

Ruth F. Allen, 1879–1963

A plant pathologist with a lasting scientific and social legacy

Ruth Florence Allen was born on May 21, 1879, and grew up in Sturgeon Bay, Wisconsin. She graduated from high school in 1896 with exceptional grades and was considered one of the brightest to have ever graduated from her high school. Ruth attended the University of Wisconsin at Madison and earned an A.B. degree in botany, with a minor in zoology, followed by an M.A. degree in 1907. In 1909, she became the first woman to receive a Ph.D. degree from the Department of Botany for her dissertation, "Studies in Spermatogenesis and Apogamy in Ferns." Her dissertation shows ample evidence of the microscope work and highly detailed observations documented by exquisite hand drawings for which she would be known throughout her career. In 1910, Allen became the first female hired at the Michigan Agricultural College (later Michigan State University) Botany Department, where she was an instructor until 1914. From 1914 to 1918, Allen was an instructor in botany at Wellesley College in Wellesley, Massachusetts.



Allen began her tenure of 16 years with the U.S. Department of Agriculture in 1918. She was hired as an assistant pathologist in the Office of Cotton, Truck, and Forage Crop Disease Investigations, with the Bureau of Plant Industry, in Washington, DC, where she began her work on cytology of rusts. In 1920, she was

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transferred to Berkeley, California. She was housed on the University of California campus and was given a joint appointment in the Agricultural Experiment Station.

It is evident throughout all of Allen's work that she was well read and was an early adopter of many controversial ideas of her time. The body of her work reflects a meticulous observer with powerful skills to illustrate and describe what she observed in an era lacking photographic tools. Her illustrations, especially in her later papers, were exquisite. Her observations of entry points for the hyphae from germinated basidiospores, and determination of whether symptoms were the result of single or multiple infections, attest to painstaking hours of microscopic observation. Allen's work provided a detailed understanding of heterothallism and development of the rust fungi on host plants. Her work is counted among the most important advances in the study of rust fungi in the twentieth century, and it laid the groundwork for research on host-rust interactions throughout the twentieth century. Allen was the most widely cited female plant pathologist in the first half of the twentieth century, mostly in regard to this work.

Throughout her professional career, Allen was discriminated against because of her gender. Although she endured unequal pay and disadvantages in access to laboratory and office space, the esteem she garnered for her influential research did not suffer.

Ruth Allen retired in 1936 at the age of 57. She began to study and invest in the stock market and was successful enough to support herself and give financial assistance to friends in need through her retirement years. When she died, her estate was divided among four of her closest friends from her professional life, who set up the Ruth Allen Award in her honor. According to APS, Ruth Allen Award recipients are scientists who "have made an outstanding, innovative contribution to research that has changed, or has the potential to change, the direction of research in any aspect of plant pathology." Since its endowment in 1965, the Ruth Allen award has honored 62 plant pathologists worldwide.

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