

WILLARD V. KING

The death of Dr. Willard V. King on March 21, 1970 in Fort Lauderdale, Florida, brought to a close a distinguished career in medical entomology which included fruitful activities in many phases of mosquito biology and control. He was a member of the staff of the U. S. Bureau of Entomology, later the Bureau of Entomology and Plant Quarantine, from 1910 until his retirement in 1953, and in later years was consultant to that organization.

Dr. King was born in Virginia City, Montana on July 19, 1888. His entomological career began during his undergraduate days at Montana State College, when he assisted in pioneering studies on the natural history of the Rocky Mountain Spotted Fever Tick. Upon graduation in 1911 with the degree of bachelor of science, he entered Tulane University in New Orleans, Louisiana, which institution granted him the doctor of philosophy degree in 1915. It was while at Tulane that his work with mosquitoes began. His doctoral thesis reported on his systematic study of the mosquitoes of New Orleans and vicinity. While at Tulane he also began investigations on malaria parasites and their transmission by anopheline mosquitoes. The results of these were published in a series of papers on the subject beginning in 1916, the first of which detailed his work on the incrimination of *Anopheles punctipennis* as a host of tertian malaria. During these early years he also spent a brief period in South

Carolina on a project designed to determine the relationship, if any, between insects and pellagra.

In 1917, Dr. King moved to Mound, Louisiana where, a few years earlier, the Bureau of Entomology of the U. S. Department of Agriculture had established a malaria research laboratory under the direction of D. L. VanDine. Initial work at that laboratory had demonstrated the great economic losses to southern industry caused by malaria carrying mosquitoes, and thereby established justification for Federal appropriations for continuing research in that field. The Mound, Louisiana Laboratory was to be Dr. King's headquarters for the next 13 years where his activities included such pioneering work as the development and first use of the airplane in malaria control, and of the use of the precipitin test for studying the blood-feeding habits of malaria carrying mosquitoes.

In 1928, the Rockefeller Foundation called on Dr. King to undertake the task of establishing the specific identity of the mosquitoes responsible for transmitting human malaria in the Philippine Islands. For this purpose he made two trips to the Islands during the years 1928-1932, and his work resulted in the naming of a number of new species of anophelines as well as pointing out the principal malaria vectors and their habitats.

In 1931, Orlando, Florida became the headquarters for the mosquito activities of the Bureau of Entomology which had been carried on at the Mound laboratory. At that time the program was altered somewhat so as to give more attention to general mosquito problems. In the early 1930's the program included cooperative work with the several work relief agencies in training personnel and in giving advice and assistance in selecting work areas, and in developing and carrying on both malaria and "pest" mosquito control programs in various parts of the country. In all of these activities, Dr. King took a keen interest and his sound advice undoubtedly contributed a great deal, not only to the effectiveness of the work programs, but also toward the promotion of sound mosquito control by those communities which maintained active programs when relief funds were terminated. The Handbook, "Mosquito Control in the Southeastern States," of which Dr. King was the senior author, and which became a much used text by mosquito control workers, particularly during World War II, was developed during this period. It was first published in 1939.

Dr. King was commissioned a colonel in the U. S. Army Sanitary Corps in 1941 and served until 1946. He first was assigned to the entomological laboratory at Fort McPherson in Atlanta, Georgia where he developed training courses and instructed army personnel in mosquito identification, biology and control. It was not long, however, before he requested an overseas assignment and soon was on his way to the South Pacific where he was to carry on mosquito control activities until the war's end. Upon returning to the states he again served as Director of the U.S.D.A. Orlando Research Laboratory, where projects carried on had to do principally with the development of new materials and methods for protecting man against mosquitoes and other insect pests. He relinquished active direction of the laboratory in 1951 and then served as technical consultant until his retirement in 1953.

Professional societies in which Dr. King held membership included The American Society of Tropical Medicine and Hygiene (past president), The American Mosquito Control Association (Honorary), The Entomological Society of America and The American Association for the Advancement of Science. He served for several years on the Board of Malaria Consultants of the Tennessee Valley Authority and as Entomological Consultant on the Florida State Board of Health.

Dr. King was married twice; in 1925 to Miss Nell B. Lynn of Shreveport, Louisiana, whose death occurred in 1941, and to Mrs. Ralph Kepert of Australia, a widow whom he met in 1944 while on military service in that country.

Survivors include his widow, two daughters, Marion and Caroline of the home address, two stepdaughters, Mrs. James Yarbrough of Atlanta and Mrs. William Mathews of Orlando, Florida; and three brothers, George, of Des Moines, Iowa; Erman, of Cambridge, Illinois; and Kenneth, of Vancouver, British Columbia.

GEORGE H. BRADLEY

HENRY W. VAN HOVENBERG

Henry Waggoner Van Hovenberg, P.E., born in 1889 in Eau Claire, Wisconsin, died December 22 at 11:00 p.m. in Titus County Memorial Hospital, Mt. Pleasant, Texas.

Mr. Van Hovenberg was an early Sanitary Engineer graduate of the Massachusetts Institute of Technology (1911). He was one of the early Sanitary Engineers employed by the City of Dallas, and in 1917 joined the St. Louis Southwestern Railroad (Cotton Belt Route) as Sanitary Engineer. At this time some 15,000 deaths in the United States were attributed to malaria each year, and one of his first assignments was to find a method of keeping the railroad employees from acquiring malaria fever. He collaborated with Mr. J. A. Le Prince, Sanitary Engineer, and Dr. H. R. Carter, Asst. Surgeon General, U. S. Public Health Service, Mr. V. M. Ehlers of the Texas State Department of Health and others, and carried out some of the basic principles of malaria control established by the Armed Forces in Havana, Cuba, and by other agencies later in the construction of the Panama Canal. This work was highly successful and served as a

model for other railroad systems in the malarious sections of the United States. In this activity, he was active in contacting state and local civic groups and municipal governments and encouraging them to adopt similar programs. He continued his service with the Cotton Belt System in various sanitary engineering activities until his retirement in 1957.

He was appointed as the engineer member of the Texas State Board of Health in 1939 by Governor W. Lee O'Daniel, and served in this capacity until his resignation in 1942, when he accepted a commission as Colonel with the U. S. Army. He was assigned to the Institute of Inter-American Affairs and served as the Chief of the Field Party and consulting Sanitary Engineer throughout Central America until the end of World War II.

Mr. Van Hovenberg belonged to numerous professional organizations and received many honors during his professional life. He is survived by his wife of 30 years, Karin; a grandson, Alex Sanderson III of Texarkana, Arkansas; and two great-grandsons. He is buried in Forrest Lawn Memorial Park in Mt. Pleasant.

DR. F. C. BISHOPP

Word has just been received of the death of Dr. Fred C. Bishopp on May 8, 1970. It was too late for the inclusion of a proper notice in this issue of *Mos-*

quito News. A full account of the career of this distinguished Past President of AMCA will be published in the September number.