

## Charlotte Elliott, 1883-1974

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Charlotte Elliott, plant pathologist, bacteriologist, and botanist, died August 7, 1974, at "The Sequoias," a retirement home in Portola Valley, California. She is best known for her research on bacterial diseases of cereal crops, especially corn. Scientists who use her "Manual of Bacterial Plant Pathogens" (1930 and 1951) recognize her great talents

and knowledge regarding bacterial plant pathogens.

Charlotte was born August 2, 1883, at Berlin, Wisconsin, daughter of Mr. and Mrs. E. J. Elliott. Before Charlotte was 2 years old, the Elliotts moved to South Dakota which she considered to be her home. Her mother and father, both of outstanding English heritage, contributed much to the commercial, educational, and cultural life in their community. Mr. Elliott, in the milling and grain business and later in banking, became the first mayor of Dell Rapids when it was organized into a city in 1889. Much of Charlotte Elliott's genteel intelligence, integrity, and interest in cultural, artistic, and scientific matters was due to the admirable background she had in her home.

After graduating from Dell Rapids High School, she attended Stanford University from which she received the A.B. degree in 1907 and the A.M. degree in 1913. Between years at the university, she taught in high school and in the South Dakota Normal School. During these teaching years she decided on a special field for her career—plant pathology. Miss Elliott studied under L. R. Jones at the University of Wisconsin where she, the only woman student in the department, received the Ph.D. degree in 1918. That same year, Dr. Elliott became a scientific assistant in the Laboratory of Plant Pathology, Bureau of Plant Industry, U.S. Department of Agriculture, Washington, D.C. The remainder of her career was spent within that U.S. Government unit or its further designations, where she progressed in stature and recognition until her retirement in 1946 as a plant pathologist of high esteem.

Dr. Elliott's early employment in the laboratory of Erwin F. Smith brought her under the guidance of a real and dedicated genius who was a pioneer and world authority on the science of plant pathology that deals with bacterial diseases. His stimulating influence and ideals of perfection followed her throughout her research career.

In 1922, Dr. Elliott's interests turned to bacterial diseases of cereal crops. She described a new bacterium, *Bacterium coronafaciens*, as causing halo blight of oats in many fields in the South and Southwest. From sorghum

fields in the southern Great Plains, she identified two new bacterial diseases of this crop: streak caused by *Bacterium holcicola* and stripe caused by *B. andropogoni*.

In the early 1930's, Dr. Elliott's research turned to corn diseases. She made her most significant contributions on bacterial wilt and Stewart's leaf blight of corn caused by *Bacterium stewarti* and published more than a dozen research papers on this disease. Her most significant research was that in which she, in cooperation with U.S. Department of Agriculture entomologists, showed for the first time that the bacteria which cause wilt of corn live over the winter in the bodies of flea beetles. After beetles become infested with bacteria in late summer and fall, they hibernate over the winter and carry bacteria to tender young corn plants in the spring by feeding on the leaves. Subsequent generations of beetles become infested and spread the pathogen from plant to plant during the summer. Among other corn diseases that received Dr. Elliott's attention were two stalk rots, caused by *Pythium arrhenomanes* and *P. butleri*.

Her final research was on *Helminthosporium turcicum* leaf blight of corn. She participated in the early research on this disease in which it was determined that there was specific genetic control.

Dr. Elliott was a member of The American Phytopathological Society, the Society of American Bacteriologists, American Association for the Advancement of Science, Botanical Society of Washington (first woman president), Washington Academy of Science, American Association of University Women, Audubon Society of America, Alpha Phi (Stanford), and the Society of the Sigma Xi. She is listed in American Men and Women of Science. In 1946, Dr. Elliott gave an invitational paper at the Fourth International Microbiological Congress in Copenhagen, Denmark, where she also presided at a session.

While Dr. Elliott was a true scientist at heart and a lover of the great out-of-doors, she included time in her life for things of an artistic nature such as music, drama, literature, and painting. She also enjoyed cooking for her friends. She gave a high priority to scientific responsibilities, but they did not mar the graciousness of her life which she shared with her friends in genuine midwestern hospitality. After retirement, she maintained a vigorous interest in science and nature. She never lost her zest for living, whether quietly botanizing in the western mountains of the United States or riding an elephant in the Far East.

She was a gentle lady of refinement, yet to those who knew her well, she was filled with a great sense of benign, good humor, fun, and personal charm. These characteristics added to her intriguing intellect and personality. Charlotte Elliott was a scientist of implicit integrity and a great lady.