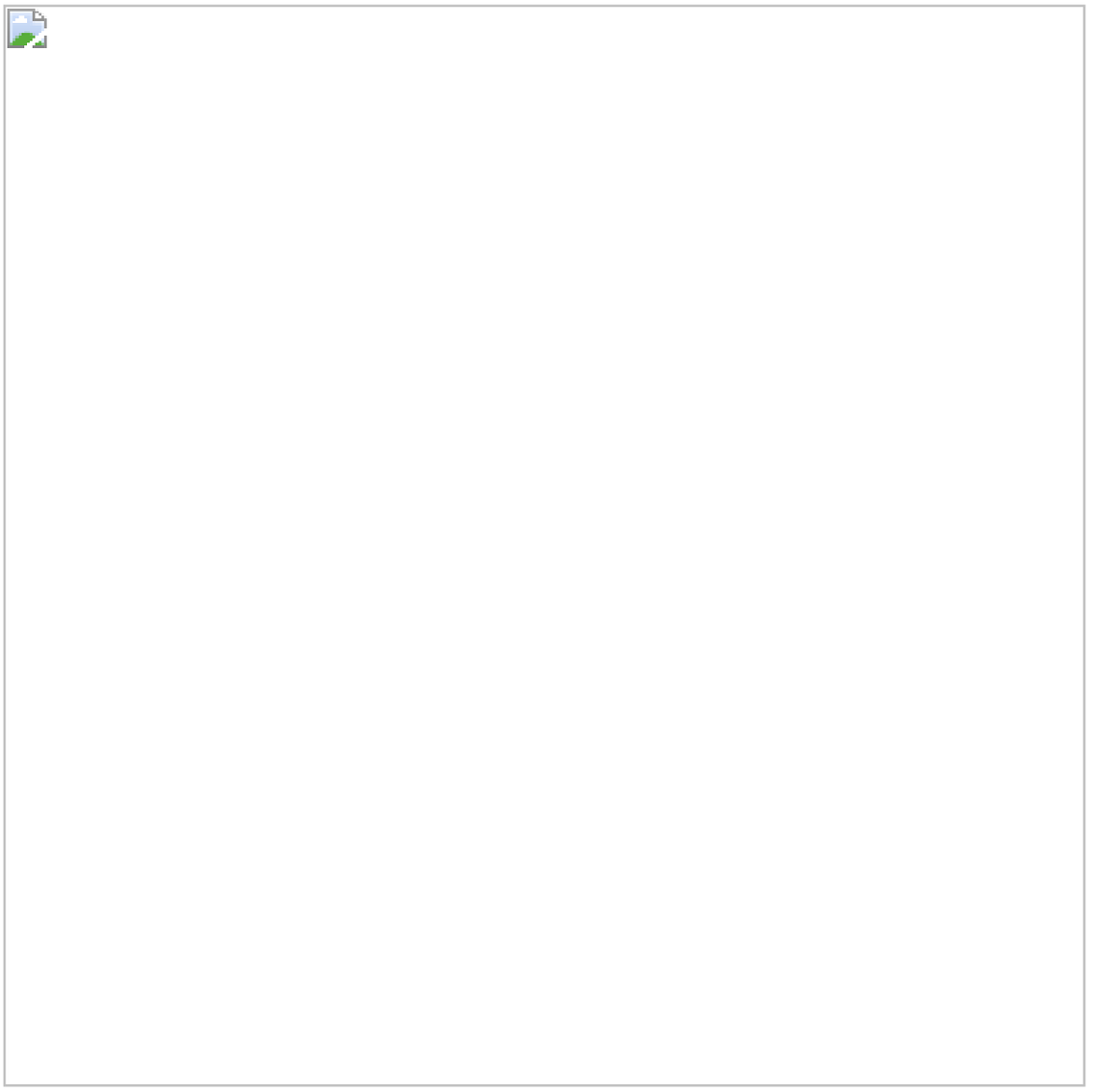

Elliott Coues Award, 2010

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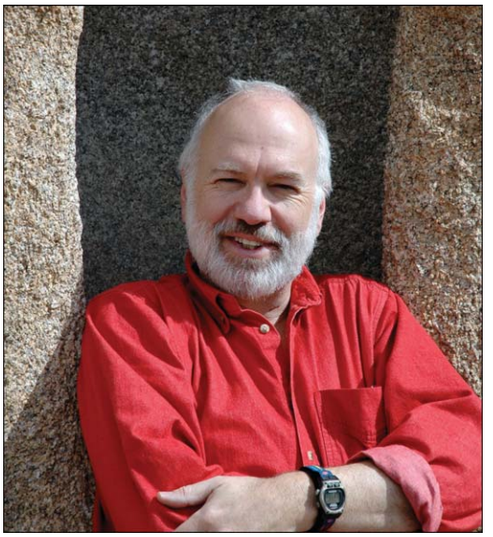
ELLIOTT COUES AWARD, 2010

Robert D. Montgomerie



Robert Montgomerie at Joshua Tree National Park, California, March 2005.
(Photograph by Denise Michaud.)

