OLOF LARSELL
Biologist, Anatomist and Historian

A NOBLE QUEST

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Olof Larsell, M.A., Ph.D., Sc.D.

The opening line of a biography written by the late Arthur C. Jones, M.D. (1896-1983) reads, "Education in the Pacific Northwest owes a large debt to Dr. Olof Larsell. The University of Oregon Medical School in particular bears the imprint of his influence. He contributed in many ways to the present high standing of the School and gave of his energy to support higher education throughout the State of Oregon." And true enough; Larsell was an ardent scholar of history, clinical researcher, professor and a true mentor and friend of students and colleagues.

He was born on the 13th of March 1886 in Rättvik, in central Sweden. His first five years were spent on Lake Siljan on the old Larsell family homestead. He recalled trips across the ice in a sled with his grandfather to the old church in Rättvik, a church which was built about 1180 A.D.

When Olof was only two years old, his father, John Larsell, went to America to find a new home for his family. He settled in Tacoma, Washington, and sent for the others in 1891.

Olof's school days at the old Edison School were interspersed with vacations on the Puget Sound and to the mountains and lakes nearby. After finishing grade school, Olof went on to study at Vashon Academy on Vashon Island. While there, Olof also managed an electric power plant, which offered educational opportunities outside the classroom. He mastered many technical skills that eventually helped him in his later work in the research laboratory.

A friend of the family urged Olof to go to McMinnville College (now called Linfield College) in Oregon, a natural choice since his grandfather had been a Baptist. Olof spent his undergraduate years in McMinnville and installed the first electric lights in the college in 1907. His major interest among the sciences was biology. He received his Bachelor of Science degree in 1910 and upon graduation, he accepted a position as an instructor in biology.

Many years supervising in student admissions, and in consultations with prospective degree candidates added to his awareness of the difficulties students suffered. Many realized their ambitions only through his help, and sometimes they did not know of his efforts.

A steady enthusiasm is contagious, and many can attest to the fact that Dr. Larsell gave them the first impetus toward real accomplishment. He had said that there was only one thing he would rather be than a physician, and that is: a teacher of physicians. His credo might well be summarized in his own oft repeated quotation, "In all thy getting, get understanding." [Proverbs 4:7]

He was professor of anatomy at UOMS until 1952. In 1952 he moved to Minnesota to become professor of Neuroanatomy at the University of Minnesota until 1954. He then spent a year at the University of Oslo in Norway on a Fulbright Fellowship before returning to Portland to continue his research on the cerebellum at Good Samaritan Hospital. In addition to publishing numerous journal articles, he published several books, some of the most notable being, The Doctor In Oregon: A Medical History [Portland: Binsford and Mort for the Oregon Historical Society, 1947] and a work of three volumes: The Comparative Anatomy and Histology of the Cerebellum From Myxinoids Through Birds [Minneapolis: University of Minnesota Press, 1967], The Comparative Anatomy and Histology of the Cerebellum From Monotremes Through Apes [Minneapolis: University of Minnesota Press, 1970], and The Comparative Anatomy and Histology of the Cerebellum, Cerebellar Connections and Cerebellar Cortex, [Minneapolis: University of Minnesota Press, 1972]. The last of the three volumes was not complete at the time of Larsell’s death so Dr. Jan Jansen of Norway, editor of the first two volumes and a world renowned expert on the anatomy of the brain, completed the book.

Known for his enduring energy, at 78 years of age, Larsell was working on the final chapter of his monumental monograph on the cerebellum, and other unfinished neurological research when he died on April 8, 1964.
Northwestern University almost drew the Larsells back to Chicago in the fall of 1926 when Larsell was offered a professorship in neurology. He spent the winter of 1926-27 as a visiting professor at the new McKlinton Campus. Fortunately for Oregon, the advantages of Portland outweighed those of Chicago, and he returned to UOMS to teach and continue his research. He lectured on neuro-anatomy at the University of California in 1931 and 1932.

