

gram, he also fostered cooperative relationships and working agreements with other groups including State, national, and international agencies.

To work for or with Art Lindquist and his insects affecting man and animals research group over time resulted in developing respect, admiration, and love for the man and his wife Juanita. To the new entomologist entering the group it might take a little time to fully realize this. Art had a way about him when he visited laboratories. He would look at a young scientist and ask: "What have you done to push back the boundaries of science today?" or "Are you working 14 or more hours a day?" When I finally summoned the courage to ask him if he meant five or seven days a week and he laughed, I began to realize that everything the man did reflected his dedication and zeal toward science and his chosen profession—entomology. Such a quality may be intangible, but fortunately it can be perceived and passed on to others to influence them.

Art carried his interest, dedication, and zeal into and through his retirement. He and Juanita made many trips to different parts of the United States for vacations or

to visit family, relatives, and friends. These trips generally included visits to laboratories where Art could talk research, keep current, and encourage others. He continued to attend scientific meetings such as the AMCA, ESA, and international congresses. He served as a consultant for international agencies, particularly the International Atomic Energy Agency (IAEA). He, with his wife's help, served for 10 years after his retirement as Technical Director of a short course on the use of radiation and radioisotopes in entomology organized by IAEA and conducted cooperatively by the University of Florida, USDA, and AEC. The Lindquists developed a "family" of friends from the students from developing countries attending this course and enjoyed following the careers of many of them through cards and letters or just informal contacts at meetings.

Art will be remembered by his many friends and associates for his abilities and accomplishments as well as his interest and zeal for science and entomology; attributes and qualities which he maintained throughout his career and retirement.

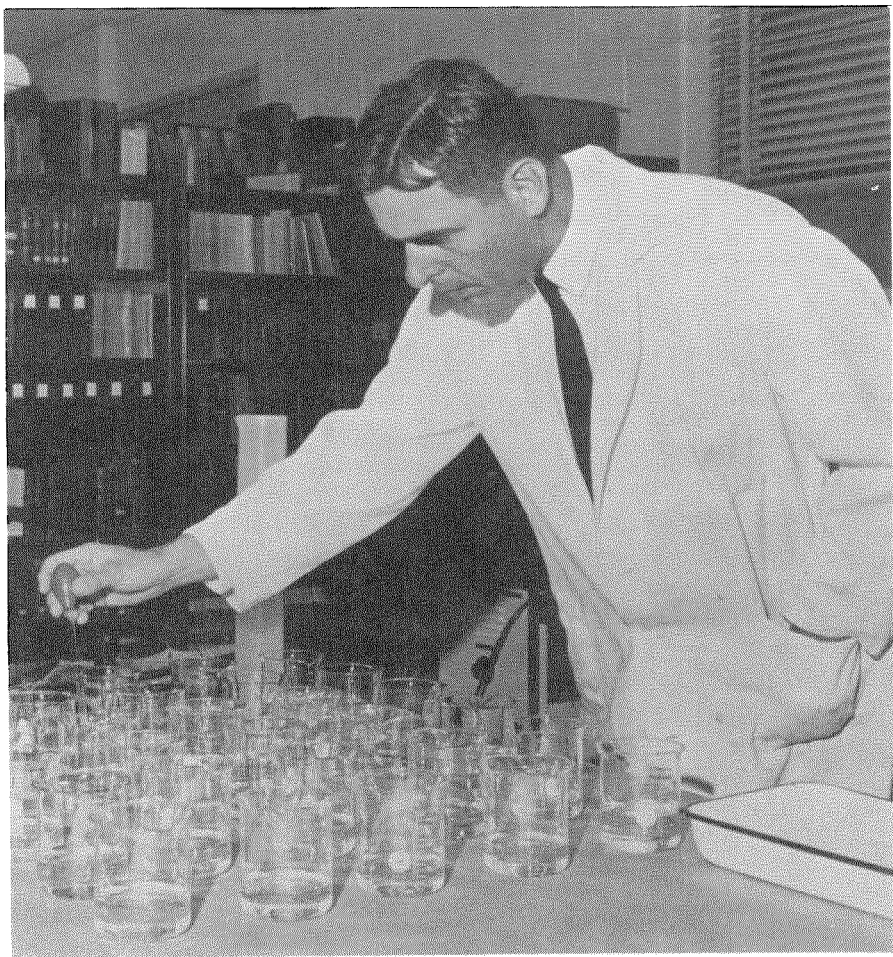
—Donald E. Weidhaas

FRANK J. MURPHEY

1920–1979

Dr. Frank J. Murphey died September 27, 1979. He had been retired since March of 1979, having found it necessary to give up his chosen work because of medical disability. Dr. Murphey had a long association with the University of Delaware, beginning shortly after World War II as a student and ending as an Associate Professor of Entomology in the Department of Entomology and Applied Ecology. He obtained all of his degrees at the University of Delaware, the B.S. as an Entomology-Plant Pathology major, the M.S. as an Entomology major, and the Ph.D. in Biological Sciences.

He was a dedicated scientist, a patient and thorough teacher, and had a beautiful sense of loyalty to his alma mater. Early in his student years he became interested in the problems of mosquito biology and the controls directed at them. When he was appointed to the faculty he continued his research on mosquitoes and made significant contributions to the present integrated pest management system employed by the State's mosquito control section of the Department of Natural Resources and Environmental Control. He developed the concept of testing chemical pesticides as well as



biological agents for mosquito control in small manmade plots which he called "micro-marshes." This technique was a logical intermediate step between the laboratory and large-scale field tests for efficacy tests against the target species and also non-target organisms. Dr. Murphey also conceived of and developed model

radio-controlled aircraft equipped with standard spray nozzles which permitted the study of spray patterns drift etc. on a smaller scale than conventional aircraft thus being much more economical for these studies. He played a major role in the development of Abate and in this connection more than once supplied Fed-

eral agencies and others with data and testimony from which they could base decisions concerning the use of Abate on Federal Wildlife refuges and similar land or marsh areas. His oviposition-attraction work with *Culex salinarius* contributed greatly to the knowledge of this aspect of mosquito biology. He served on national committees set up by the Environmental Protection Agency and other Federal groups involved with mosquito control and/or Wildlife Management. He was a Regional Director of the American Mosquito Control Association and served on the National Mosquito Control-Wildlife Coordination Committee.

He was honored for his mosquito research by the American Mosquito Control Association and the New Jersey Mosquito Control Association. He was awarded the Jesse B. Leslie award for mosquito control research by the latter organization. He is credited with having brought more than a quarter million dollars to the mosquito research efforts at the University of Delaware.

Dr. Murphey's dedication extended to his teaching efforts, especially in the ca-

capacity of directing graduate research. He was "patience personified" in working with such students and deserved the high regard they all showed him. Among his contributions to the Department of Entomology and Applied Ecology were his successful efforts to increase interdisciplinary work in the University which was exemplified by the cooperation that developed with researchers in the Biological Sciences. In addition he extended this effort to the Academy of Natural Sciences of Philadelphia and to the duPont Company, from which the Department gained its first 2 adjunct professorships. The relationship with these 2 groups is still active.

His colleagues will remember him with great respect and admiration for his scientific and educational work as well as with fondness as a friend with whom conversations could roam from science to philosophy and scholarly discourses on the progress of the Fighting Blue Hens football team which he loved so much. To all who knew him, he was a very special scientist and friend. Dale F. Bray, Robert W. Lake