Bob Montgomerie is a Canadian behavioral ecologist, best known for his wide-ranging studies of sexual selection and parental care in birds. He studies sexual selection in the broadest sense, integrating work on plumage signals, sexual conflict, genetic mating systems, parental care patterns, and life-history evolution into a cohesive understanding of avian reproductive strategies. His research program is noteworthy both for the broad diversity of species and topics in which he and his students have made important contributions and for his knack for creative insights and questions. His research spans a remarkable taxonomic and geographic diversity, with detailed field studies on more than 40 bird species in North and Central America, Europe, and Australia—from hummingbirds to ptarmigan, fairy-wrens, bowerbirds, and robins. The diversity of the birds he has studied is remarkable enough, but he has also conducted pioneering research on mating tactics, sperm evolution, and sexual conflict in damselflies, fruit flies, snakes, frogs, and a dozen species of fish. His research is invariably question-driven, motivated by a deep understanding and passion for the natural history.

Montgomerie's interest in birds began in his early teens, working with ornithologists at both the Royal Ontario Museum and the fledgling Long Point Bird Observatory. He published his first paper—on differential migration in Least Flycatchers (*Empidonax minimus*)—while in high school. His Ph.D. research with Peter Grant at McGill focused on competition in Mexican hummingbirds and was followed by a prestigious 10-year research fellowship at Queen's University in Kingston, Ontario, where he is currently professor and research chair in the Department of Biology. Upon settling at Queen's in 1980, Montgomerie began a two-decade research program on the behavioral ecology of High Arctic–breeding birds at Sarcpa Lake, Nunavut, with innovative studies on mating systems and parental care in Rock Ptarmigan (*Lagopus muta*), Snow Buntings (*Plectrophenax nivalis*), Lapland Longspurs (*Calcarius lapponicus*), and several shorebirds. Because tundra-dwelling

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birds are visible all the time, Montgomerie and his students were able to make detailed observations of behaviors, including brood division, extrapair mating, incubation scheduling, begging behavior, central-place foraging, nest defense, mate guarding, and honest signaling, years before these were hot topics in behavioral ecology. These Arctic studies resulted in many influential papers, as well as six species accounts in the *Birds of North America* series.

Montgomerie has also advanced our knowledge of sexual selection and sperm competition in birds in diverse ways. With Ph.D. student Jim Briskie, he conducted pioneering research on the dynamics of sperm competition and sexual conflict over mating in birds, focusing on behavior, reproductive anatomy, and sperm evolution. He was among the first to apply DNA fingerprinting techniques to analyze mating patterns in birds, and the 12 species whose extrapair paternity he has studied span the range of avian mating-system diversity—Noisy Miners (*Manorina melanocephala*), Barn Swallows (*Hirundo rustica*), White-winged Fairy-wrens (*Malurus leucopterus*), Red Phalaropes (*Phalaropus fulicarius*), Red-winged Blackbirds (*Agelaius phoeniceus*), and Smith's Longspurs (*Calcarius pictus*), to name a few—each time revealing previously unsuspected aspects of their reproductive biology. He is also widely recognized as a leader in the study of plumage color, and here, too, he has studied a wide diversity of species. The overarching theme of this color work is to understand plumage evolution in a broad ecological and life-history context, including the proximate mechanisms that produce colorful plumage, as well as the fitness costs and benefits that shape the evolution of plumage colors. His best work in this area includes comparative studies of the mortality costs of conspicuous plumage, a novel explanation for the evolution of delayed plumage-maturation in passerine birds, research on the condition-dependence of plumage expression in House Finches (*Carpodacus mexicanus*), the genetic basis of plumage evolution in White-winged Fairy-wrens, and the evolution of multiple ornaments Satin Bowerbirds (*Ptilonorhynchus violaceus*).

At Queen's University, Montgomerie has supervised the thesis work of almost 100 undergraduates, graduate students, and postdoctoral fellows, 24 of whom now hold academic positions in North America, Europe, Australia, and New Zealand. He is a Fellow of the AOU and has received numerous awards for both research and graduate teaching, including a Canada Council Killam Research Fellowship in 2002–2004.

For his extensive contributions to our understanding of sexual selection and parental care in birds, informed by a deep understanding of their natural history, the American Ornithologists' Union is pleased to award Bob Montgomerie the Elliott Coues Award for 2010.

Award criteria.—The Elliott Coues Award recognizes extraordinary contributions to ornithological research. The award is named in honor of Elliott Coues, a pioneering ornithologist of the western United States and a founding member of the AOU. There is no limitation with respect to geographic area, subdiscipline of ornithology, or time course over which the work was done. The award consists of a medal and an honorarium provided through the endowed Ralph W. Schreiber Fund of the AOU.