

Thomas Allen Shalla, 1933–1983

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Thomas Allen Shalla, scholar, teacher, scientist, and mentor to his students, died Friday, May 13, 1983, at the University of Kansas Medical Center in Kansas City. He succumbed from a long illness which eventually required surgery at the Medical Center. Dr. Shalla was Professor of Plant Pathology and Plant Pathologist in the Experiment Station, Department of Plant Pathology, University of California, Davis. At the time of his death, he was on sabbatical leave in the Department of Plant Pathology,

Kansas State University, Manhattan. He is survived by his wife, Shirley, living in Davis, California; three sons, Donald G. Shalla, living in Sacramento, Robert D. and Richard A., each living in Davis; and by his father and mother, Mr. and Mrs. Harold F. Shalla of Cheyenne, Wyoming.

Tom Shalla was born May 7, 1933, in Grand Rapids, Nebraska. He earned a diploma in science at Fort Collins High School in 1951, the Bachelor of Science degree in Botany at Colorado State University, Fort Collins, in 1955, and the Doctor of Philosophy in Plant Pathology, University of California, Davis, in 1959. After six months on military assignment he joined the staff of the Department of Plant Pathology, College of Agriculture, University of California, Davis, as instructor and junior plant pathologist in the Experiment Station. Within a decade Dr. Shalla advanced to full professor and plant pathologist.

Dr. Shalla was a member of The American Phytopathological Society (APS), The American Association for the Advancement of Science, Beta Beta Beta, Omicron Delta Kappa, Phi Kappa Phi, and Sigma Xi. He was awarded Fellow in The American Phytopathological Society in 1974. He served on the APS Committee on Virology, which he chaired in 1975 and 1976. He was on the Editorial Board of *VIROLOGY*, was Associate Editor 1969–1973, and Editor of *VIROLOGY* from 1974 until his death. Tom Shalla devoted much of himself in service to his department, to his college, and to the University community.

Dr. T. A. Shalla will be remembered for his truly remarkable teaching and his research contributions, and many will come to know him through his reports on research.

Tom Shalla was a superb teacher in the classroom, in the laboratory, and in his daily contact with students. This latter situation is illustrated by the following story.

Many a time we get discouraged or discourage students when in response to a research idea—"I have tried it, it does not work"—is heard. Such a negative or blunt response was totally foreign to Tom. On one occasion an idea struck one of his students in regard to negative staining of electron microscope sections. Rather than discouraging him, Tom said "by all means try it, but stand back when you mix the liquid plastic and the negative stain" (this should have been a warning). When the student mixed the compounds a mild explosion occurred. The student, rather shaken, stormed into Tom's office and asked in no uncertain terms why he had not warned him about the explosion. Tom answered "I did and you did not listen closely enough, but look at the positive side. Rather than discouraging you I encouraged you to do the experiment. You now know that people working in similar fields have similar ideas (otherwise how could I have known about the explosion), and in

retrospect I think that this situation provided a more valuable experience than anything I could have told you" and he chuckled.

Although by nature a reserved person, Tom was at heart an entertainer who enjoyed teaching. He had the rare gift of being able to engender curiosity and to inspire. "His lectures are masterpieces of precision and clarity" said one of his students. He was ingenious and a master at presenting complex subject matter concisely and understandably. For example, to illustrate stream birefringence, he used live goldfish swimming in a solution of tobacco mosaic virus, placed between crossed polarizers on an overhead projector—an unforgettable drama. Students consistently rated him the best of their teachers. For these reasons he was sought out as a lecturer on the Davis campus and elsewhere, both nationally and internationally. On high school career days he was in great demand because his lectures were informative and entertaining.

In research, Dr. Shalla pursued two avenues: first, his love of virus-host interaction and the relationship between structure and function at the cellular level, particularly in regard to viral synthesis; and second, his interest in plant disease problems in agricultural production. He did not make the potentially divisive distinction of basic versus applied research.

By nature innovative and meticulous, Tom developed and adapted electron microscope techniques to his research needs. He and his students contributed substantially to the study of structure and function, including formulation and penetration of stains for improving electron density. Pioneering among these contributions was the use of ferritin-labelled antibodies for the identification and localization of virus and viral protein in plant cells. Dr. Shalla was also recognized internationally for his studies on the structure of viral inclusions, host response to virus infection, intercellular transport of virions via plasmodesmata and infection of protoplasts. Most recently he worked on the transport of the infectious agent from cell to cell in regard to the possible regulation of the number of plasmodesmata by virus gene products. This novel concept has served to focus attention on a potentially major area of future research.

An important problem early in Dr. Shalla's career was pear decline, a rapidly spreading and devastating disease of unknown cause. To coordinate research and allocate funds, a statewide multidisciplinary, multi-institutional task force of scientists was formed in 1960 to solve the mystery. Dr. Shalla's organizational abilities were recognized and he was appointed chairman. For over a decade he served in that role, spearheading research activities and coordinating annual reports. This agriculturally important undertaking culminated in many significant papers (eg, the 1963 report on graft transmissibility of the pear decline agent) and in the virtual elimination of pear decline as a disorder limiting pear production in California.

Tom Shalla will be remembered fondly and with enduring admiration by the students he inspired and by all fortunate enough to have worked with him. He was a large man, with a sense of humor to match his size. His gentleness and twinkling eyes were a hallmark at Davis. By his patience, commitment, and standards of excellence, he set a unique atmosphere for research in which his students prospered without ever the fear of domination or abandonment. He was an outdoorsman who revelled in hunting and fishing. He also played the guitar with which he would accompany western folk songs, sung in the classical way or with the twang of the Midwest. We will miss Tom Shalla, the teacher, the friend, and the entertainer.