## Paul James Allen, 1914-1976

K. B. Raper, W. R. Bushnell, and L. Sequeira



Paul James Allen, Professor of Botany and Plant Pathology, University of Wisconsin, died suddenly at his farm in Verona, Wisconsin, on November 13, 1976. Dr. Allen was born in Stockbridge, Massachusetts, September 28, 1914, and spent his childhood years on a farm in New Hampshire. He attended Phillips Exeter Academy and subsequently Harvard

University, graduating from the latter in 1936. At Harvard, such stalwarts as Merritt Lyndon Fernald and William Morton Wheeler stimulated his enthusiasm for biology, and William H. Weston instilled an interest in the fungi that was to remain a driving force throughout his professional life. The years at Harvard were followed by graduate study in plant physiology at the University of Rochester (M. S., 1938) and the University of California at Berkeley (Ph.D., 1941). While at Rochester he published in collaboration with David R. Goddard a paper entitled "Changes in Wheat Metabolism Caused by Powdery Mildew." This paper, his first, was to become a classic.

He served as an instructor at the University of Pennsylvania for two years (1941-1943) before joining an emergency team organized by the USDA at Salinas, California, during World War II to explore the use of guayule, a shrub of the southwestern USA, as an alternate source of rubber. Freeing the latex from the plant tissues in which it was embedded proved to be a very difficult problem, successfully solved when Allen and his coworkers hit upon the ingenious technique of thermophilic retting.

Dr. Allen joined the Botany Department at the University of Wisconsin in 1946, where he resumed his research on the physiology of plant disease, and where he remained for the remainder of his career except for sabbatical years at the University of Sheffield (1953-1954) and the University of California (1960-1961).

Perhaps the most significant aspect of Paul Allen's contributions to plant pathology was his ability to develop physiological concepts of the way in which plant pathogens cause disease. Because of his unusually broad background, he was able to bring together three important branches of botany-mycology, plant physiology, and plant pathology-and to interpret phenomena that had evaded satisfactory explanation for decades. These ideas were expressed in a series of highly influential and wide-ranging reviews in the 1950's, in which, for the first time, the principles of plant physiology were applied comprehensively to plant disease.

Continuing the research he had initiated as a graduate student, Dr. Allen and his students investigated

respiratory metabolism and related host-parasite interactions in powdery mildews and rusts. Through his interests in obligate parasites, he began a series of pioneering and highly productive investigations on the differentiation of infection structures in rust fungi which soon led to the discovery of self inhibitors of spore germination and, more recently, to the study of their mode of action. Perhaps his greatest talent and interest was the ability to deduce the physiological basis of fungus behavior from simple experiments.

Dr. Allen's researches at the interface between plant physiology and plant pathology brought him international recognition, and numerous invitations to speak at symposia and congresses. Throughout his career at Wisconsin he had a steady succession of excellent graduate students and postdoctoral fellows, several of whom have themselves become leaders in their fields. His appointment in 1964 as Professor of Plant Pathology as well as Professor of Botany formally recognized the great. contribution he made over the years to advancement of the plant sciences at Wisconsin through his highly effective liaison between these two departments.

Paul Allen served as Chairman of the Department of Botany from 1965 to 1970-years that included a period of great student unrest on the campus. Throughout this turbulent period he remained calm, fair, and compassionate, and maintained his sense of humor, a not inconsiderable accomplishment.

Quiet and thoughtful, Paul was a person who elicited trust and who listened sympathetically. He had a special knack for establishing rapport quickly with virtually everyone, even casual visitors. His wide-ranging interests made him a stimulating conversationalist, and his humor, sensitivity, and genuine interest in people endeared him to many. Although his students were inspired and challenged by his high intellectual standards, they always found him to be helpful and compassionate when the need arose. Among his wide circle of friends, the foreign students at the University occupied a special place. His hospitality and genuine interest in them often included invitations to visit with his family at their farm home, and led to enduring friendships.

Famous for his work with fungi, contributor to numerous international conferences, writer of tightly knit reviews, and acknowledged authority on the physiology of rusts and powdery mildews, Paul Allen was, withal, an unpretentious man whose eminence was balanced by a humane perspective. For his keen intelligence, his wit, charm, and unfailing cheerfulness, and his warm understanding, he will be remembered with affection and admiration by his many friends. He is survived by his wife, Mary, who continues to live at the farm in Verona and by two sons, David and Thomas, and a daughter, Kathryn.