Charles Leonard Huskins: 1897-1953

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WITH the untimely death of Charles Leonard Huskins on July 26, 1953, at the age of 55, the scientific world lost an internationally distinguished biologist, a dynamic, colorful personality, and an outstanding educator.

Professor Huskins was born in Walsall, England, on Nov. 30, 1897, the son of William Huskins and Annie Clara Darby Huskins. At the age of nine he moved, with his family, to Red Deer, Alberta, Canada. During World War I he enlisted and served overseas in the Canadian Infantry (1916). However, he was attracted by the rapidly expanding Royal Flying Corps (later the R.A.F.), and served as a flying officer in England and France (1917–19). He helped defend London against the Zeppelins and liked to recall that he celebrated the Armistice by flying low around Nelson's column in Trafalgar Square. During World War II he was active in the C.O.T.C. and the McGill unit of the R.C.A.F.

After the war he returned to Canada and enrolled at the University of Alberta, from which he received the degree of Bachelor of Agricultural Science in 1923 and the master's degree in 1925. His outstanding promise as a young scientist was recognized as a result of his investigation of certain genetic phenomena in oats and he was awarded an "1851 Exhibition Overseas Scholarship" for graduate study. He returned to England and by 1927 had obtained his Ph.D. from Kings College, University of London, which later (1934), on the basis of his published research, also awarded him the D.Sc. degree. From 1927–30 he worked under William Bateson as a research fellow in cytology at the John Innes Horticultural Institution in England.

His teaching career began in 1930 at McGill University, first in the Department of Botany and later (1934–1945) as professor and first chairman of the Department of Genetics. This department was organized largely for, and because of, Dr. Huskins. It was the first and is still the only university Department of Genetics in Canada. He was very proud of the cytogenetics group that flourished under his direction at McGill, and for this reason he was reluctant to leave and to accept a post as professor of botany at the University of Wisconsin (1945–1953). Except for a number of brief visits to various European institutions, a term as visiting professor at the University of California in 1938, and a year as a Guggenheim fellow at Columbia University in 1942–43, his academic career was spent at McGill and Wisconsin.

He was active in many professional organizations. Despite his Wisconsin residence, he was president of the Biological and Medical Sciences Section of The Royal Society of Canada in 1951. While at McGill, Professor Huskins gave active support to the National Research Council of Canada and worked hard to develop and improve the *Canadian Journal of Research*.

In 1923 he married Margaret Villy, a writer and at that time a lecturer in English literature at the University of Alberta. She was a person whose exceptional artistic and spiritual qualities contributed greatly to their home and community. Both Professor and Mrs. Huskins were deeply concerned with the work and growth of the Madison Unitarian Society. She died in March, 1953. They are survived by three children: Sheila Wincot (Mrs. S. Hori), Olwen Margaret, and John Michael.

Professor Huskins' scientific investigations represented pioneering work on a number of fundamental biological problems. His early work was concerned with understanding the nature of certain mutations in oats and wheat. During his stay at the John Innes Horticultural Institution he studied the cytology of certain grass species of the genus *Spartina* and a suspected hybrid. The cytological analysis showed the suspected hybrid to have the chromosome number predicted on the basis of hybridization followed by chromosome doubling. This is one of the first well-authenticated examples of the naturally occurring evolution of a new plant species and is now commonly cited in books and articles pertaining to plant evolution. From this study, his interest in chromosome morphology led to his well-known researches on the spiral structure of plant chromosomes. His fertile mind also delved into the problem of chromosome synapsis and the mechanism of crossing-over, and led him to study chromosome behavior in grasshoppers, mice, and higher plants. Later an interest in the ultimate structure of the chromosome (and hence the gene) culminated in a series of papers on the role of the chromosomes (and nucleus) in differentiation and development. During the last decade of his life he also developed a strong interest in certain aspects of the history and philosophy of science. His aim in this regard was to interpret the progress and role of cytology in the general framework of science and in its relation to society as a whole. Considerable time and thought were also devoted to the problem of the integration of science and religion.

Professor Huskins was keenly aware of the dangers of the interference of politics into the strictly scientific matters which led to the destruction of the science of genetics in Soviet Russia. He was likewise well aware of the personal misfortunes and the loss of scientific manpower that ensued. As a consequence, he

took an active part in helping a number of refugee scientists to reestablish themselves in North America.

