

Thomas Traquair McClure, 1914—1973

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The untimely death of Thomas Traquair McClure on July 21, 1973 ended the career of a distinguished plant pathologist. Born in Boston on August 30, 1914, he began his studies in plant pathology in 1939 at Iowa State after finishing a bachelors of science in biology at Harvard in 1936 and a masters in plant physiology at Rutgers in 1938.

His studies at Iowa State were disrupted by military service in the Army from 1942 to 1946. He returned to his studies at the University of California at Berkeley and was granted a doctorate in Plant Pathology in 1949 by the University of California.

He had been an active member in the Society of Sigma Xi, The American Phytopathological Society, the American Society of Plant Physiologists, the American Association for the Advancement of Science, the Botanical Society of America, the Weed Science Society of America, and was at the time of his death chairman of the Aquatic Plant Control Agents, Including Herbicides and Algicides, Subcommittee, E-35.14 of the American Society of Testing and Materials Committee E-35 on Pesticides.

His first position following graduation was a teaching position as an assistant professor in the Department of Botany and Plant Pathology at Michigan State University. In this position he taught courses in fruit diseases, vegetable and field crop diseases, phytopathological techniques, disease control, and general botany. He also conducted spray trials for the control of cherry leaf spot. In 1952, he accepted a position as plant pathologist in the Biological Research Branch of the Agricultural Marketing Service of the U.S. Department of Agriculture at Beltsville, Maryland. In 1959, he became staff plant physiologist in the Pesticides Regulation Division of Agriculture Research Service. From 1961 until his death, he served the U.S. Department of Agriculture and the Environmental Protection Agency in the regulation of pesticides used as herbicides and plant growth regulators. At the time of his death, he was Acting Chief of the Plant Physiology Section of the Plant Studies Branch of the Criteria and Evaluation Division of the Office of Pesticide Programs of the Environmental Protection Agency.

His interest in plant pathology was centered about the physiology and anatomy of disease resistance in plants. He thought that by learning how plants respond to and resist disease there would be found new means of controlling disease. His first contribution related resistance of cucumber plants to light exposure and nitrogen and described the resistive action of cucumber plants to infection. Lignification of cell walls was observed to be consistently associated with resistance. He observed that this reaction occurred in response to wounding as well as to fungal infection. In further published work, he observed in sweet potato that callus formation was suppressed where the stele was infected with *Fusarium oxysporum* f. *bataias*. The ingress of this

disease and host reaction was described in this published study.

He made an outstanding, and even at this time, poorly understood observation that chlorogenic acid accumulated in wounded sweet potato root cells prior to suberization and wound periderm formation. He observed that suberization during wound healing may be a form of lignification. The role of gibberellins in the control of chlorogenic acid accumulation, and their role in wound healing is of great interest to plant growth regulator scientists today in their studies on the mode of action of gibberellins.

He observed that *Fusarium oxysporum* f. *bataias* attacks sweet potato roots by way of vascular wounds, and that this pathogen was able to parasitize tobacco plants with wounded vascular tissue. He published a number of studies on the control of diseases of fruits and vegetables during his assignment with the Quality Maintenance and Improvement Section of the Agricultural Marketing Service in the U.S. Department of Agriculture.

Those who had the good fortune of knowing Tom will remember him for his quick wit and humor. His philosophy of being a scientist in our society was inspiring to many.

After leaving the laboratory and assuming a position of judgment with the Pesticides Regulation Division of the USDA-ARS in 1961, he wrote for the 25th Anniversary of Harvard Class of 1936 the following: "I find I still have research ideas and wistfully hope some day to test them in the laboratory. The policy of rewarding research men fiscally by removing them from laboratories deprives the country of the efforts of its best scientists and abandons its laboratories to the uninspired, aids our enemies, and pleases none but those who have run out of ideas. The claim that the better scientists are freed to direct the efforts of less-experienced scientists, conveniently overlooks the contradiction inherent in the idea of directing scientists much as one would direct a gang of unskilled laborers. Policies affecting scientists should be formulated by those cognizant of how scientists work, and how new scientific ideas originate. Scientists do not fit in a platoon system, but are more like guerilla snipers; their ideas result from their interests and their curiosity, not from orders given by an administrator. The echelon system defeats its purpose in this field, and I suspect in others as well. The need for economic justification restricts science to its application. This nation is noted for its ability to apply scientific findings made elsewhere. To lead in science, we must promote the production of raw materials of science, the concept obtainable only through basic research. As breakthroughs in basic research are apt to be found in the no-man's-land between delineated fields of science, let us hope this aspect of nonconformity will be encouraged in the near future."

He is survived by his wife, Mary Brown McClure; a brother, James G. McClure; and daughters, Anne McClure and Elizabeth McClure.

Dr. McClure was a unique man and we are fortunate that he chose the field of plant pathology for his area of studies. The world is a better place to live as a result of his life.