

IN Memoriam

Don Wayne Fawcett, 1917–2009

Don Fawcett, one of ASCB's founders, first president, and longtime member, passed away at home on May 7, 2009. He was 92. Fawcett was born in Iowa, where his father raised sheep and cattle. He grew up in Boston, where his father moved when he became a wool merchant.

Don Fawcett studied at the Boston Latin School, the oldest high school in the U.S.; he was admitted to Harvard College in 1934, where he became fascinated with biology. In order to attend the football games for free, he played trumpet in the Harvard Band with Keith R. Porter, a schoolmate and his biology teaching assistant.

Fawcett graduated in 1938 and was admitted to Harvard Medical School, where he did research as a medical student under George B. Wislocki, the chair of the Department of Anatomy. He received his M.D. in 1942 and, as an intern in Surgery at the Massachusetts General Hospital, was on duty in the emergency ward when 300 people were severely burned in a fire at the Coconut Grove nightclub.

From Surgery to Research

In 1943 he was commissioned a captain in the U.S. Army Medical Corps and served as a battalion surgeon in an artillery unit in the European theater in World War II. Upon his return, he chose a career in research and teaching rather than the practice of surgery. He became an instructor in the same department in which he had done his undergraduate research. There he began to work on subjects that continued to interest to him throughout the rest of his life: adipose tissue and the male reproductive system. He wrote about his junior faculty experience, with typical modesty, in an unpublished autobiography: "Success often does not depend upon special intellect or insight, but upon being involved early in a new and rapidly advancing field."

The first commercial electron microscope had become available early in the 1940s, and Keith Porter had one at the Rockefeller Institute for Medical Research, now the Rockefeller University. Don Fawcett joined his group, which included George E. Palade. There, as he reported, he "learned to break glass knives and to cut thin sections and went on to describe for the first time the structure of cilia and flagella."

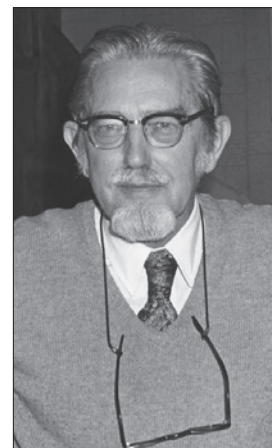
About his experience in those years he said: "for morphologists the decade from 1950 to 1960 held the same anticipation and excitement that attends the opening of a new continent for exploration. The electron microscope revealed marvelous order and functional design in the organization of every tissue and organ that was examined and added significantly to our understanding of our own structure . . . I am grateful to have been able to participate in a branch of science in which one can enjoy aesthetic satisfaction while wresting from nature some of her closely guarded secrets and contributing in some small measure to man's store of knowledge."

Department Chair, Teacher

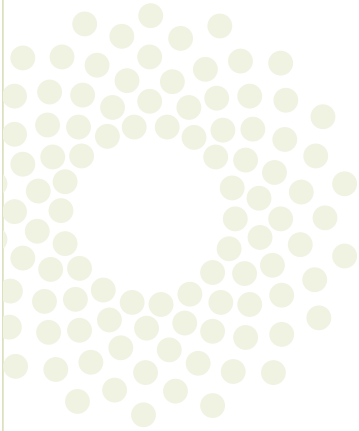
He rapidly moved up the academic ladder at Harvard and in 1955 he assumed the position of chair of the Department of Anatomy at Cornell Medical School. He returned to the Department of Anatomy at Harvard Medical School four years later as the Hersey Professor of Anatomy and chair. During his tenure as chair, Fawcett rebuilt the department in a substantive way. Generations of his pupils, which included graduate students, postdoctoral fellows, young faculty members, and many foreign visiting scientists, went on to occupy key academic positions of anatomy and biology in the U.S. and abroad.

