## Harold Stulz (1902-2003)

Harold Stultz was born in Saint John, N.B., in 1902. His family moved to Chrystal Springs Farm, Steeves Settlement, in 1922. Following his early education in Saint John and Havelock he attended the Provincial Normal School. He graduated from Acadia University with a BA in 1928, then did graduate studies at Osborne Zoology Laboratory, Yale University, from 1928-1930. From 1930 to 1933 he taught Nature Study at Greenwich Country Day School, Greenwich, Conn. At this time he developed an interest in the theory of economic entomology and decided he would be a professional entomologist in Canada. He entered Macdonald College in 1933, completing his graduate studies in 1937.



Harold's professional entomological career began at the Dominion Entomological Laboratory in Annapolis Royal, N.S., in 1935. Later the headquarters moved to Kentville where he remained until retiring in 1968. The major portion of his career was devoted to studying a number of species of Lepidoptera. He extensively studied the bionomics of the codling moth. In the 1930's this pest had become a serious problem for apple growers in other parts of the world due mainly to the failure of arsenical sprays. An upsurge of this pest in parts of the Annapolis Valley caused alarm. Harold undertook a detailed study of the biology of this pest, including the effectiveness of lead arsenate applied at different times for control, and its parasites and predators. The entomological team at the laboratory was then encouraged to undertake extensive studies on the relationship of sprays to an increase in pest problems thus initiating the ecological studies on the fauna in apple orchards in general. This became known as the integrated pest control program to permit maximum effectiveness of natural enemies and the minimum use of chemical sprays. Harold's contributions to this program included a study of the natural enemies of the eye-spotted bud moth, life history and natural control of the pale apple leaf roller, and the spotted tentiform leaf miner. He carried out a fall survey of apple aphid species which served to alert growers to current conditions and to the best time to apply controls.

In relationship with the certification program of the strawberry-growing industry, he surveyed strawberry fields in the Maritimes to determine which of the known aphid species and leaf roller vectors of the strawberry virus disease were present. This led to aphid controls to improve the disease-free certification program. Harold also studied field mice and their damage to apple trees. His early warning system led to mice suppression to manageable levels.

Following his retirement he was employed for six months in 1969 with the Nova Scotia Department of Agriculture to compile the first fruit tree protection guide for use by fruit growers. The following summer, the provincial government called upon Harold to serve as Extension Entomologist for his knowledge of fruit tree pests and diseases. This friend and benefactor of agriculture was an encyclopedic source of information for colleagues at the Research Station, for extension entomologists, and for many growers. He also made invaluable contributions to his church and community; the most outstanding as director of the Kings Branch of the Children's Aid Society/Family and Children's Service for 42 years. Harold died at the age of 100 years on 10 March 2003.

— June Herbert