

## **IN MEMORIAM: FRIEDRICH WILHELM “FRITZ” MERKEL, 1911–2002**

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## IN MEMORIAM: FRIEDRICH WILHELM "FRITZ" MERKEL, 1911–2002

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Fritz Merkel was born in Breslau in Silesia (now Poland) on 27 August 1911, and educated there. He died in Frankfurt am Main on 12 August 2002, only two weeks before his 91st birthday. He became a member of the AOU in 1962, and an Honorary Fellow in 1977.

From childhood on, he was an enthusiastic zoologist. His family always had a strong interest in zoology; his grandfather was a well-known specialist on the systematics of snails. Already as a schoolboy, he roamed the environs of his home town. He was particularly interested in the breeding ecology of Penduline Tits and published his first scientific paper on polygyny in that species. His interest in nature was wide. Besides birds, crickets and grasshoppers were his favorite animals. He loved the latter because of their singing. He used to say: "When summer turns into autumn, moult and migration stop the song of birds, and crickets and grasshoppers take over."

His work as a student helper at the German bird-banding centers of Rossitten and Hiddensee aroused his interest in bird migration. His Ph.D. thesis at the University of Breslau was concerned with the physiology of *Zugunruhe* (i.e. the urge or drive of animals to migrate) in night-migrating passerines. After completing his thesis in 1938, he joined his teacher Giersberg at J.W. Goethe-University in Frankfurt am Main, where he later became a professor and spent the rest of his academic life. His career was interrupted by the Second World War, which began in September 1939. He fought on the Eastern front, and was captured and held as a prisoner of war in Siberia until his release in 1950. In 1961–1962, with the support of a

Fulbright award, he visited the United States and worked in the lab of the late Donald Farner in Pullman, Washington, focusing on the annual cycle of White-crowned Sparrows. Much of Merkel's research dealt with bird migration and related problems, such as the endocrine and energetic basis of *Zugunruhe* in passerines. His most important findings, however, were the discovery in 1960 that night-migrating birds are able to orient without the help of celestial cues (which at that time were generally believed to be the only orientation cues), and the identification of the geomagnetic field as the factor controlling that "nonvisual" orientation.

Fritz Merkel was a dedicated teacher with a great personal effect on his students. He always held the admiration and the affection of his students and colleagues because of his broad zoological knowledge; his open-minded, very liberal attitude; and his wonderful sense of humor that included telling stories on himself. His enthusiasm directed many students toward studies on birds, but he did not mind if one wanted to work with other animals. Thus, the list of species studied in his laboratory ranges from planaria to mammals.

After retirement, Fritz Merkel continued his research. For the last 30 years of his life, he placed a number of bird houses in his garden and established a colony of European Starlings to study their sociobiology, especially polygyny. He thus resumed the themes of his childhood studies on Penduline Tits. Even during the last year of his life, when bedridden, he was still interested in scientific questions and their solution.