



IN MEMORIAM

Roy M. Sachs
Professor of Environmental Horticulture, Emeritus
UC Davis
1930-2012

Roy Sachs, who joined the faculty of the department of landscape horticulture at the University of California, Davis, in 1961 and retired from the department of environmental horticulture in 1991, died on May 23, 2012, at age 82.

Roy was noted and appreciated for his wide-ranging curiosity and his enthusiastic pursuit of answers to difficult questions in plant biology. Roy made major contributions to the field of plant physiology. He discovered that floral initiation in some plants is induced by a sequence of long days followed by short days, and he demonstrated that gibberellic acid, a plant growth substance, causes stem elongation by first promoting cell division, then cell elongation, in the region just below the shoot apex. He also was one of the principal proponents of the nutrient diversion hypothesis, which postulates that the transition from vegetative to reproductive growth in plants is associated with a shift in source/sink relations that results in an increased supply of sugars to the shoot apical meristem.

Although best known for his studies of the mechanisms of flower induction, Roy's research spanned scales from the molecular to the forest and landscape. He was unique in his ability to pursue questions about morphogenesis, self-organization, and pattern formation – normally the domain of a botany or biology department – while directing equal energy to solving problems in horticulture. He was a pioneer in the field of chemical growth control of plants, which is now a common practice in ornamental horticulture, and his research on application of growth retardants to trees under power lines has had a major impact on the tree management practices of electric utility companies. Roy investigated the energetics and horticultural requirements of biomass production long before it became fashionable, and made important contributions to the development of energy-efficient greenhouse heating systems. These achievements are all the more remarkable because Roy's enthusiasm and exuberance in the lab made him an enemy of scientific equipment. Many of his students and colleagues expanded their skills by learning how to repair devices that Roy had disabled.

Emergency learning about equipment repair in the laboratory aside, Roy was a superb teacher. His teaching relied on no particular method, nor did it require establishment of authority. In fact, Roy was invariably dressed in a t-shirt and shorts, whether he was in the lab, the field, or the classroom. He was modest and empathetic, as well as informal, and students felt comfortable in his presence. He loved vigorous debates of ideas and encouraged students to challenge doctrine. Such questioning was the centerpiece of two influential courses that Roy started. One, a course in crop physiology that he developed with Larry Rappaport, was highly regarded by both graduate and undergraduate students for its effective integration of the principles of plant physiology with their application to problems of importance in horticulture and agronomy. Many students later expressed appreciation for Roy's emphasis on challenging dogma and debating major plant physiology issues of the time. Another course Roy created, Analysis of Horticultural Problems, exposed students to methods for studying both specific and general problems in horticulture. Rather than using a textbook, Roy helped students to draw on their accumulated knowledge and find appropriate sources of information to propose and test solutions.

He was an intellectual with remarkable range. At a time of increasing specialization, he was a voracious reader of history, politics, science, and literature. He loved to talk about ideas, and one had his full attention in any discussion of them.

Roy, always a vigorous defender of the underdog, was unfazed when he found himself defending a minority opinion, and never conceded a point to the majority without a fight. However, even the most tenacious arguments were leavened with his sense of humor. He even faced his fatal illness with humor, saying, "The situation is fatal, but not serious."

He was mentor to many graduate students, and maintained relationships with scientists around the world. In addition to his family and friends, he left behind many colleagues and students who appreciate his academic contributions and his approach to life.

Richard Evans
Wes Hackett
Jack Paul