

George Geoffrey Meyerhof 1916-2003

George Geoffrey Meyerhof, CM, PHD, DEnghc, DSc h.c., Dr. Ing h.c., D es Sc.h.c., LL D h.c., Hon FICE, FEIC, FASCE, FRSC, FCAE, P. Eng. died peacefully January 2, 2003, age 86, in QEII Health Sciences Centre, Halifax. Dr. Meyerhof was born May 29, 1916, in Kiel, Germany, was emeritus Professor of Civil Engineering, Dalhousie University. He was Head of the Civil Engineering Department and Dean of Engineering at the Technical University of Nova Scotia in Halifax for many years. After graduating with a B.Sc. degree from London University in 1938, he worked for several years with consulting structural engineers in England and subsequently obtained a Ph. D. degree in engineering. He was a son of the late Professor Otto Meyerhof, Nobel Laureate in Physiology.

In 1946 he joined the staff of the British government Building Research Station near London, England, where he carried out extensive research on soil mechanics and foundation problems. For his distinguished contributions in this field, the University of London awarded him the degree of Doctor of Science in 1954. After coming to Canada in 1953, Dr. Meyerhof became Supervising Engineer in the Montreal Office of the Foundation of Canada Engineering Corporation where he was in charge of the design of various buildings, bridges and other civil engineering structures. Dr. Meyerhof was the author of more than 200 papers, and a book of selected papers on structural and soil mechanics subjects which have been published by scientific and engineering societies in various countries, and a booklet "Memories of a Civil Engineer in World War II".

He was a Fellow of the Royal Society of Canada, a Fellow of the Canadian Academy of Engineering and of many other scientific and engineering societies in Canada and abroad, and a registered engineer. He was a founding member of the Halifax Grammar School. In 1999 Dr. Meyerhof was honoured by being appointed a member of the Order of Canada for distinguished service in geotechnical engineering. The Association of Professional Engineers of Nova Scotia awarded him their most prestigious recognition, the F. H. Sexton Award, for his exceptional professional engineering services rendered to the Province of Nova Scotia. He was awarded the year 2000 Honourary Fellowship of the Institution of Civil Engineers (United Kingdom) for his world renowned contributions to geotechnical engineering. He received the Centennial Medal of Canada, the Queen's Silver Jubilee Medal, and the Queen's Golden Jubilee Medal for outstanding service to Canada. In addition, he has received the Duggan Medal and the Julian C. Smith Medal of the Engineering Institute of Canada, the R. F. Legget Award of the Canadian Geotechnical

Society, the Engineering Award of the Association of Professional Engineers of Nova Scotia, and the Karl Terzaghi Award of the American Society of Civil Engineers for his outstanding contribution to foundation engineering.

He was the first President of the Canadian Geotechnical Society, a Council Member of the Engineering Institute of Canada, a Council Member of the Institution of Civil Engineers of Great Britain, a Terzaghi Lecturer of the American Society of Civil Engineers, a Buchanan Lecturer of Texas A&M University, and a Hardy Lecturer of the Canadian Geotechnical Society. The Technical University of Aachen, Germany, awarded Dr. Meyerhof the honorary degree of Doctor of Engineering, and the University of Ghent, Belgium, awarded him the honorary degree of Doctorate of Science. He was also awarded the honorary degree of Doctor of Engineering from the Technical University of Nova Scotia, as well as honorary Doctor of Science degrees from McMaster University, Hamilton, and Queen's University, Kingston. He received the honorary Doctor of Laws degree from Concordia University.

Dr. Meyerhof is survived by his wife, Ingrid Goering Meyerhof; two sons, Thomas (Dorothy), Ottawa, Peter (Mary Anne), Sonoma, Calif. and their son, Geoffrey. He is also survived by his sister; Bettina Emerson, Seattle, Wash.; brother, Walter, Menlo Park, Calif. He was predeceased by his first wife, Elisabeth Meyerhof. There will be no visitation. The funeral service will be held in All Saints Cathedral, Halifax, at 1 p.m. Wednesday, January 8. In lieu of flowers, donations may be made to the Canadian Cancer Society.

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Hans Hofmann, one of the pre-eminent Precambrian paleontologists worldwide, passed away suddenly on 19 May 2010 due to a heart attack at his home in Beaconsfield in the west-end of Montreal. Hans was born in Kiel, Germany 3 October 1936, and acquired his independence and love of the outdoors living in a rural town to escape Allied bombings during the Second World War. The family emigrated to Canada in 1951, settling in Montreal. Hans Hofmann obtained all three of his university degrees in Geology from McGill University in near record time, receiving his BSc in Geology in 1958, his MSc in igneous petrology in 1959, and his PhD on Ordovician stratigraphy and paleontology under the legendary T.H. Clarke in 1962. Hofmann continued his studies of Paleozoic sedimentary strata and fossils as an assistant professor at the University of Cincinnati (1962-1965) and McMaster University (1965-1966).

