

**MEMORIAL RESOLUTION OF THE FACULTY  
OF THE UNIVERSITY OF WISCONSIN-MADISON**

**ON THE DEATH OF PROFESSOR EMERITUS RICHARD MAX SHACKELFORD**

Dr. Richard Max Shackelford was the eldest son of John and Mary B. (Wilcox) Shackelford of Murray, Kentucky, born January 23, 1915. Because of his keen mind, high energy, and the encouragement of his extended family, he chose to pursue an academic life. He earned a B.S. degree in biology from Murray State College in 1936 and accepted a position as a high school teacher and principal in Hardy and Mammoth Spring Arkansas.

In 1940, "Max" entered graduate school as a research assistant under Dr. J. L. Cole in the Department of Genetics at the University of Wisconsin-Madison and began his studies of fur-bearing animals. He received his M.S. degree in 1941.

His graduate studies were interrupted by World War II, and he entered the U.S. Navy in 1942. He served as the navigation officer aboard the U.S.S. Howard, a destroyer mine sweeper (DMS7) in the Pacific from the battles of the Marshall Islands to Iwo Jima (1942-1946). He continued to keep in touch with the ship's captain and some of the members of the crew through correspondence and reunions. He returned to Madison to complete his Ph.D. degree as the last advisee of Dr. Leon Cole and published his thesis *Genetics of the Ranch Mink* in 1947. He published his thesis as a book and later put out a second edition. That same year, he accepted a position as assistant professor in the Department of Genetics.

He married Ruth Noreen Peterson in 1951 and adopted her two children of a previous marriage, Terry Jon and Thomas Charles, both of whom preceded him in death. Their son, Jole, was born in 1954.

Dr. Shackelford was "the" fur animal (chinchilla, fox, martin, and mink) specialist at the University of Wisconsin in 1953 and as a result was designated the executive secretary of Fur Animal Research by the president of the university. He was named custodian and placed in charge of the Fur Animal Research Laboratory, 2100 Linden Drive. The space was available to facilitate the research in genetics, biochemistry, and veterinary science.

For nearly 40 years, Dick Shackelford covered the research, teaching, and extension work in fur animals. He was especially interested in color phases of mink since color was the most important factor in the value of the pelt of domestic fur producing animals. He was instrumental in elucidating the genetics of color phases Autumn Haze (light brown), Lutetia (gunmetal), Azurene (pale gray) and Tourmaline (pale beige) and others.

He published papers on the chromosomes of the fox, a fox hybrid, white spotting in the fox and the anatomy of the genital system of the chinchilla.

Because the mink is a carnivore and some feed came from meat animal by-products, which contained low levels of steroid hormones, he did research on the effects of steroids on the reproductive performance of female mink. This work not only established the endocrine control of fur growth, but also was one of the first works to show that melanophor-stimulating hormone was not just a hormone of amphibians, but also a very important hormone of mammals.

In 1960, Dr. Shackelford recognized that there was considerable progress made in blood group polymorphism and its association with health issues in cattle. He invited Dr. Jan Rapacz to initiate studies on blood group and blood protein polymorphisms and their possible linkage with several health issues in

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mink. These studies resulted in: 1) discovery of mink blood group systems and their association with immunological incompatibility as well as their relationship with other mammals; 2) elucidation of the cause of female infertility as a result of immunological incompatibility as well as the cause of mortality of newborns due to hemolytic disease; 3) identification of antibiotics in food, used as bacteriostatic agents, as the cause of fatal anaphylaxis in young mink; and 4) discovery of erythrocyte mosaicism in mink as the fourth species of mammals (cattle, sheep and humans). The phenomenon of mosaicism is the coexistence of genetic (inherited) and somatic (acquired by exchange of twin) blood groups, without immunological rejection, as a result of allo-transplantation of hematopoietic tissue during embryonic and fetal life.

This is the only extensive research on the inheritance of blood group and blood protein polymorphisms of the domestic mink, and this research resulted in a number of publications.

No teaching duties were assigned to Dr. Shackelford, but he was a guest lecturer in courses given by Dr. James Crow and Dr. William Stone of the Laboratory of Genetics, Dr. Wilber J. "Tip" Tyler of the Department of Dairy Science, and later in the very popular Animal Science course, *Companion Animals*.

It is no exaggeration to say that Dr. Shackelford was considered the world authority on the genetics and reproductive physiology of fur animals.

For 15 years, he served as chairman of classification committee and the educational committee of the International Mink Show held annually in the Milwaukee Auditorium. He chaired the two-day Mink Farmer's Summer School held at two-year intervals, starting in 1948, which attracted mink breeders from this country and abroad. He published many articles in trade journals and other fur farming publications and was invited to speak at seminars and symposiums in the U.S. and Canada and to give a series of lectures in Denmark, Norway, Sweden and Finland.

In 1974, Professor Shackelford received a distinguished alumnus award from Murray State College. He retired from the University of Wisconsin in 1984 but continued to enjoy association with colleagues at the university. He loved reading, gardening, tending orchids and bird watching in rural Mt. Vernon where he lived for 45 years. He continued his interest in color inheritance by selecting canaries for color and song. He had an eye for and appreciation of beauty and utility. He also raised guineas, pea fowl and grouse. He was locally known as "the professor on the hill."

He is survived by his son, Jole, who teaches in the Department of the History of Science at the University of Minnesota, a daughter-in-law Frankie, and grandsons Gorm (London, England) and Leif (Oakland, California).

Dick will be fondly remembered by family, friends, neighbors, and his few remaining UW colleagues.

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