Microscopist, Writer

Throughout his life, Don Fawcett did his own experiments and much of his own microscopy. "The life of a professor," he commented, "is an endless series of faculty meetings, project site visits, research grant applications and other unproductive activities. However, I was able to continue my research by having a microtome in my home where I cut my own thin sections and a darkroom in the basement where I printed the micrographs." He was rarely satisfied with any photographic print unless he had done it himself. He started his day as the chair at 9:00 a.m., having already spent hours at the electron microscope. He resumed his own work in the evening at home. A gifted writer, he would reappear in the department on Monday with a paper or book chapter newly written in pencil on a yellow pad of paper in his impeccable handwriting, to the envy of all department members.



Don Wayne Fawcett



He published over 200 papers on the ultrastructure of cells and organelles and was the author of *The Cell*, an atlas of fine structure, and of several editions of a famous textbook of histology. Known as “The Bloom and Fawcett” to generations of students and young investigators, the book taught them the microscopic anatomy and histophysiology of the human body.

Fawcett made important observations on the structure of mitochondria, sarcoplasmic and agranular reticulum, skeletal and cardiac muscle, brown fat, and liver cells. He discovered the fibrous lamina of the cell nucleus. The most extraordinary achievement of his career, however, was his description of the structure of spermatozoa and the male reproductive system. He illustrated this with some of the most extraordinary images of biological organization ever published.

A Love Affair with Africa

In the mid 1960s, Don Fawcett was appointed as an examiner in the School of Veterinary Medicine of the University of Nairobi, and thus began his long love affairs with Africa and photography. For years he would spend a month of his summer in Kenya, visiting the national parks and photographing mammals, birds, and flowers. His breathtaking photographic images of African and North American wildlife have been widely exhibited and published. In 1975, he was persuaded to relinquish his chair of the Department of Anatomy and became the Senior Associate Dean for Preclinical Sciences. It was a job he didn't like because he missed doing research, so he left Harvard Medical School in 1977. He accepted a position as senior research scientist and director of electron microscopy at the International Laboratory for Research in Animal Diseases (ILRAD) in Nairobi. He could thus devote all his time to the greatest passion of his life, contemplating nature at all levels of organization.

The mission of ILRAD was to develop the means to control parasitic diseases of cattle, and Don Fawcett made important contributions to the study of *Theileria parva*, responsible for East Coast fever. He studied the mechanism of the

entry of the protozoan into lymphocytes and showed that the tick vector eliminates the excess fluid ingested by secreting it back into the host through its salivary gland. After five years in Kenya, he moved to Montana in 1988, where he lived for the remainder of his life.

An Influential Legacy

Don Fawcett will be remembered and honored by his many disciples. They were deeply influenced by his remarkable gifts as a scientist, mentor, and chair. Moreover, his intellect, imagination, and vast understanding of zoology and comparative physiology had a unique impact on students, postdoctoral fellows, and faculty.

For Don Fawcett, looking at living things was an adventure that never ceased fascinating him, even into the last years of his life. Tolerant of human frailness, endowed with an excellent sense of humor, full of understatement about his gifts and accomplishments, he detested pomposity in all its manifestations. He also distinguished himself in another important respect: He appointed the first woman and the second African-American professor in a preclinical department at Harvard Medical School. And, as the associate dean for Preclinical Sciences, he chose as his successor the first woman to occupy a departmental chair in a preclinical department. We ourselves, an immigrant Italian and a Japanese American, who were both faculty members of the now vanished Department of Anatomy, bear witness to Don Fawcett's profound humanism.

Don Fawcett is survived by his wife of 68 years, Dorothy Secret Fawcett, as well as his sons, Bob Fawcett (New Hampshire) and Joe Fawcett (Kalispell MT), and two daughters, Mary Papish (Hawaii) and Dona Boggs (Ovando, MT), a nephew, Ken Fawcett (Iowa), 13 grandchildren, and 10 great grandchildren.

In memoriam, the family suggests contributions to the American Society for Cell Biology (8120 Woodmont Ave., Suite 750, Bethesda, MD 20814, USA or by visiting www.ascb.org) for the ASCB Half-Century Fund to create a Don Fawcett memorial travel award to support students' attendance at ASCB meetings.

—Elio Raviola and Susumu Ito