

Harry Hoogstraal
1917 - 1986

The recent, rapid illness and resulting death of Harry Hoogstraal came as a shock to his friends and acquaintances around the world. Trained and richly experienced he was in the disciplines of medical zoology, parasitology, entomology and ecology, his death is an irremediable loss to the sciences. Because of his life-long dedication to these fields of science, his renown as an international scientist and dynamic colleague is securely established and will long endure. Very infrequently does one individual so profoundly influence the advancement of knowledge in so many areas of biological science as did Harry Hoogstraal.

Born in Chicago, Illinois, February 24, 1917, he died in Cairo, Egypt on his 69th birthday, February 24, 1986, following a three-month bout with pulmonary cancer. With B.A. and M.S. degrees (1938 and 1942) from the University of Illinois, his training was interrupted by World War II to serve as an officer entomologist (1943-1946) in the U.S. Army. Subsequently, he received Ph.D (1959) and D.Sc. (1971) degrees from the London School of Hygiene and Tropical Medicine.

As a classmate of his at the University of Illinois, I early became aware of his genius since, while still a masters' candidate at the University, he organized and led (1938-1941) four summer multi-discipline biological expeditions into the mountain and desert portions of western and southwestern

Mexico. These resulted in the amassing of large, scientifically-valuable collections of animals and plants. I was fortunate in serving as entomologist for the 1940 expedition. His masterful and indefatigable leadership ability became clearly apparent to all of us who participated. Although largely funded through herculean efforts on the part of Harry, these expeditions did have the sanction of the University of Illinois and the Field Museum of Natural History (Chicago).

Initially separated by the onrush of World War II, we met briefly in early 1944 when Harry came from Fort McPherson, Georgia to Washington, D.C. to be best man at my wedding. Then, not two long afterwards, our paths coincided again when Dr. Lloyd Rozeboom and myself moved our Naval Medical Research Unit 2 (NAMRU-2) anopheline taxonomic studies from the New Hebrides and Solomons to the highlands above Hollandia, Dutch New Guinea early in 1945. Harry and famed Dr. Willard V. King were already stationed nearby with the Army 19th Medical General Laboratory where they were engaged in a massive taxonomic study of the mosquitoes of that area.

The time available to the King-Hoogstraal team for working up and publishing on their large and rich New Guinea mosquito collection was limited by the forward movement of the war and by the necessity for involvement in other projects in the war's aftermath. Even so, they published descriptions of 36 new species of mosquitoes from their New Guinea collections. The series of 11 papers resulting from that study importantly contributed to an understanding of the rich and largely unknown culicid fauna of the southwest Pacific.

Additionally, their collections, deposited in the U.S. National Museum, have through the intervening years served as a rich resource to many other individuals involved in taxonomic research on Southwest Pacific mosquitoes.

With the end of World War II, Harry did not seek an early return to the U.S. as did most of the rest of us. Instead, he took his discharge in Manila and, under the auspices of the Field Museum, organized a major biological expedition into the interior of the Philippine islands of Mindanao and Palawan (1946-1947) and spent the next two years most energetically exploring and collecting in those biologically poorly-known islands. The collections resulting from his efforts were the richest ever made from those portions of the Philippines.

Following his return from the Philippines in 1948, he joined, as an employee of the U.S. Navy Bureau of Medicine and Surgery, the University of California African Expedition in 1948-1949. This began his lifelong sojourn in Africa. At the completion of this expedition he continued on for awhile in Madagascar and then moved to Cairo, Egypt to organize and become Head of the Department of Medical Zoology, U.S. Naval Medical Research Unit No. 3 (NAMRU-3), a position which he held for the remainder of his life.

Our paths coincided again in his early years in Cairo with my being detailed to NAMRU-3 for a tour of duty in 1949-1951. While there, I was privileged to be along with him as members of an important medical and biologically-oriented

expedition to the Yemen, Southwest Arabia in early 1951. His skill and enterprise in conducting field work under difficult conditions immensely contributed to the success of that expedition.

Throughout his life, Harry's fame for generosity was perhaps as great as that which he earned in the scientific community. This exemplary and expensive trait of his extended from lending funds to impoverished fellow university students (including myself) to gathering vast collections of scientifically valuable specimens from remote or little studied areas of the world and then contributing them freely to institutions and specialists everywhere. The range of his magnanimity included such acts as paying for the education of some of the children of his Egyptian cook who died while in his employment.

A trait for which he was perhaps most noted was his indefatigable industriousness. Eighteen-hour working days were not unique with him. This propensity enabled him to accomplish superhuman feats as demonstrated by the fact that during his lifetime he authored or co-authored more than 500 publications and edited many more. Harry was at one time or another a member of more than 30 professional societies. Additionally, he served in a volunteer capacity in at least 20 professional and editorial posts, lectured on countless occasions to scientific groups, participated in the graduate training of a number of students, and built and managed for many years an outstanding Department of Medical Zoology at NAMRU-3 in Cairo. During his life he also received a host of professional honors. In addition to being the immediate Past President of the American Society of Parasitologists, he was 1986 President-Elect of the American Society of Tropical Medicine and Hygiene. Recently, he was elected an Honorary Member of the Entomological Society of America.

He early became recognized as the preeminent authority on ticks and the diseases which they harbor and/or transmit to the vertebrate animals, a recognition that continued to increase throughout his life. His work on this medically important group of arthropods took him on collecting expeditions and on consultations to a number of lands around the world. His lifelong zeal for this work also resulted in the amassing of a superlative global collection of ticks (rivaled only by that housed in the British Museum), a research library of some 200,000 items, thousands of personal papers and other memorabilia, all of which have now been installed at the Smithsonian Institution where they comprise a curated special Hoogstraal Collection and Tick Study Section.

This brief account was written specifically for the readers of *Mosquito Systematics* in recognition of Harry's early work on mosquitoes. His contributions to the study of ticks and the vertebrate animals and pathogens with which ticks are associated are being eulogized in numerous other publications. This has included a memorial observance held for him at the National Naval Medical Center, Bethesda, Maryland on April 11, 1986.

Harry's role in mosquitos systematics was principally as a research colleague and a very active junior author of the series of papers by King and

Hoogstraal previously alluded to. This series of papers described from New Guinea, 22 new species of *Aedes* as well as 7 species of *Culex* 5 of *Uranotaenia*, and 2 of *Mimomyia*. His name has been memorialized in mosquito nomenclature by: *Aedes (Stegomyia) hoogstraali* Knight and Rozeboom 1946 and *Tripteroides (Tripteroides) hoogstraali* Baisas 1947.

It can be said without fear of contradiction, that Harry Hoogstraal left this world a better place than he found it. The number of individuals who mourn his early passing is multitudinous.

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- * The photograph of Harry included here was taken by myself at the 1951 International Congress of Entomology held in the Netherlands at Amsterdam. Certainly, he matured with the passing years as we all do, but this photo typifies the ebullient spirit radiated on all occasions by this great man.

- Kenneth L. Knight