MEMORIAL RESOLUTION OF THE FACULTY OF THE UNIVERSITY OF WISCONSIN-MADISON

ON THE DEATH OF PROFESSOR EMERITUS STANLEY D. CARLSON

Stanley D. Carlson, professor emeritus of entomology, passed away in Madison, Wisconsin, on April 23, 2009 after a long illness. Professor Carlson was born in St. Paul, Minnesota, and received his BS from the University of Minnesota in 1956. He went on to earn a master's degree at the University of Nebraska in 1961 and a PhD from Kansas State University in 1964. After receiving his doctorate, Professor Carlson joined the faculty of Virginia Polytechnic as an assistant professor. In 1967, he was awarded a prestigious NIH fellowship in the Department of Physiology, Karolinska Institute, Sweden. Following that fellowship, he won another NIH fellowship in the Department of Biology at Yale University. Professor Carlson joined the faculty of the Department of Entomology at UW-Madison in 1971 and was promoted to the rank of full professor in 1980.

Professor Carlson's long research career centered on insect vision. He authored over 130 scientific articles, book chapters and reviews. His collaborative effort in the monumental work, *A Scanning Electron Microscope Atlas of the Honey Bee* (Erickson, Carlson, and Garment, 1986) remains the ultimate authority on the anatomy of the honey bee. One of his ultrastructural studies on the exquisite symmetry of the insect eye was displayed on the front cover of *Science* (1963). He was the first to insert probes into the insect eye proving that certain insects had color vision. He and several graduate students subsequently determined the wiring diagram of the compound eye of the fly and the circuitry and synapses through which the eye communicates with the brain. This work logically lead to the examination of adjacent glial cells, each ultrastructurally and functionally distinct but working together in different strata in the eye. As he delved deeper into the glial cells and their role, he realized that glial cells represent the insect blood-brain barrier. This critical barrier in insects (also found in humans) is the basis for the ionic protection of the insect nervous system against certain insecticides. In collaboration with others, he demonstrated that lesions in the NRX-4 gene in Drosophila lead to faulty intercellular junctions and breaching of the blood-brain barrier.

Professor Carlson had many teaching duties in the department. He taught formal courses in insect morphology and insect sensory physiology, as well as numerous graduate seminars in insect ultrastructure and neurobiology. Professor Carlson was also involved in the campus Neuroscience Training Program and for many years served as the director of the scanning electron microscope facility in Russell Labs.

Music was Professor Carlson's passion. He was an accomplished pianist who specialized in the performance of Chopin and Rachmaninoff. He spent many hours in the School of Music listening to student recitals and hosting piano club meetings. Departmental members and especially the administrative staff were routinely treated to lunch and a short concert at the Carlson home. Interestingly, Professor Carlson rarely played at these lunch concerts; rather it was a finishing graduate student majoring in piano studies who performed. Professor Carlson was sincerely interested in student progress whether in entomology or music and was delighted to serve as a mentor in any capacity possible.

Professor Carlson's exquisitely dry wit made faculty meetings an absolute delight. A frequent entomology representative to the Faculty Senate, his reports to the department were legendary for their sesquipedalia, humor, and commentary on university politics. One of the enduring memories of Professor Carlson was his fearlessness in challenging authority, especially university administrators. His numerous quixotic letters supporting causes of all sorts revealed his deep feelings for a just and fair society. Professor Carlson's contributions to science and music, leavened with humor and wisdom, made the department and the world a better place. He is missed by all of us.

MEMORIAL COMMITTEE
Robert Jeanne, chair
Walter Goodman