

vage, and the injection of microscopic beads of known but differing diameters into the cloaca of male birds and then searching for the spheres in lavages of females, Quay was able to document the degree of fidelity and copulatory performance of individual males and females in resident populations of many species.

His extensive netting and banding activities during these years put him into contact with the Western Bird Banding Association. He became President of that organization (1987–1988) and editor of its contributions to the *North American Bird Bander* (1983–1986).

Quay's demonstration of the great potential

of cloacal lavage is an important contribution to ornithology. A connection between his research on the neuroendocrinology of the pineal complex and ornithology is not as apparent. However, in the year Bill Quay was born, William Rowan was launching his classic experiments with juncos and crows that demonstrated the importance of photoperiodism to the reproductive and migratory behavior of birds. One lifetime later, an army of pineal researchers is closing the gap between the photoperiodic world revealed by Rowan and the molecular/cellular realm ruled by the pineal gland. Bill Quay played an important part in this endeavor.

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IN MEMORIAM: DAVID E. DAVIS, 1913–1994

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David E. Davis was born 18 July 1913 in Chicago, Illinois, and died in Santa Barbara, California, on 31 October 1994 after prolonged illness. He received his primary and secondary education in Wilmette, Illinois. He joined the AOU in 1931 and became an elective member in 1941. In 1942 he married Emily ("Tim") Rodgers with whom he had three daughters. Tim predeceased him in 1987, and in her memory he endowed a research chair at the Morton Arboretum in Hinsdale, Illinois.

His B.A. was from Swarthmore College (1935), and his M.S. and Ph.D. were from Harvard (1939); his thesis was on anis in Cuba. During his postdoctoral fellowship with L. V. Domm at the University of Chicago (1941) he studied chicken behavior. In 1941–1943, he investigated hosts of yellow fever in Brazil for the Rockefeller Foundation. After two years of work on typhus in Texas, he went to the Johns Hopkins School of Hygiene and Public Health as Associate Professor (1946–1959), where he worked on population dynamics of European Starlings, Norway rats, several other species of birds and mammals, and on potential rodent vectors of Korean hemorrhagic fever. He became a pro-

fessor at Pennsylvania State University in 1959 and chairman of zoology at North Carolina State University of Raleigh in 1966. When he retired to Santa Barbara in 1975, he continued research there.

Dave's research usually had applications to human welfare. He published three books and 230 papers on populations, behavior, ecology, and the physiology of aggression. He was the editor of the *Wilson Bulletin* (1948–1950), then a cofounder with Carlton Herman of the Wildlife Disease Association, of which he was the second president (1961–1962); he received their Distinguished Service Award in 1975. He was on the executive committee of the AIBS (1959–1962) and president in 1971. He was an associate editor of *Animal Behavior* (1958–1979), secretary of section F of the AAAS (1966–1969), and a trustee of *Biological Abstracts* (1975).

Dave was a well-balanced, stable man, with an optimistic outlook, though he was discouraged by the limitations his illness placed on his physical activity in later years. He was held in high regard by his family, friends and students, and in turn he was deeply interested in their progress and achievements. He was noted for

his almost legendary self-discipline. His decisions were logical and without emotional intrusion. Highly organized, he budgeted his time carefully. Proud of his Welsh heritage, Dave had an active interest in singing and sang in his church choir and in barbershop quartets.

His early interest was fostered by summers at Crystal Lake, Michigan. Seton's *Two Little Savages* was his *vade mecum*. In his teens he published a "Natural History of Crystal Lake," which won him a summer of drawing and

painting lessons at the Chicago Art Institute. While at Harvard, he joined Ludlow Griscom on his famous bird walks. Dave had an impressive knowledge of bird songs and calls, which he put to good use. I once asked him which was his first interest: birds or mammals? His prompt reply was, "Neither. Populations." Thus his major interests were defined early and formed the core of his research throughout his career.

We have lost a truly great friend and scientist.