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## Dr. Thomas Henry Gardiner Aitken (1912 – 2007) (Entomologist and Naturalist)

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## DEDICATION

### DR. THOMAS HENRY GARDINER AITKEN (1912 – 2007)

(ENTOMOLOGIST AND NATURALIST)

Dr. Thomas Henry Gardiner Aitken, a former member of the Trinidad Field Naturalists' Club and a member of the Editorial Committee (1956 and 1957) of the Club's Journal, died in Corning, New York on 19 April, 2007 at 94 years. He was a former entomologist at the Trinidad Regional Virus Laboratory (TRVL) and Consultant to the Caribbean Epidemiology Centre (CAREC).

Dr. Aitken or Tommy as we knew him, received his early education in England, France and his home town of Porterville, California. He received his B.S. Degree in entomology and zoology in 1935 and his Ph. D. in entomology and parasitology in 1940, both from the University of California (Berkeley). His Ph. D. thesis on "The Anopheline Complexes of the Western U.S.A.", where he described a new species of mosquito *Anopheles freeborni*, still stands today as originally described. This is a tribute to his painstaking attention to care and detail which has characterized his entire life.

He joined the army in 1941 as a First Lieutenant in the Sanitary Corps, later becoming a Lieutenant-Colonel. He served for a short time as a technical advisor in the Preventive Medicine Division in the Surgeon-General's Office in Washington, D.C., then he was stationed in Puerto Rico where he was in charge of the Entomology and Parasitology Laboratory. Brief stints took him to Central America as a Malaria Control Officer and to the Armed Forces School of Malariology, Florida in 1943 where he was Liaison Officer and Instructor.

In 1943, he was transferred to Algeria to work with the Rockefeller Foundation's team engaged in a programme of controlling an epidemic of typhus fever. Typhus fever is caused by a spirochaete and carried by the body louse. An effective way to control the epidemic was to kill the louse. By this time, a remarkable insecticide, DDT, was developed. The Rockefeller Foundation devised a machine to blow DDT powder onto people's clothing to kill the lice and therefore control the epidemic. That same year, there was an outbreak of epidemic typhus in Naples and Dr. Aitken received orders on Christmas Eve to go there to assist in controlling the epidemic.

By 1944, he became Chief Malariologist of Malaria Control Operations under the Allied Forces Command in Corsica and then at Naples.



Dr. Thomas H. G. Aitken

In 1946, Tommy became a staff member of the International Health Division of the Rockefeller Foundation and he was to remain a staff member for some 28 years. His first assignment with them was that of entomologist in the malaria eradication programme in Sardinia. This was the first large scale experimental programme using DDT to control the Anopheline vector of malaria. Before the start of this programme, malaria had infected nine out of every 10 individuals on the island which was then known as the "hell hole of the Mediterranean". By spraying emulsions of DDT on the interior walls of houses at the rate of 2 gms per square metre, a long

lasting effect, up to eight months, of the insecticide was achieved. The Rockefeller Foundation's methods were to revolutionise malaria control around the world, and many countries, including Trinidad and Tobago, subsequently eradicated malaria from their shores. This basic technique of using DDT emulsions is still used by many countries where the Anopheline mosquito is still susceptible to the insecticide.

In the early 1950's the Rockefeller Foundation turned their attention to the study of arboviruses – viruses transmitted by insects, ticks and mites. Previously their staff members had studied the natural history of yellow fever in Latin America. It was during these studies their staff had discovered a number of other viruses which they had set aside in deep freezers for later studies. Thus, in 1951 they turned their attention to these viruses and set up field laboratories in India, South Africa, Egypt, Nigeria, Colombia, Brazil and Trinidad. Dr. Aitken was re-assigned to the Trinidad Regional Virus Laboratory (TRVL) in 1954.

When he arrived in Trinidad very little was known about the arthropods of medical importance, except the Anopheline mosquitoes, the vectors of malaria. His first step was to see what blood sucking arthropods were present on the island and then determine their identity. Using a variety of techniques he spent most of his time collecting mosquitoes and studying them. Consequently, we now know that there are about 165 species of mosquitoes on Trinidad. During this work he also collected other arthropods of medical importance – horse flies, stable flies, sand flies, bed bugs, kissing bugs, lice, fleas, mites,

ticks and scorpions. The result today, is that TRVL and its successor, CAREC, has one of the finest collections of arthropods of medical importance in the region. Some these arthropods were new to science when he collected them and many were named after him including a new genus of mite, *Aitkenius*.

