IN MEMORIAM: RAYMOND JOSEPH O’CONNOR, 1944–2005

TONY DIAMOND

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Transatlantic ornithology lost a unique practitioner with the death of Raymond Joseph O’Connor on 29 September 2005, from cancer. In his native British Isles and adopted North America, Raymond made original contributions that have helped shape modern ornithology on three continents. He joined the AOU in 1975 and became an Elective Member in 1988 and a Fellow in 2005.

Born on 20 January 1944, in Dublin, Republic of Ireland, Raymond was educated at church schools in Ireland and remained a devout Catholic throughout his life; his religion gave him strength and comfort through his terminal illness. He first became interested in birds at the age of 12, when, as he watched a small bird methodically weaving fibers into a nest, he and the bird made eye contact, a connection he had never experienced before. Birding remained a hobby while he completed a B.Sc. in Physics and Mathematics at University College in Dublin in 1965. After working for three years on a Ph.D. in Physics at Birkbeck College in London, a program to allow physical and biological scientists to interchange careers facilitated his transformation into an ornithologist; he moved to the Edward Grey Institute of Field Ornithology at Oxford as a Nuffield Foundation Biological Scholar. He studied growth and development of birds for his D.Phil. in Zoology (1971) under Christopher Perrins. His unusual combination of laboratory and field experiments led to the landmark Growth and Development of Birds (1984), which remained the key reference on the topic until quite recently. Oxford contemporaries recall his somewhat intimidating intelligence, exemplified during coffee breaks when he would absentmindedly solve a Rubik’s cube while carrying on a conversation to which he appeared to be paying his complete attention. He worked long hours, built necessary equipment himself, and always retained a clear vision of where the work was taking him. Though clearly brilliant, he was approachable and a great conversationalist. He was a mentor to students and colleagues, always willing to advise and critique with kindly precision—a facility he retained throughout his career.

He held a lectureship in Animal Ecology and Behaviour at Queen’s University, Belfast, Northern Ireland, from 1972 to 1975. His departure for a similar position at University College Bangor, North Wales (1975–1978), was precipitated by the escalation of violence in Northern Ireland; in particular, the shooting of a colleague coming out of church “just because of his religious persuasion” made a deep impression. In both positions, Raymond continued his research on avian growth and development but also moved, in collaboration with colleagues, into new areas—including, for example, community structure in intertidal systems.

In 1987, Raymond became Director of the British Trust for Ornithology (BTO) and brought his unique combination of quantitative, biological, and personal skills to reshape it into the world-leading organization it is today. He oversaw the computerization of clerical records of populations, nest records, and banding, all data gathered by amateurs and organized by professionals. His recognition that all aspects of the BTO’s data collection could be integrated to answer critical population questions, and his powerful advocacy of the BTO’s need for the requisite computer power, set the stage for national-scale analyses of bird population dynamics not previously possible and rarely contemplated. The seminal paper in Ardea (“Pattern and process in Great Tit populations in Britain,” 1980) showed how information gathered by volunteers for BTO programs could be corroborated by, and in some cases extend, the understanding from numerous intensive professional studies on the species. It also showed how the value of the data in each separate program is greatly improved by comparison with
data in the others, so that the value of the whole exceeded the sum of the parts. This paper, those on other species, and Raymond's participation in the 1983 "Birds and Man" Symposium in Johannesburg, were influential in establishing the national Bird Populations Data Bank and Avian Demography Unit as a South African version of the BTO.

While at the BTO, Raymond applied the Trust's emerging capacity for integrated population analysis to agricultural birds, leading to his 1986 book *Farming and Birds*, written with Michael Shrub. This work demonstrated the previously unrecognized deleterious effects of modern intensive farming practices on a wide variety of birds.

In 1987, as his BTO role moved further away from research and into administration, Raymond accepted a faculty position in the Department of Wildlife Ecology at the University of Maine in Orono, where, among many other projects, he strove to apply the BTO approach to U.S. data. Volunteer bird programs in North America evolved differently, in a heterogeneous combination of nongovernmental and government agencies, with the unfortunate result that North America still lags behind the United Kingdom and South Africa in bringing together all these diverse data sets to achieve continental-scale understanding of bird population dynamics. Raymond chose the best-organized bird population data available at the continental scale, the Breeding Bird Survey (BBS), and collaborated with colleagues in a broad range of other disciplines to apply BBS data to geographically and temporally large questions of interactions between biodiversity, the physical environment, and human activities. His last book *Atlas of Climate Change Effects on Common Birds in 150 Bird Species of the Eastern United States*, with S. N. Matthews, L. R. Iverson, and A. M. Prasad, 2004) provides insight into the power of this approach to answer some of the questions now faced by contemporary ornithology and society. Much of his groundbreaking work was published in reports and in non-ornithological
journals. (Apart from reviews, only three of his publications since coming to the United States were in bird journals.) This approach raised the credibility of ornithological data among practitioners of other fields but has not had the reciprocal effect of broadening the outlook of most ornithologists or increasing their appreciation of their discipline's value to society in general.

Raymond was not only an original and accomplished researcher, but a popular and effective teacher. Through his university teaching career, he taught at least 17 different undergraduate and graduate courses, covering animal behavior, evolutionary genetics, landscape ecology, population dynamics, conservation biology, endangered species recovery plans, and various quantitative topics, including modeling, microcomputers, and complex multivariate statistics. His interest in university-level teaching led to publications in such journals as *The Scientist* ("Why ecology lags biology"), *The Teaching Professor* ("Using oral examinations in a statistics class"), and *The Chronicle of Higher Education* ("Rethinking the role of peer reviews"). His students remarked particularly on his unique ability to make wildlife-biology undergraduates like statistics. His kindness, patience, and dedication to teaching, and his respect and consideration for students, were legendary.

Raymond’s bread of interest and expertise is reflected in the many committees and working groups to which he contributed, including (among many others) the Food Quality Protection Act Science Advisory Board of the Environmental Protection Agency (EPA), the American Institute of Biological Sciences Working Group on Infrastructure for Biology, the U.S. Geological Survey Peer Review Team for the Breeding Bird Survey, the National Science Foundation's working group on Biodiversity Observatory Networks, and the EPA’s Endocrine Disruptor grant review panel. Some of the honors Raymond earned were membership in the International Ornithological Council (1980–1984), National Research Council Senior Research Fellow (1993–1994), and Guggenheim Memorial Foundation Fellow (2001).

Raymond’s strong interest in biology as a science and his physics background led him constantly to challenge ornithologists and ecologists to aspire to the strict standards of biology, and biologists to emulate the standards of physics; he often found us wanting, and told us so with clarity and passion. Throughout his career, Raymond held ornithology’s feet to the fire of physics, and the profession is better for it.

In 2005, Raymond, his wife Deirdre Mageean, and their son Eoin moved to Greenville, North Carolina, where Dr. Mageean had been appointed vice chancellor for research and graduate studies at East Carolina University, and Raymond took a position in the Department of Biology. His return to Ireland for burial reflects his family’s deep love for his native land. Their loss is shared by many friends and colleagues throughout the world who mourn the premature end to the unique and inspiring career of one who was universally admired and respected.