Larsell continued to collaborate with Dr. Fenton on histiocytes in the human nasal accessory sinuses and other histiological work in this field relating to sinus infection, lymphatic channels and drainage, the defense mechanism of the upper respiratory tract, and the vasomotor mechanism. As a guest of the Wistar Institute, he did significant research on the acoustic apparatus and function in the pouch young of the opossum at the Morris Biological Farm during the years 1929, 1934 and 1935. Material obtained there added to the work on the cerebellum; especially significant was the fact that functional studies in these unique, pouch young amplified the findings in regard to structural development in what is really an embryonic series. The relations of the labyrinth and its connections with the cerebellum formed a part of this group of contributions. Studies on the bat cerebellum gave more evidence of function-structure relationships. Summation of all this and prior work on the cerebellum appeared in several reviews on the subject, the first of which was entitled, "The Cerebellum: A Review and Interpretation" published in the Archives of Neuroanatomy and the Sense Organs in 1939. Dr. Larsell revised this text in a second edition, and wrote the section on the Nervous System in the tenth edition of Morris' Human Anatomy, to which he contributed many original plates and other figures drawn under his supervision by Miss Clarice Ashworth Francone, noted medical illustrator at the University of Oregon Medical School.

In 1938, Larsell was elected by the Board of Higher Education of Oregon as Dean of the Graduate Division and served until 1946. Consultation with faculty members around the state cut deeply into time for research.

The scientific fraternity of Sigma Xi received support from Larsell, who was a long standing member and sponsored many members among his students and assistants. He was a member of the Society of Experimental Biology and Medicine and a Fellow of The American Association for the Advancement of Science. He was also a member of the executive committee of the American Association of Anatomists, and also belonged to the American Association of University Professors. He was a charter member of the History of Science Society, organized in 1924, and he was elected to the Lardonshistoriska Samfundet of Upsala through his studies on Berzelius, Rudbeck, Retzius and other Swedish scientists. Gamma Alpha and Phi Beta Pi claimed him as a fellow, and in 1929, he served as Vice President of the Western Society of Naturalists. Dr. Larsell was also a member of the Editorial Board of the Journal of Comparative Neurology, consulting editor for The Journal of History of Medicine and Allied Sciences.

Larsell gave assistance to many students, over and above that which was required.

On the 22nd of June 1911, he married Leo Dorcas Fleming at her home in The Dalles, Oregon.

At the Friday Harbor Marine Biological Station he took two inspiring summer courses, which increased his enthusiasm for biological research. He also became great friends with Dr. William A. Locy, of Northwestern University. Through Dr. Locy, Olof obtained a teaching fellowship in zoology at Northwestern University in 1913. The study of the development of the bird's lung had been the basis of his Master's thesis. Dr. Locy and Larsell published a joint paper on the embryology of the avian lung in the American Journal of Anatomy in 1916.

In the summer of 1913 and 1914, Larsell took courses in neurology at the University of Chicago under Dr. C. Judson Herrick. They developed a fast friendship, which influenced Larsell's later research. He returned to Linfield for the school year 1914-15, but was offered an instructorship in zoology at Northwestern, where he could also work towards a Ph.D. He accepted the offer, and he and his wife returned to Evanston where he received his Doctorate in Philosophy in 1918. Larsell became interested in the nervous terminalis, carrying him farther into the field of neurological research. Three years of study on mammalian and reptilian material directed his research toward comparative neurology.

Larsell was appointed assistant professor of anatomy at the University of Wisconsin in 1918. The cerebellum had become a determining interest to Larsell while he was in Chicago. He resumed this work at Madison. His initial paper on the cerebellum of the amblystoma was the forerunner of a long series of work which made him one of the world's authorities on the anatomy and function of the outgrowth of the rhombencephalon. The encouragement of Professor William Snow Miller, authority on the lung, led to resumption of work on the nerve terminations in the mammalian lung. Problems required new technic and his solution resulted in the first clear exposition of the terminal nerve mechanisms of the lung.

