

Lewis Knudson

October 15, 1884 — August 31, 1958

In his fifty-first year of scientific achievement following his initial appointment to the staff of the New York State College of Agriculture and Cornell University, Lewis Knudson, Professor Emeritus of Botany, died at his home in Ithaca on August 31, 1958. He is survived by his widow, two sons and several grandchildren.

Lewis Knudson was born in Milwaukee, Wisconsin, on October 15, 1884. Upon graduation from the University of Missouri in February, 1908, with the degree of B.S.A., he came to Cornell as assistant in plant physiology and began his teaching under Professor B. M. Duggar. He advanced to the rank of instructor at the end of the term, received the Doctor's degree, and was appointed Assistant Professor of Plant Physiology in 1911. Upon the resignation of Professor Duggar in 1912, he was made acting head of that department.

In 1916, three years after, the Department of Plant Physiology was incorporated into the newly created Department of Botany and Dr. Knudson became Professor of Botany.

During 1919-1921 he spent a year in France and six months in Spain, lecturing in Madrid and Barcelona, carrying out research at the Sorbonne, and attending lectures in the Pasteur Institute. In 1941, on the retirement of Professor Karl M. Wiegand, he became head of the Department of Botany. He retired, after 45 years with the College, on June 30, 1952.

Professor Knudson was an exceptionally effective teacher of both elementary and advanced courses in plant physiology and, during the absence of a colleague, also lectured with marked success in the general botany course. His sympathetic and stimulating direction of graduate work led 25 students to complete the work for the Doctor's degree under his direction. Among these are some of the most widely known names in plant physiology, horticulture, and related sciences.

In research, Dr. Knudson's work dealt with a variety of problems of fundamental importance to the field of plant physiology. His first major research was on tannic acid fermentation. Turning his interest then to a consideration of the physiology of the bacteria, he and his students developed a widely used method of culturing the nitrogen-fixing bacteria associated with legumes. His pioneering work on the organic nutrition of green plants produced highly useful methods of growing these plants in pure culture. This same work, applied to the nonsymbiotic germination of orchid seeds, was to revolutionize the commercial growing of orchids. Professor Knudson also applied these pure

culture techniques to the study of induced mutations in the haploid phase of ferns and demonstrated permanent changes in the chloroplasts by treating the fern spores with X-rays.

Professor Knudson's investigations of the physiology of the ripening of bananas, and of banana diseases, made major contributions to the economy of the Central American countries which raise this fruit. He also worked on rubber-producing plants in collaboration with several of his colleagues during and after the Second World War. Dr. Knudson's activities in consulting service and research continued after his retirement, and he had practically completed a monograph on the banana at the time of his death.

During his period of active service Dr. Knudson, in recognition of his clear judgment, was named to many of the most important committees of the Cornell faculty. Following retirement, he received the Gold Medal award of the Federated Garden Clubs of New York State in 1956 for "distinguished service in scientific research on the physiology and nutrition of plants," an honor accorded only one other scientist, the late Liberty Hyde Bailey. In 1957, Dr. Knudson was the recipient of an honorary Doctor of Science degree from his alma mater, the University of Missouri.

Dr. Knudson was a Fellow of the American Association for the Advancement of Science. His professional, scientific, and honorary society affiliations included the Botanical Society of America, American Society of Naturalists, Real Sociedad Espanola de Historia Natural, American Society of Plant Physiologists, Sigma Xi, Phi Kappa Phi, Alpha Zeta, and Gamma Alpha.

Dr. Knudson's distinguished contributions to science are in the record, and his inspiring lectures will live long in the memory of his students.

While he was famous as a research investigator and teacher, his innate human friendliness is also a memorial in the minds of many. However occupied he might have been with his own affairs, he was never too busy to listen sympathetically to the problems of others, and to offer kindly advice. He knew and loved many men of low and high degree, and they in turn loved him. He enjoyed life to the full.

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