

Sydney Arthur Asdell

Sydney Arthur Asdell was a pioneer in the science of reproductive biology, and his fundamental research findings are widely recognized for their contributions to the remarkable development that has occurred in this field. Born in Bramhall, Cheshire, England, he attended King Edward VI Grammar School in Birmingham and then Cambridge University, where he received his B.A. degree in 1922, his M.A. in 1925, and his Ph.D. in 1926. At Cambridge he was the first student to receive a Ph.D. degree from F. H. A. Marshall, the leading physiologist of his time. Fittingly he was awarded the Marshall Medal, by the Society for the Study of Fertility, in Dublin in 1977.

In 1927–28 Dr. Asdell served as a fellow in the laboratory of Dr. G. W. Corner at the University of Rochester, in Rochester, New York. During this time progesterone, one of the two major ovarian steroid hormones, was isolated and crystallized. In 1928, following a brief fellowship at the University of California, Berkeley, he became a lecturer in the physiology and nutrition of farm animals at Massey Agricultural College in New Zealand. In 1930 he joined the faculty of the Department of Animal Husbandry (now Animal Science) at Cornell University as assistant professor in animal physiology. He was promoted to professor in 1936 and served as Fulbright Professor in Animal Physiology at the Royal Veterinary and Agricultural College in Copenhagen in 1952–53. In 1923 he was married to Muriel Marrack, who died on February 24, 1972.

Professor Asdell's early experiments helped to establish the basis for a number of the major advances in the field, including artificial insemination, superovulation, in vitro fertilization and embryo transfer, and estrous cycle regulation. He established the time of ovulation, the rates of passage of sperm and ova through the reproductive tract, and the important physiological effects of estrogen and progesterone on the reproductive tracts of farm animals. He organized much of the research that eventually led to measurement of blood concentrations of all of the major hormones controlling reproduction in cattle. He carried out a number of experiments to elucidate the hormonal control of lactation.

He was intensely interested in the role of nutrition in reproductive performance and played a major role in the large-scale experiments conducted at Cornell in this area from 1950 to 1965. In his later years he became interested in the effects of hormones on longevity. The breadth of his interests in the biological sciences is perhaps best illustrated by his analysis

of the relation between inbreeding and intelligence in the royal families of Europe and his discovery of the linkage of intersexuality and the gene for hornlessness in goats.

Although much of his work was basic in nature, he had a good appreciation of how to carry out applied research and promoted the use of a mobile laboratory to visit farms to survey and study the causes of infertility in cattle in New York State. This survey revealed several important nutritional, managerial, and disease factors that contribute to infertility, and subsequent research resulted in elimination or improvement of those conditions. He was the prime mover in organizing the first cooperative regional research project in the northeastern United States. This project, entitled NE-1—A Regional Approach to Problems of Fertility and Breeding Efficiency in Dairy Cattle—although revised and renumbered several times, is still in existence.

Professor Asdell's use of a mobile laboratory to survey causes of cattle infertility eventually led to production of a widely read book, *Cattle Fertility and Sterility*, in 1955 with a second edition in 1968. However, his major contribution as a writer was his book *Patterns of Mammalian Reproduction*, in which he combined his great knowledge of reproductive physiology with his ecological interests to produce an extremely useful compendium of the essential facts known about reproduction in a large number of mammalian species. In a third book, *Dog Breeding*, written after his retirement, he was able to distill his experience and knowledge of physiology and genetics into a deceptively simple book useful to dog lovers, dog breeders, and scientists interested in different aspects of dog reproduction.

Dr. Asdell had a subtle sense of humor that enlivened his lectures and endeared him to graduate and undergraduate students alike. Over the years, he taught a number of courses, beginning with "Animal Breeding," a course that concerned Mendelian genetics and the physiology of reproduction. At the same time, he taught a course in the physiology of lactation. Later he taught "Reproductive Physiology," a course taken by most graduate students in biological fields at Cornell. He also taught an advanced course dealing with the physiology of growth, lactation, aging, and adaptation. He had a phenomenal memory and a remarkable mastery of the language. He rarely used lecture notes, even when discussing highly detailed information. He was perhaps most effective as a teacher in a seminar setting. The seminar in reproduction and endocrinology that he started just after the end of World War II is still being given. He was a strong advocate of the study of physiology at Cornell and was the first representative for the newly formed field.

Dr. Asdell did an outstanding job in training graduate students, and it was through these students and their students that he exerted a continuing influence on his field. He demanded originality and initiative of his students, yet he was always encouraging and supportive. He had a keen insight into the important problems and concepts in his field and an uncanny ability to

reduce those problems into their major components. He was a modest, quiet person, but he did not hesitate to speak out when faulty information or poorly conceived hypotheses were promulgated. As one of the grand old men of reproductive physiology, he knew many people, and he made it a point to introduce students and new faculty members to the members of the "establishment." Above all else he was scrupulously honest in both scientific and personal affairs. He served as an example to his students of the importance of critically evaluating data and publishing the facts with the best possible interpretation.

Professor Asdell is survived by a son, Philip Tregarthen, and a daughter, Mary Kathleen, both living in Frederick, Maryland.

Robert H. Foote, Ari VanTienhoven, William Hansel