OBITUARY

Isaac Moore 1923–1998



IN MEMORIAM

Dr. Isaac Moore, entomologist and worldwide expert in pest management programs with the sterile insect technique (SIT), succumbed to illness on December 28, 1998.

Isaac was born in Antwerp, Belgium, on February 25, 1923, and the horrible events of World War II affected and changed his life from early youth. At the age of 17, at the time of the German invasion of Belgium in 1940, he saved his life by secretly boarding the last ship that crossed the English Channel to England. In England, before completing his studies, he volunteered as a Belgian subject for the British Navy. During five years of service (1941–46), he was positioned on a Navy destroyer as a radio operator for audio surveillance of German submarines in the North Sea, making use of his knowledge of the German language. These hard times left him with harsh memories of sailors from torpedoed ships miserably freezing to death in the cold sea water. However, his military service imbued in him a deep love for the sea, which he expressed during later times by building sailing boats in glass bottles. During the Holocaust he lost his mother, brother and sister-in-law. After the war he returned to Belgium. His Jewish awareness intensified by his war experiences and the meeting with soldiers of the Jewish Brigade led him to the decision to immigrate to Palestine.

Realizing that agriculture was essential for the existence of a safe and secure State of Israel, he finished his schooling in Belgium at Gembloux University, receiving the B.Sc. degree in agriculture, with distinction, in July 1947. In early 1948 he immigrated to Israel (then still Palestine) to serve in 'Machal' (volunteers from abroad). In 1951 he received the M.Sc. degree from The Hebrew University of Jerusalem, and in June 1960 the Ph.D. degree from the Hebrew University's Faculty of Agriculture in Rehovot, for his work on the phenology of the olive fly, *Dacus oleae*. He then went for a one-year postdoctoral study period in Insect Pathology at the University of California, Berkeley, that provided him with the basic knowledge and experience for his future work on developing biological control methods with entomopathogenic microbes. Returning to the Department of Entomology at The Volcani Center in Israel, Isaac pioneered in composing insect artificial diets for the olive fly. This start was used later to develop insect mass-production methods for the SIT programs of fruit flies. Later on, he extended his work to developing artificial diets for the leopard moth, *Zeuzera pyrina*, the codling moth, *Cydia pomonella*, and the Egyptian cotton leafworm, *Spodoptera littoralis*. In one of his novel contributions to insect mass rearing on artificial diets, he replaced agar with the less

expensive and easier-to-use calcium alginate gel systems.

In later years, Isaac selected promising strains of the insecticidal microbe *Bacillus thuringiensis* for the control of *S. littoralis* and worked on the uses of baculoviruses to control this pest. In the years 1965–67 and again in 1970–73, he was employed by the International Atomic Energy Agency (IAEA) in Vienna as chief scientific secretary of the pest control section of this organization. There he gained a worldwide reputation for his scientific advancement of the use of atomic energy in pest control strategies. During this service, he instructed and guided working groups of scientists from 21 different countries, how to develop the SIT programs in their home countries. As from 1974 and until his retirement on March 1, 1988, Isaac's work was dedicated to a new field of studies, the screening and measuring of sex pheromone responses in insect males by means of electroantennogram (EAG) techniques. "Why not?" he said once at his first steps in acquiring this technique, "I used similar equipment when operating radio communication systems during the Second World War while I was in the British Navy..."

In the last years, using his EAG techniques, he collaborated with many colleagues in the Department of Entomology, on developing sex-pheromone programs for the monitoring and control of agricultural pests. He proceeded with his work, in spite of the onset of the crippling disease that gradually limited his capability to operate the EAG system.

Isaac's scientific work was characterized by uncompromising precision and devotion. Also, his highly regarded analytical evaluation of scientific problems and issues led him to innovative developments in every aspect of his work, and brought colleagues to consult with him on their ongoing research activities. His broad classical European education and knowledge of many languages, enabled him to acquire a profound knowledge of the history of Europe, especially that of the Third Reich, and of philosophy and literature. Working with him for many years, I greatly benefited from his outstanding scientific and literary capacities.

After Isaac's retirement he devoted his leisure time to operating a ham-radio station, and constructing ornamental artifacts at home. In spite of his chronic disease, his passing was sudden and unexpected. Isaac is survived by his wife, Aliza, one son and two daughters, and five grandchildren.

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