of Avise's work is relevant as well to conservation biology, particularly the elucidation of genetic diversity among and within currently recognized "species." Examples of his contributions to this field can be found in the 1996 book he co-edited with J. L. Hamrick, entitled "Conservation Genetics: Case Histories from Nature" (Chapman and Hall, New York). For his contributions to the use of genetic markers in studying the ecology and evolution of birds, the American Ornithologists' Union is proud to bestow the 1997 William Brewster Memorial Award on John C. Avise.

Award criteria.—The William Brewster Memorial Award is given to the author or coauthors (not previously so honored) of the most meritorious body of work on birds of the Western Hemisphere published during the 10 calendar years preceding a given AOU meeting. The award consists of a medal and honorarium provided through the endowed William Brewster Memorial Fund of the American Ornithologists' Union.

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ELLIOTT COUES AWARD, 1997:

CHANDLER S. ROBBINS

Accurate information on population status is one of the cornerstones of effective conservation planning. Only 35 years ago, the best means of assessing range-wide populations of many North American bird species was to compile impressions of experts across the country. Thanks to the efforts of Chandler S. Robbins in establishing and nurturing the Breeding Bird Survey, North America today has an envi-

able, decades-long record of avian population trends collected in a standardized and statistically justifiable manner across much of the continent. In the years before BBS results were widely available, Chandler S. Robbins worked to recruit participants and to find funds for the program, often on his own time, and without much backing from scientists and administrators who did not recognize the potential value of



the BBS. Indeed, Chan is one of the few U.S. Fish and Wildlife Service employees to have an official reprimand on his record, earned for launching the BBS without permission. Chan's vision and considerable charm and determination were crucial to continuation and expansion of the BBS network. The first major publication of Breeding Bird Survey results was a summary from the first 15 years of the survey, published by Robbins and coauthors in 1986 (U.S. Fish and Wildlife Service Resource Publication No. 157). A more influential summary appeared in *Proceedings of the National Academy of Sciences USA* 86:7658–7662 (1989), which probably marks the starting point of more general recognition of the value of BBS. In that paper, the authors used BBS data to demonstrate that many Neotropical migrant birds declined during the 1980s. Publication of these results was one of the fac-

tors leading to formation of Partners In Flight, a multiagency program focused on conservation of Neotropical migrants and other birds. The Coues Award recognizes contributions having an important influence on the study of birds in the Western Hemisphere. The Breeding Bird Survey is certainly such a contribution, because its results have shaped much of the avian conservation research of recent years. BBS data have been cited in hundreds of research papers and have spurred more than a decade of research on possible causes of population change in species of concern, including forest fragmentation, loss of habitat, effects of nest parasitism and predation on reproductive success, and many other topics. Recent BBS analyses have shown more persistent declines in grassland and shrub-nesting birds than in woodland species, leading to specialized research on

those habitats. BBS data now are routinely used as a starting point for setting conservation priorities by policy-makers and land managers both in the private and public sector. Numerous other people have helped make the Breeding Bird Survey the flagship program it is today, for example, by developing sophisticated analysis procedures, but none of their contributions would have been possible without Chan Robbins' work in getting the program off and running in the first place. For his efforts—and for his successes—in providing us with such a valuable research and conservation tool, the American Ornithologists' Union is pleased to present the Elliott Coues Award for 1997 to Chandler S. Robbins.

Award criteria.—The Elliott Coues Award is given

for meritorious contributions having an important influence on the study of birds in the Western Hemisphere, but which have not been recognized through a Brewster Award. Contributions to ornithology not eligible for recognition with a Brewster Award by virtue of its geographic limitations may be honored through a Coues Award, as may works including important innovative ideas that through brevity of publication outside the primary ornithological literature may not have been selected based on Brewster Award criteria. However, the Coues Award is not necessarily limited to such works. The work consists of a certificate and an honorarium provided through the endowed Ralph W. Schreiber Fund of the American Ornithologists' Union.