

# Resolution of Respect

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## Francis C. Evans

1914–2002

Francis Evans, Professor Emeritus at the University of Michigan, died on 16 August 2002 in Ann Arbor, Michigan, following a short illness. Francis belonged to the generation of ecologists whose lives and careers spanned the transformation of their discipline from early, pioneering efforts to its present expansive scope. In joining in the transformation, Fran made his contributions in a characteristically unassuming fashion. As a member of the ESA, he took special interest in helping others to publish their work and ideas. He served as sole zoological editor for *Ecological Monographs* from 1955 to 1961, and as Chair of the Publications Committee from 1978 to 1981. Forty years after he himself first published with the Society, he served as its President in 1983–1984. He enjoyed these opportunities to contribute, and greatly appreciated the honor of receiving the Distinguished Service Award from the Society in 1987.

Fran Evans' interests in ecology began early. He was born and raised a Quaker in Philadelphia. The Quaker community took much interest and pleasure in nature and natural history. Fran spent summers and school vacations away from the city, exploring forests, fields, and seashores up and down the East Coast. Even in Philadelphia he had good opportunities for natural history outings, as his family lived close to, and later in, Awbury Arboretum. There he birded from an early age with friends and cousins. At 10, he joined the "Bug Club" organized for children by Philadelphian Margaret Cary, and he spent his youth thereafter collecting and studying insects, especially butterflies and moths. His enthusiasm for Lepidoptera matured in later years into a variety of studies and publications on insect ecology.

Following well-worn family footsteps, Fran attended Germantown Friends



School and Haverford College. At Haverford, he was encouraged to apply for a Rhodes Scholarship for graduate study at Oxford. He had read with great interest and excitement the slim volume of fresh ideas on animal ecology and "scientific natural history" published a few years earlier by the young Charles Elton. He was awarded the scholarship, and he sailed for England in the summer of 1936 to join Elton and his recently formed Bureau of Animal Population at Oxford.

Fran's three years at Oxford with Elton and his group set the research interests for his career. With his mentor's thoughtful and scholarly guidance, he pursued a thesis on the topic of habitat selection of small mammals at Bagley Wood. The Bursar of St. John Baptist College issued a pass, with a copy sent to the Head Woodman, declaring that "Mr. F. C. Evans, Oriel College, and two assistants have permission to catch mice in Bagley Wood, during the period

October 13<sup>th</sup> 1937 until September, 1938, during the hours of daylight." Thus, although many of the mysteries of ecology after dark would have to remain beyond the pale, the young researchers were nonetheless enabled to get on with the business of catching mice. Fran also made two field expeditions under the auspices of the Oxford University Exploratory Club to the then-remote Faeroe Islands (in 1937, with H. G. Vevers) and to Iceland (in 1939). These expeditions resulted in reports in the *Journal of Animal Ecology*, Fran's first scientific publications, on the biology of the Faeroe mouse and breeding gannets.

With war approaching, Fran defended his D.Phil. in 1939 and returned home to become a Claypole Memorial Fellow at the University of California at Berkeley. There he worked as a Research Assistant with the epidemiologist Karl Meyer at the University's Hooper Foundation for Medical Research in San Francisco. Developing further his interests in

animal population dynamics, he engaged in fieldwork throughout California and the Pacific Northwest to assess the relationships of vertebrates, ectoparasites, and disease. The work focused on the role of ground squirrels, Burrowing Owls, and fleas in the maintenance and transmission of plague. In 1942, he moved to the University of California–Davis and worked as an Assistant Zoologist with Tracy I. Storer at the Agricultural Experiment Station. Together with F. G. Palmer, they published in *Ecological Monographs* an account of rodent populations of the Sierra Nevada.

Fran married Rachel W. Brooks in June 1942, and they spent at UC–Davis the first of 60 years together. When the University of California closed the Davis campus in 1943 and turned it over to the U.S. Army Signal Corps, Fran and Rachel returned to Haverford. There Fran served as an instructor in biology, especially to train medical personnel for the war. He also continued his studies of parasitic insects, collecting data on the human louse. He later published these data with colleague Fred Smith in the *American Naturalist* (1952) in an early analysis of a population's intrinsic rate of natural increase. To maintain proper temperature while gathering data, he incubated his study subjects by placing them in a packet that he strapped to his armpit. He always chuckled in remembering the shock and considerable consternation that this caused friends who had less natural inclination for biology.

In 1948, Fran joined Lee R. Dice at the University of Michigan in Ann Arbor as an Assistant Biologist in the Laboratory of Vertebrate Biology directed by Dice, and as Assistant Professor of Zoology. Dice was

another mentor with much influence, and his intellectual independence and originality, sound common sense, and quiet, steady manner deeply impressed Fran. When Dice retired in 1957, Fran succeeded him as Director of the laboratory. He remained at Michigan for the rest of his career, becoming Professor in 1959 and Professor Emeritus in 1982.

One special duty particularly engaged Fran at Michigan. From 1959 to 1982, he served as Associate Director and oversaw the operation of the E. S. George Reserve, a protected tract of fields, ponds, and forests near Ann Arbor. Donated to the university, the Reserve was dedicated to ecological research. It has served as the site of many outstanding research projects by generations of Michigan ecologists. These include Fran's own graduate students, in whom he took great personal interest and of whom he was very justly proud.

Inspired by Elton's comprehensive research program in community ecology at Wytham Woods, Fran initiated diverse studies of an old-field community at the George Reserve when he arrived at the University of Michigan in 1948. He continued to collect data at the old field well into his retirement. Fran's goal, over the years, was no less lofty than to understand the key patterns and processes that underlie the dynamics of natural communities and succession. He recognized well the great scope of the challenge, and took much pleasure in collaborating with others in the attempt. Over the years, Fran worked especially closely and published with S. A. Cain, E. Dahl, and R. G. Wiegert on vegetation and primary production of the old field, with P. J. Clark and R. H. Brand on statis-

tical analyses of spatial patterns and species richness, with W. R. Dawson on bird populations (the two were awarded the Harry R. Painton Award from the Cooper Ornithological Society in 1963 for their collaborative research), and with U. N. Lanham, D. F. Owen, S. K. Gangwere, and W. W. Murdoch on insect communities. Fran's old-field studies also spurred essays, as in his promotion of the concept of the ecosystem (in *Science*, 1956). He devoted his final years of fieldwork, in particular, to the study of bee–flower interactions in the old field. Although Fran published only a brief account of his bee work before age overtook him, he left behind meticulously documented records for others <<http://insects.ummz.lsa.umich.edu/fauna/esgrbees.html>>.

Francis Evans felt keenly that he led a privileged life as a research ecologist and a university professor, and took great satisfaction in helping students and colleagues. He felt lucky to have come of age in ecology when the field was young, with high sense of collegiality in a shared grand adventure. He admired others for their varied and special talents in enlarging the more mathematical and theoretical realms of ecology. He himself always remained true to his conviction that the richest rewards in ecology lay first and foremost, as Elton had said, in scientific natural history. His greatest professional pleasures came in observing organisms in their natural settings and in sharing in the endeavor with others to place such observations in broad ecological context.

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