One of his early convictions concerning his special field of biology was that the disciplines of physics and chemistry should be brought to bear on certain biological problems. He spent much time and effort trying to foster this approach, and his enthusiasm in this respect made a lasting impression on many of his associates and students to the great advantage of the sciences. He had a remarkable talent for synthesis, combining data and technics from a variety of fields of knowledge. This ability was of great value to his fellow committee members in organizing the curriculum of Integrated Liberal Studies at the University of Wisconsin. He emphasized the distinction between training and education, realizing that the function of the teacher is, in the words of Channing, "not to stamp our minds irresistibly on the young, but to stir up their own."

Professor Huskins was a vigorous and energetic man who often sought relaxation in physical exertion. For many years he spent his summer vacation and frequent winter ski weekends at his Vermont farm. He was exceptionally well liked by both undergraduate and graduate students. In the latter, he encouraged and developed an unusual degree of independence and originality. His relationship with them was always a friendly one, and he showed a genuine interest in their personal as well as their scientific welfare and advancement. He was a stimulating conversationalist, witty and quick to appreciate the humorous side of a subject. Among his students and associates there are few who will not remember many pleasant and stimulating hours spent in his laboratory, office, or home.

The written contributions of Charles Leonard Huskins will long preserve his scientific memory; his vivid personality will live on in the memories of his many friends.

Timothy William Stanton: 1860-1953

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IN the 11th Annual Report of the United States Geological Survey, C. A. White, geologist-in-charge of Mesozoic invertebrate paleontology, writes that "On July 1 [1889] Mr. T. W. Stanton, who had recently been appointed Assistant Paleontologist, reported to me for duty and immediately entered upon the work of the division." Thus was initiated a continuous period of some forty-six years in the public service, an experience that made Dr. Stanton one of the outstanding figures in American geology.

Timothy William Stanton was born in Monroe County, Illinois, September 21, 1860. His parents, William and Mary Ann Blanchard Stanton, were both of farmer stock and had come from North Carolina. In 1866 the family moved across the Mississippi River to Missouri, and Stanton began his education in the one room country school of the locality. In 1874 the family moved to Colorado and settled at Boulder, then a community of 2000 people. There young Stanton attended the public school, and in 1877, when the University of Colorado opened its doors, he became a preparatory student and in 1883 was graduated with the University's second class as a Bachelor of Science. In 1895 he received the Master of Science degree and in 1924 an honorary Doctor of Science degree from the same institution. In 1888–1889 he attended The Johns Hopkins University as a graduate student in biology and geology and in 1897 Columbian (now George Washington) University of Washington, D. C., awarded him the degree of Doctor of Philosophy.

After graduation from the University of Colorado in 1883, Stanton was connected for five years with the public schools of Colorado. In 1894, after moving to Washington, he became a part-time teacher of geology at Columbian University, and continued this connection until 1910.

In Colorado, Stanton lived in an area of Cretaceous rocks and became interested in them and their fossils. In the University the professor of mathematics was really a general naturalist and gave, among other courses in science, one in geology that Stanton took. This crystallized his interest and he concentrated on it. He published in 1888 his first paper on the fossils of the Pierre shale. It was natural therefore that his appointment with the Geological Survey should involve Cretaceous fossils. Up to 1889 White had been responsible for all work on Mesozoic invertebrates in the Geological Survey. In that year Alpheus Hyatt took over responsibility for Triassic and Jurassic invertebrates and White, with Stanton as his new assistant, restricted his work to Cretaceous invertebrates. In 1892 Stanton succeeded White as geologist-in-charge of work on Cretaceous invertebrates. In 1900 he became paleontologist, in 1903 geologist-in-charge of the Section of Paleontology and Stratigraphy and in 1912 chairman of the Committee on Geologic Names. In 1930 he became acting chief geologist and in 1932 chief geologist. He retired in September 1935 at the age of seventy-five. For some years afterward he revived interest in his early work on the Lower Cretaceous deposits of Texas, but he found the toll of years too heavy to permit the finishing of the large manuscript he had begun many years before and only parts of it were published. He busied himself with less exacting tasks and for his last fifteen years remained