Dr. Aitken's contributions were not only in the field of taxonomy and biology of arthropods, but he also experimentally infected mosquitoes in the laboratory to determine their role in the transmission of some viruses isolated in Trinidad. And together with staff of TRVL he demonstrated that rodents played an important part in the cycle of some of the viruses. His contribution to the study of the natural history of yellow fever is also outstanding, not only in extending our knowledge on the biology of the sylvan vector *Haemagogus*, but also in field investigations of epizootics. Long after he had left Trinidad and retired from the Rockefeller Foundation, he returned to CAREC as a Consultant sponsored by the International Development Research Centre of Canada, to advise on techniques that could be used in demonstrating the possible natural transovarial transmission of yellow fever, something he had already demonstrated in the laboratory at the Yale Arbovirus Research Unit.

Dr. Aitken worked with Doctors Wilbur Downs, C. R. Anderson and Leslie Spence to make the TRVL, the forerunner of CAREC, one of the world's leading institutions on the field study of arboviruses. Many distinguished scientists had visited the TRVL, while students from India, Japan, Argentina the USA and the Caribbean came for longer periods to study our methods and techniques.

While most of Dr. Aitken's scientific contributions have been documented in journals, and he has written some 160 articles, it was his desire to transfer technology by "on-the-bench training" to local staff that set him apart from the others.

Tommy took a keen interest in the natural history of Trinidad and he was able to infect many local persons with his enthusiasm to learn more about our environment. One example of this was his discovery, while on a mosquito-collecting expedition to the Cedros Swamp, of a balisier species, *Heliconia marginata*, considered new to Trinidad at the time. He was an avid gardener and was very proud of his living collection of Trinidad orchids and bromeliads. He joined our Club shortly after his arrival in Trinidad and became a member of the Editorial Committee of the Journal shortly after it was restarted in 1956. He was also a member of the Horticultural Society, winning trophies for his exhibits at their Annual Flower Show and

when that group celebrated their Diamond Jubilee in 1974, they awarded him the Gilt Medal. He took a leading role in persuading the Forestry Division of the Ministry of Agriculture, Government of Trinidad & Tobago, to declare the Bush Bush Forest a Wildlife Sanctuary.

He was transferred to the Belem Virus Laboratory, Belem, Brazil in 1967 and then to Yale Arbovirus Research Unit (YARU) in 1971 retiring from the Rockefeller Foundation in 1974. His last appointment was that as a Senior Research Scientist at YARU from which he finally retired in 1983.

Because of his wide knowledge and experience, many agencies have sought his advice. Thus, after his experience working with DDT, he was appointed a member on WHO's Expert Committee on Insecticides and was a member of that Committee for five years. He has also been a member of various sub-committees of the American Committee of Arthropod-borne Viruses and has also served as a member on the Editorial Boards of the Journal of Medical Entomology and Annals of Medical Entomology. He has been a Consultant for short periods to USPHS, Arbovirus Ecology Branch (1974), the Gorgas Memorial Laboratory (1976) and CAREC (1981, 1982).

Tommy received many awards because of his distinguished career. Among these is the Gold Medal he received from the Government of Sardinia for his contribution to the malaria eradication programme. Likewise, he was awarded an honorary doctor's degree from the University of Cagliari, Sardinia. Other awards included the Richard Moreland Taylor Medal (arbovirology) in 1984; the Harry Hoogstraal Medal in 1993 "For Outstanding Achievement in Medical Entomology". In 1993, also, CAREC dedicated its newly renovated entomology-parasitology laboratory "The Thomas Aitken Laboratory" in his honour. The following year, 1994, he was the recipient of the John Belkin Award from the American Mosquito Control Association "in recognition for more than 50 years of outstanding contributions to the field of mosquito biosystematics".

He was a devoted husband and father. In 1948, he married Virginia Gale of Boxford, Massachusetts. His wife preceded him in death in 1999. He leaves to mourn two sons, Bruce and Brian, a daughter-in-law, Lina Maria, and two grandchildren, Colin and Maia. Bruce has a Ph. D. degree and is a fiber optics researcher at Corning, Inc., while Brian is an antiquities dealer in New York City.

We, therefore, affectionately dedicate this issue of Living World to the memory of Dr. Tommy Aitken.

**Elisha S. Tikasingh**