Dr. Larsell had always been interested in medical history. The Medical History Club at Wisconsin sponsored by Dr. Miller, heightened that interest and led Larsell to contribute his first study on the life and work of Magnus Gustaf Retzius (1842- 1919) Swedish physician and anatomist who dedicated a large part of his life to researching the histology of the sense organs and nervous system.

Dr. Richard B. Dillehunt, third dean of the University of Oregon Medical School,
met with Larsell in Chicago. This meeting led to an appointment as full professor in anatomy at the young school in Portland and Larsell moved his family back to the Pacific Northwest in the Spring of 1921. The Larsells' two sons, John, who was born in Evanston and Frank who was born in Madison, accompanied their parents. Robert was born the next year, in The Dalles, Oregon.

The medical school had been transferred to the new building on Marquam Hill only two years before. It was a fine fireproof building faced with white brick, but already overcrowded. All the departments of the school had to be accommodated by the east wing. The grounds surrounding the place had been cleared of woods only a short time before, stumps had been removed by blasting, and there were deep pits in the brown clay which gave the campus the appearance of an abandoned battlefield. A goat was tethered on the hillside where the Dillehunt Hall now stands and the animal house was just over the edge of the hill. Since there was no regular means of transportation, the University maintained a bus service. The bus was a truck with seats placed along both sides and two steps at the rear, up which the passengers might clamber, or which could serve as perches on which late comers might hang when the bus was crowded. Flapping curtains of oiled canvas sheltered the students from the wind and rain, and only those at the rear of the bus could view the passing scenery. The old Marquam Hill road was not the width of the new one, and the gradient varied greatly, while the turn at the bottom of the hill was so sharp that cars ascending had to start up the first steep grade from almost a dead stop. It was a source of wonder that the bus could negotiate the slope.

Larsell's first classes were predominantly made up of ex-service men. Dr. Larsell organized new elective courses, one in histological technic which was in high demand, and he also took full charge of histology. He at once established his own research, carrying on the work on mammalian lung innervations. A paper on the experimental degeneration of the vagus nerve and its relation to nerve terminations in the rabbit lung appeared in the Journal of Comparative Neurology, to be followed by another, dealing with the ganglia, plexuses and nerve terminations in lung and pleura in 1922.

Larsell became friends with Dr. George Burget, head of the department of physiology, which led to a cooperative study published in 1924 on the effects of mechanical and chemical stimulation on the trachea-bronchial mucous membrane. A study of the development of the cerebellum through embryonic and adult forms of amphibians, chiefly the frog, was published in 1926. His drive for a functional as well as a morphological interpretation of his findings motivated all of his research.

The Board of Trustees of Linfield College drafted him to serve on the Board in 1922, and he served as president of the Board from 1931-1938. This entailed endless hours of work outside of his duties at the Medical School. In addition, in 1923, he formed a Medical History Club for faculty and student assistants. Many of the monthly meetings were held at the Larsell home. Larsell presented and later published papers on Anders Adolf Retzius, father of Gustaf Retzius (1924), Joseph Henry Wythe (1925), and the development of medical education in the Northwest (1924). At that time, most of the knowledge about the history of medicine in the Pacific Northwest was preserved only through his efforts. He interviewed many people throughout the territory and encouraged the members of the History Club and others to do interviews, as well. The History Club was reorganized in 1932 as a student group. Contributions by the members of the Club form an important section in the annals of medical history in the OHSU Pacific Northwest Archives Collection. An autobiography of Jöns Jacob Berzelius, which was published originally by The Royal Swedish Academy of Sciences was translated by Larsell and appeared in book form in 1934 (Williams and Wilkins Co.) as one of a series sponsored by the History of Science Society.

Larsell studied the mechanism of blood during the years 1926-1929, in collaboration with others. For their joint effort on, "The Embryology and neuro-histology of the sphenopalatine ganglion connections: a contribution to the study of otalgia", Ralph A. Fenton and Larsell shared the Casselberry Prize from the American Laryngological Association in May 1928.