In Memoriam

JOHN ALEXANDER MOORE
Professor Emeritus of Biology
1915-2002

John A. Moore, scholar, educator, scientist, author and friend to all who knew him died May 26, 2002, at his Riverside home at age 86. His wife Betty was at his side. Throughout his long life, John was the very essence of the university professor and humanistic scholar. His scientific achievements were astonishing, and included authorship or editing of hundreds of articles and books over a seven-decade career. He was an active member of many professional societies, including the National Academy of Sciences, the American Society of Zoologists, and the American Institute of Biological Sciences, and a tireless champion of education reform. He was widely revered for his scientific contributions and received numerous awards throughout his life. He was also an avid photographer, a devotee of the arts and all aspects of human culture, a skilled historian, a lover of the outdoors, and in general someone who was always a source of surprise, pleasure, and admiration.

John was born on June 27, 1915 in West Virginia. His parents separated when he was four, and after living briefly in Nevada and California, John and his mother moved to Markham, Virginia, a small town at the base of the Blue Ridge Mountains. It was there that John developed his love of the outdoors and a lifelong interest in birds. By his account, schooling in that rural environment was a challenge, with few books or qualified teachers and little exposure to science or the arts. He joked that “For awhile, it looked like I’d be President of the United States because I went to school in a log cabin”. He remained in Markham through his first two years in high school and received his first good schooling during his junior year in Washington, D.C. and in New York City as a senior. During that year he worked as a volunteer at the American Museum of Natural History which heightened his love of biology.

John remained in New York for 37 years. He obtained his bachelors, masters, and Ph.D. at Columbia University. At the time Columbia was one of the premier Zoology departments and John interacted with the leading biologists of the day including the cell biologist E.B. Wilson and the embryologist Lester Barth. Barth introduced John to amphibian eggs and kindled his interest in development and embryology. While in New York, John taught at Brooklyn and Queens College, became an Assistant Professor at Barnard College in 1943 and then a professor of Zoology at Columbia, where he was chair of that distinguished department from 1949 – 1952.

While a graduate student, John met Betty Clark, who had studied at Radcliffe and worked on vision with George Wald at Harvard. Like John, Betty was mentored by Lester Barth and received her Ph.D. from Columbia. John and Betty were married in 1938 and (as John loved to tell) he immediately planned
their honeymoon as an extravagant and naively ambitious canoeing expedition through the poorly charted wilds of northern Quebec to look for the northern limits of numerous frog species. Luckily, John suffered a ruptured appendix a month before the trip and their plans had to be altered. Instead, they went to the Gaspe peninsula to collect frogs (which resulted in their first publication).

John studied *Rana pipiens* and other frogs during much of his career (he was a Research Associate in the Department of Herpetology at the American Museum of Natural History from 1942 until his death). His interests were wide-ranging and encompassed development, embryology, genetics, geographic variation, and temperature tolerance. Perhaps his major contribution to classical herpetology came in 1952 when, as a Fulbright Scholar, he and Betty carried out the first comprehensive examination of the Australian frog fauna. They collected widely in Australia, and also made extensive use of material in the British Museum of Natural History and the National Museum in Paris. This effort resulted in the classic *Frogs of Eastern New South Wales* (still widely used by Australian herpetologists). Among the species John described was the exquisitely colorful Corrobree frog which has become a conservation icon and was featured on an Australian postage stamp.

In addition to his many research publications, John Moore made enormous contributions to education. Probably his greatest impact was by telling the story of biology through his many textbooks and historical accounts of the field’s most expansive and exciting period. John’s basic philosophy about writing and teaching was that biology should be accessible and understandable and not be buried in jargon. His *Principles of Zoology* (first published in 1957) was widely used as the primary textbook in many colleges and universities. In 1959, John supervised the first version of *Biological Science: An Inquiry into Life* (also known as the Yellow Version), a new high school science text firmly based on conceptual understanding and inquiry.

