Albert Joyce Riker, 1894—1982

J. E. Kuntz, J. G. Berbee, A. C. Hildebrandt, T. T. Koslowski, and R. F. Patton

Dr. Albert Joyce Riker, Emeritus Professor of Plant Pathology at the University of Wisconsin, died February 21, 1982, at the Tucson Medical Center, Tucson, AZ, after a long illness.

Professor Riker was born at Wheeling, WV, in 1894. In 1917, he received an A.B. degree in botany at Oberlin College, and then taught botany at the University of Cincinnati. During World War I, he served as a bacteriologist overseas. After the armistice, he earned an A.M. degree in botany and bacteriology at the University of Cincinnati in 1920 and a Ph.D. degree in plant pathology at the University of Wisconsin in 1922. Except for 1926–1927, when he studied in London and Paris, Riker worked in the Department of Plant Pathology until he retired in 1964.

His broad interests encompassed many phases of plant pathology, notably phytobacteriology, tissue culture, forest pathology, and epidemiology. With his co-workers, he published over 300 scientific papers. His interest in bacterial pathogens and especially the crown gall disease led him to study the physical and chemical factors that trigger tumor initiation at the cellular level under precisely controlled conditions. The physiology of plant tumors induced by insects, bacteria, fungi, viruses, and environmental conditions was clarified. Riker's basic research in plant tissue culture has led to ongoing studies in tissue and cell biology.

He provided leadership in initiation and development of all aspects of forestry at the University of Wisconsin—not only in forest pathology, but in forest entomology, forest genetics, and the forestry department as well. Riker fostered cooperation with the Wisconsin Conservation Department (now the Department of Natural Resources), the U.S. Forest Service, wood-based industries, and individual woodland owners and gained financial support for research from various agencies.

In forest pathology, Dr. Riker and associates sought new approaches in the control of white pine blister rust that led to the production of blister-rust-resistant planting stock and to disease avoidance by critical selection of pine planting sites. In the 1930s, Riker anticipated by several decades future wood shortages. His work with fast-growing, disease-resistant hybrid poplars was a pioneering effort in intensive culture of forest trees for maximum wood fiber production. He and his research associates initiated tree disease research programs that included nursery diseases, rusts, vascular wilts, stem cankers, diebacks and declines, and various overgrowths.

Concerned with national and international impact of tree diseases, he encouraged worldwide cooperation to lessen the spread of internationally important forest tree diseases. To appraise forest resources, to identify threatening diseases, and to seek out foreign scientists and agencies, Riker traveled throughout the world. His work stimulated the organization of the Symposium on Internationally Dangerous Forest Tree Diseases and Insects, which was sponsored jointly by the Food and Agriculture Organization of the United Nations and the International Union of Forestry Research Organizations.

Because of his continuing interest in the epidemiology of plant disease, he had a leading role in establishing the Biotron at the University of Wisconsin. This unique facility now provides precisely controlled environments for research with both plants and animals.

As a scholar and teacher, Riker's career also was impressive. He developed and taught methods in research to graduate students in biology and agriculture. He contributed greatly to teaching of methods of plant disease research and technical writing. His *Introduction to Research on Plant Diseases*, fondly called "Riker's Manual," guided students and investigators for many years. Similarly, Riker's concern with excellence in scientific publication was reflected in his important contributions to the AIBS Style Manual for Biological Journals. Riker was editor of PHYTOPATHOLOGY for several years. His desire for ready access to scientific information inspired his leadership in strengthening library resources at the University of Wisconsin and other universities.

Several professions and societies were served by Dr. Riker. He was Vice-President and President of the American Phytopathological Society; Director and Vice-President of the Forest Genetics Research Foundation; and a member of the National Academy of Sciences (Chairman of the Botany Section, 1959–1962), American Association for the Advancement of Science (Fellow), American Association for Cancer Research, American Academy of Microbiology (Fellow), American Society for Cell Biology, American Society of Microbiology, American Society of Naturalists, American Society of Plant Physiologists, Botanical Society of America, Society of American Foresters, and numerous others.

In recognition of his many contributions, Riker received other national and international awards and honors. He was the recipient of the American Men of Science Star in 1944; the Eighth International Botanical Congress Medal in Paris, 1954; three Haight Traveling Fellowships (1959–1960, 1962–1963, and 1964); and was part of the United States delegation to the Atoms for Peace Conference in Geneva, Switzerland, 1955. In 1960, he was one of the four Wisconsin plant pathologists honored at the 50th anniversary of the American Phytopathological Society meeting in Wisconsin. Also, the faculty conference room in the Russell Laboratories at the University of Wisconsin has been named the "A. J. Riker Conference Room."

Dr. Riker brought to his research high ideals, keen insight, and superb technique. His contributions have been of immeasurable benefit to the department, the university, the state of Wisconsin, the nation, and the world. His wisdom and counsel were sought by students, colleagues, and associates throughout the world.

Professor Riker is survived by his wife Adelaide, and a niece, Betty Plantz, both of Tucson; a nephew, Harold Riker of Gainesville, FL; and a step-niece, Mrs. Laura Fischer of Portland, OR.