

# **Leland Bernard Norton**

*January 29, 1910 — June 10, 1953*

After an illness of approximately a year, Leland Bernard Norton passed away at his home near Ithaca on June 10, 1953. His untimely death brought to an end an association with Cornell University which had extended over a quarter of a century as student, teacher, and research worker. This association began when Professor Norton was only eighteen years old and ran continuously until his death at forty-three. Its termination means a great personal loss to his many friends, the loss of an excellent teacher and research worker to the University, and the loss of a keen mind to the science in insecticidal chemistry.

Professor Norton was born at Inlet, New York, on January 29, 1910. He prepared for college at Watertown High School, attended Hamilton College, and received the Bachelor of Science degree from Hamilton in 1928 when only eighteen years of age. The next step in his education was the attainment of the Ph.D. degree in Chemistry at Cornell in 1934. Meanwhile he received practical experience in the field of chemistry of insecticides as a temporary assistant for three summers and one full year at the New York State Agricultural Experiment Station at Geneva. At this same institution he served for two years, 1935-37, as Assistant in Research on feed and fertilizer analysis, and for six more months under the same title while working on maple sugar products.

In 1938 Professor Norton became Assistant Professor of Insecticidal Chemistry at Geneva. This was undoubtedly the real beginning of his career as it afforded him the opportunity to conduct research in a field of chemistry in which he had found interest as a temporary undergraduate assistant. Soon he was publishing papers on the use and safening of arsenical sprays on fruit. As the use of arsenicals became more and more restricted because of the residue problems, Professor Norton turned his attention toward the development of safer nicotine sprays. Then came World War II and a search for sources of insecticides to replace those made unavailable because of trade restrictions and the needs of our armed forces. With Professor T. R. Hansberry as Toxicologist, Professor Norton conducted research on a number of substitute materials, including the yam bean. During the latter days of the war his attention became focused on DDT;—its various formulations as dusts, sprays, and emulsions; the problems of its toxicity to spray operator and to consumer; and the controversial matter of how to determine most accurately by chemical means the residues of active ingredients left on or in the edible portions of crops treated for insect control.

The advent of DDT ushered in a new era of work in the field of synthetic organic insecticides. Each new material brought its own problem of formulation, toxicity, and residue determination. The entire field of insecticidal chemistry became full-grown in a period of two or three years and it was deemed absolutely necessary that the entomology department at Cornell should have a staff member well trained in this line of work. The purpose of such a man was seen to be two-fold in conducting research and in giving guidance to graduate students and staff members as they became involved in physical chemistry. Professor Norton most admirably filled this need. Having transferred from Geneva to Ithaca in 1945, he was made Associate Professor of Insecticidal Chemistry in the Department of Entomology and Limnology in 1946, and Professor of Insecticidal Chemistry in 1950. Shortly after his arrival in Ithaca he became surrounded by graduate students in economic entomology as they recognized the necessity of being well versed in the chemistry of insecticides. Soon he became a co-founder of a formal course in the chemistry and toxicology of insecticides, and the men he trained readily secured positions in other institutions. Chemists and toxicologists of private industry and the federal government were his friends and his co-workers in the solution of many difficult problems of residue analyses. Professor Norton published approximately thirty papers dealing largely with the chemistry of insecticides.

The capabilities and achievements of Professor Norton were not without recognition. He was a member of Phi Beta Kappa, Sigma Xi, the American Association of Economic Entomologists, the American Chemical Society, and the Gamma Alpha fraternity.

Professor Norton is survived by his mother, Mrs. Edith Fox of Barnes Corners, New York, and his widow, Mrs. Katherine Wheeler Norton of Ithaca. Also surviving are three children, a daughter Eleanor by his first wife, formerly Miss Eleanor Seeley, who died in 1943, and two sons, Peter and John born of his marriage in 1946 to Miss Katherine Wheeler.

In spite of his keen interest in his work, 'Nort', as he was affectionately known by his friends, found time for other activities. For a number of years he often played golf and bowled. In each of these sports he was the recipient of several trophies. He was an ardent fly fisherman, tying his own flies and bowing to no man in the skill of their use in the deception of trout. He liked to hunt deer and grouse, to play bridge, to garden, and to work at odd jobs around his home.

In all of his life's activities it may be said of 'Nort' that he was strong of conviction but amenable to reason, earnest and sincere but always cheerful, and always helpful but never obtrusive. These and other fine qualities endeared him to many. His passing is a keenly felt loss to his profession and to his many, many friends all over the country.