Paul Jones Chapman

September 9, 1900 — October 6, 1993

Professor Paul Jones (Chappie) Chapman had a distinguished and productive career in research, extension and administration at Cornell's New York State Agricultural Experiment Station at Geneva and briefly on an extension assignment in Ithaca. He made a number of important contributions to the science of entomology that had very practical benefits for the fruit growers in New York, other states and around the world. He was widely recognized for his keen intellect, good judgment and far-sighted approach to future needs in crop protection from the ravages of arthropod pests.

He was born in Cazadero, California, the operating base for his father's lumber business. He was the sixth of seven children. In 1910, the family moved to Santa Rosa to provide proper education for the children. His father developed an interest in orcharding and owned several prune orchards. Chappie was more interested in this than lumbering, although he worked summers as a lumberjack to earn money for college. He was interested in bird and animal life and read all the books he could find on the subject. Horticulture became his career interest. He followed his two older brothers to Stanford University, but transferred to Oregon State University after one year to pursue his education in horticulture and related sciences. He received his B.S. degree in 1922.

Chappie then came to New York and was employed as a Special Field Assistant assigned to Genessee and Wyoming Counties, Departments of Entomology and Plant Pathology, Cornell University, from April through September, 1923. More about this activity later. He accepted an assistantship with Extension Professor Cy Crosby, and enrolled in the Graduate School with a major in Entomology. He chose a taxonomic problem on the Psocoptera Order because he could fit it into his assistantship extension responsibilities. In 1927, he studied six weeks at the Museum of Comparative Zoology, Harvard University. After receiving his Ph.D. degree in 1928, he went to the Virginia Truck Crop Experiment Station as an Entomologist in April 1928. He returned to Cornell at the New York State Agricultural Experiment Station in June 1930, to manage the new "Moths and Insect" project established by the State legislature with a $50,000 appropriation. He was hired as Chief in Research (the equivalent of full professor) in the Division of Entomology at the age of 29. Chappie served as Head of the Department for 17 years from 1948 until 1965, and retired in 1968. From then until shortly before his death, he was active in research and in writing the history of the New York State Agricultural Experiment Station.

Even though his official extension duties were brief, he had an outstanding record. As an inexperienced special field assistant working with apple growers, he recommended the then not accepted spraying of apple trees in prebloom and late bloom with fungicides for control of apple scab. Chapman advised his growers to make two applications, just before and in late bloom, because of a heavy rain that year. His growers had clean fruit at harvest whereas others were badly damaged by apple scab. These outstanding results led to offers of graduate assistantships in plant pathology and entomology as well as an industry position. As a graduate assistant with the late Professor Crosby, he became involved in the controversy of the merits of spraying versus dusting for control of orchard insects and diseases. He believed that spraying was superior over all, which eventually was proven to be true.

Professor Chapman had a very distinguished career in research. He was author or co-author of 180 papers and a book. His research began as a graduate student with a classic study on the taxonomy of the insect order Psocoptera, a study which is still the reference standard. His two years in Virginia resulted in four publications on the biology and control of vegetable insect pests. Upon his return to New York, he undertook studies on three major pests of apple and developed a research program for fruit pest control in the Hudson Valley. He was an outstanding researcher in the field with his carefully planned experiments that have provided essential knowledge about the basic biology of fruit pests and their interactions with their hosts. He developed innovative control measures for pest control, such as determining that one-month storage of apples at 32-35°F kills all stages of apple maggots, thus making apples eligible for export to England and other markets where this insect is not present.

He collaborated with chemists at the New York State Agricultural Experiment Station in defining the mode of action of and characterizing those qualities in petroleum oils that contribute to their toxicity to insects and mites and to plant phytotoxicity. In this one area of research, he published over thirty papers and has set the specifications for plant spray oils now widely used on deciduous and citrus fruits for insect and mite control in New York and throughout the world.

After assuming headship of the Department of Entomology in 1948, Professor Chapman still continued active research, working in collaboration with the late Professors S.E. Lienk and horticulturist, Otis Curtis. They designed field experiments to determine the impact of mite foliage feeding on apple tree growth and yields. These studies demonstrated that heavy mite populations early in the season slowed tree growth and drastically reduced bloom and yield the following year. The Chapman-Lienk collaboration continued with a National Science Foundation grant to explore what happens to an introduced plant species (apple) entomologically. The study was limited to the Lepidopterous family Tortricidae.

The final report is a book, *Tortricid Fauna of Apple in New York*, published in 1971. It includes a wealth of information on cultivated and wild apples along with the biology and color plates of larval and adult stages of 54 tortricid species. After retiring, he and Lienk initiated studies on the flight periods of Macrolepidoptera. In 1991, at the age of 91, he published a 152 page Station bulletin summarizing the records of the flight periods of 676 species occurring in Western New York. He made Professor Lienk, his long-time collaborator and friend who died in 1988, the senior author.

As significant as Professor Chapman's research findings have been, his contributions as teacher of young faculty and his leadership of the Department of Entomology into a modern diversified unit are equally if not more important. He encouraged basic biological studies as essential to sound integrated pest management (even though he did not use that term). Because of his success with chemists in collaborative research on spray oils, he recognized the potentials for such collaboration. He was a pioneer in integrating other disciplines into the entomology profession, establishing toxicology, biological control and biochemistry positions in the department. The last one was to study the then new field of insect pheromones. By example and encouragement, he set the highest goals for the department's basic and applied research programs. He set very high standards in selecting new professorial staff. Besides great promise as scientists, he looked for balanced well-rounded persons. Of the ten faculty positions appointed during his tenure, six went on to chair departments of entomology. One of these also became a director, one a dean and one was elected a member of the National Academy of Sciences. A seventh professor moved directly into a directorship. He was very proud of his faculty and their accomplishments.

From retirement until a few months before his death, he came to his office and laboratory regularly where he continued work on the flight periods of moths and writing the history of the Station. He was always available to anyone for advice and counsel. The Department of Entomology was very important to Chappie, especially after his wife died in 1988. It became his primary interest and he was concerned for its future. In 1992, the Paul J. Chapman Graduate Student Fellowship in Entomology was established with a very generous gift from Chappie to Cornell University. This will ensure that "his" department can continue to inspire young entomologists to follow the principles and insights he had instilled in his colleagues.

Professor Chapman was an Honorary member of the Entomological Society of America where he served a term as President of the Eastern Branch and a term on the National Governing Board. The Eastern Branch honored him three times. In 1940 and 1942, he received the gold medal awarded for the best paper presented at the Eastern Branch meeting and in 1965 he was awarded the Certificate of Merit, only the third time this certificate had been

presented. He was a member of the American Association for the Advancement of Science (Fellow), American Institute of Biological Sciences and a member of Sigma Xi, Phi Kappa Phi, Gamma Alpha and Scabbard and Blade.

Professor Chapman was active in community affairs. He served as board member and president of the Geneva Civic Music Association; board member, president and Paul Harris Fellow of the Geneva Rotary Club; board member and first vice president of the Geneva General Hospital; and board member of the Geneva Free Library.

Chappie was an articulate, persuasive, reserved, polite, courtly gentleman. He was highly respected by staff at all levels for his keen intellect, wisdom and common sense. He had an instinct for doing the right thing and was a person people naturally turned to for counsel and advice.

He was predeceased by his wife in 1988. They had no children. Several members of his family still live in California.

Edward H. Glass, Haruo Tashiro, Wendell Roelofs