In the years that followed, he was recognized for his scientific achievements and his excellence as an educator and author by being elected as a fellow to the American Academy of Arts and Sciences in 1960 and as a member of the National Academy of Sciences in 1963. It was especially in the National Academy that John’s passion for scientific literacy was heard. He was a member of 12 Academy committees on science and science education and made major contributions to the 1996 *National Science Education Standards*. Over the years he became deeply concerned that the Nation’s colleges and universities were not doing an acceptable job of training of the nation’s teachers. In letters to the Academy he outlined a radical reform plan that he understood would be highly controversial. In this, as in all of his efforts, John’s mild personality and gentlemanly southern manner masked a steely determination and tenacity, exemplified by this quote: “A study of the sort proposed requires brave persons who will give a truly deep look at the system and a bold and honest set of recommendations. Most studies in education produce a pabulum-
product in an attempt to please all of the individuals involved. This task is too important for stroking. Raising hell is more appropriate.”

John and Betty moved to the Biology Department at UC Riverside in 1969. His research interests broadened to include the population genetics and evolution of *Drosophila* in the American Southwest. He loved field work, especially when it took him through the impressive landscapes of the American Southwest (and he was legendary for his fondness for hot weather). John cared very deeply about UCR and was unwavering in his belief in a liberal arts education based on solid groundings in science, humanities, and the arts. In that vein he created a course, “Biology of Human Problems”, which remains popular for majors in the life sciences. John was a strong believer in the Academic Senate and was a familiar figure at Senate meetings, where he continually challenged the faculty to take control of the curriculum and provide students with the very best education possible.

Following his “retirement” from UCR in 1982, John emerged as the nation’s central figure in science education reform. From 1983 through 1989, in conjunction with the American Society for Zoology, he undertook the Herculean task of outlining a conceptual framework for all of biology through a series of annual symposia that resulted in seven volumes entitled *Science as a Way of Knowing*. The goal was to provide background materials for introductory biology courses at colleges and universities. In addition to the scholarly chapters contributed by leading scientists, John contributed an extensive series of historical accounts of the development of biology as a science. This unifying theme was so powerful that his essays emerged as a very successful volume published by Harvard University Press under the title *Science As a Way of Knowing: The Foundations of Modern Biology.*

In addition to challenging the National Academy of Sciences to become active participants in promoting science, John felt that it was especially crucial to educate the public about evolution, and to confront the recurring efforts to replace evolutionary concepts with ‘creation science’ in school curricula. In his typical fashion, he became one of the world’s experts on creation theology and biblical history, and used that knowledge in a series of important contributions to a number of publications on the teaching of evolution. John had too strong a will to be thwarted by institutional inertia or politics, and when the Council of the Academy voted not to follow his recommendation that Academy publications on evolution include a scholarly analysis of the several different versions of the story of Genesis, John wrote his own book on the subject, *From Genesis to Genetics*, which was published by the University of California Press in January, 2002. This proved to be his last publication.

Even outside the academic arena, John was forever the student who would become interested in something, research it in great detail, and eventually become a master storyteller on that subject. He devoted considerable time to collecting items that interested him. At various times these included books, old
firearms, cameras and lenses, navigational instruments, and in his later years, antique lighting devices. In part, John's fascination with lighting was sparked by his concern over the continuing divisiveness of race, ethnicity, religion, and gender. He argued that all humans had to solve the problem of creating light and became a scholar on the history of illumination – a topic largely ignored by most historians. He was ardently at work on a book on the history of illumination at the time of his death.

Through his writings (especially his textbooks), John Moore became a teacher to millions. Fiat Lux, “Let there be light”, is indeed an appropriate motto from this, his last institution. John illuminated a world that is often cast into darkness, a world that benefited from his own passions, convictions, and wisdom. Those who were fortunate enough to know him were often changed forever, and he is deeply missed by his hundreds of friends throughout the world.

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