In 1966 Hofmann accepted the newly formed position as Precambrian Paleontologist for the Geological Survey of Canada, a decision that was forever to change our understanding of the early evolution of life on Earth. The Precambrian represents the first 85% of Earth history, but in contrast with the abundance of fossil shells and bones in later geological periods there are virtually no mineralized fossils in Precambrian strata. Consequently our knowledge of Precambrian life was extremely limited, a problem that vexed even Charles Darwin in writing "*The Origin of Species*". Indeed, Hans used to jokingly refer to his job as Precambrian Paleontologist as "like being the window-washer in an underground parking garage". Hans Hofmann used approaches derived from geology, biology, and chemistry to show that the Precambrian does indeed contain a rich history of life as Darwin would have predicted, but that most of the organisms were microscopic and/or soft-bodied and did not produce the abundant large fossils that characterize younger periods.

Hofmann's research in Precambrian paleontology at the Geological Survey of Canada (1966-1969), Université de Montréal (1969-1998), and McGill University (1998-2010) spanned every corner of the globe and nearly three billion years of Precambrian time. In Australia, Hofmann led a team that discovered the then oldest-known evidence for life on Earth, stromatolite columns built by bacterial colonies nearly 3.5 billion years ago, a discovery that merited the front cover of the *Geological Society of America Bulletin* in 1999. Other "firsts" included describing the oldest stromatolite fossils in North America, the oldest megascopic fossil remains in China, and the oldest fossil shells in Canada. He described fossil assemblages nearly 2 billion years old from Hudson's Bay that include microfossils so exquisitely preserved that they can be directly compared with living species of bacteria and bacterial stromatolites so picturesque they formed the inspiration for a 1990 Canada Post stamp. Hans Hofmann also extensively researched the fossil evidence of life's first experiment in complex multicellularity, the enigmatic "Ediacaran biota" at the end of the Precambrian, discovering new fossil sites along the entire length of the Canadian Cordillera and receiving the 2009 "Best Paper Award" from *Journal of Paleontology* for his discoveries in eastern Newfoundland. He happily continued his paleontological research throughout his entire professional career, submitting a major paper on a new Ediacaran fossil locality in western Canada (with Eric Mountjoy) a month before his death. In total, Hans

Hofmann probably contributed more to the database of Precambrian fossils than any other researcher of his generation worldwide.

Equally importantly, Hofmann helped to transform Precambrian paleontology from a largely descriptive field to an analytical science. His terminology and techniques were considered radical when he first proposed them, and are now standard procedures in describing Precambrian fossils. He codified the description of stromatolites, inventing the terminology that is used to this day, and introduced the use of image analysis to studies of stromatolites and trace fossils. Hofmann also introduced the geon concept for communicating long periods of geologic time and proposed the three-fold division of the Proterozoic that now is an official part of the international geologic timescale. Hofmann published periodic reviews of all Precambrian fossils known at the time, individually assessing each new report to ensure that it met his rigorous standards for biogenicity and rejecting those that did not measure up. Hans was able to do this successfully over many years because of the immense respect the international community had for his dedication, rigour, and honesty in all aspects of his personal and professional life. Hans Hofmann also wrote scientific papers in geological fields as varied as mineralogy, structural geology, and sedimentology. A Renaissance man!

Hans Hofmann published more than 100 refereed scientific papers and monographs over his career, gave more than 100 conference presentations, and was an invited keynote speaker more than 200 times in university departments and institutes worldwide. He was awarded the Elkanah Billings Medal of the GAC Paleontology Division in 1980, and still remains the youngest-ever recipient of this award. In 1995 he received the Willet Green Miller Medal of the Royal Society of Canada for “outstanding research in any field of the earth sciences”. In 2002, Hofmann received the Charles Walcott Medal of the US National Academy of Sciences for outstanding “individual achievement in advancing knowledge of Precambrian life and its history”, the first Canadian to win this significant award. Hofmann became a Fellow of the Royal Society of Canada in 2002.

Hans Hofmann was a dedicated family man, remembered fondly for organizing family camping trips and for his enthusiastic slide presentations every time he returned from the field. He is survived by his brother Frank, his beloved wife of 49 years Eva, his children Thomas and Wendy, and his grandson Noah. In every sense of the word, Hans Hofmann was a “gentle giant” who will be sorely missed by his many friends and colleagues worldwide.

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(Author's title given as of the time of writing)