American Mineralogist, Volume 73, pages 922–924, 1988

Memorial of John Sinclair Stevenson
September 21, 1908–September 7, 1987

LOUISE S. STEVENSON
Redpath Museum, McGill University, Montreal, Quebec H3A 2K6, Canada

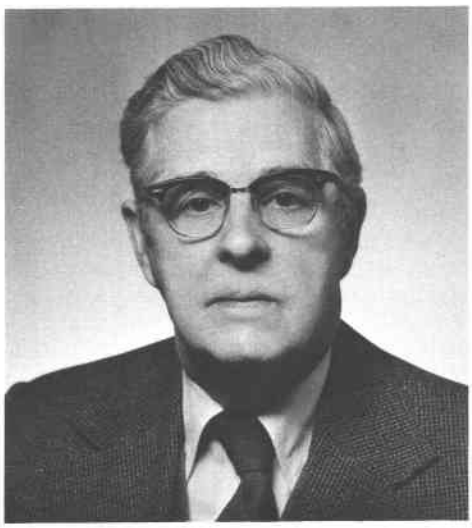
John Sinclair Stevenson, life fellow of the Mineralogical Society of America and Dawson Professor of Geology at McGill University, died September 7, 1987, in Montreal after a short illness. He had recently returned from South Africa where he participated in an International Workshop on Cryptoexplosions and Catastrophies in the Geological Record.

He was born in New Westminster, British Columbia, September 21, 1908, and received his Bachelor of Arts degree in 1929 and the Bachelor of Applied Science degree (engineering) in 1930 from the University of British Columbia. He received his Ph.D. from Massachusetts Institute of Technology in 1934, where he had the privilege of being one of Waldemar Lindgren's graduate students and Professor Lindgren's last teaching assistant. He was also fortunate in being able to spend his summers as a student in the field assisting outstanding geologists from the Geological Survey of Canada, including W. Cockfield, C. E. Cairns, J. F. Walker, and Morley Wilson.

The year following graduation from MIT was spent at a small gold prospect in northern Ontario, Longacre Longlac, north of the present Hemlo mine. From there he went to Victoria, British Columbia, where he progressed from assistant to associate to mining engineer from 1935 to 1950 with the provincial Department of Mines; from 1939 to 1945 he was the specialist in charge of strategic war minerals.

In Victoria at that time, most serious scientific work centered around the Dominion Astrophysical Observatory, and John became an active member of the Royal Astronomical Society of Canada and served a term as president of the Victoria Centre. While working for the Department of Mines, he was visited by meteorite expert Dr. F. Leonard, who had come to British Columbia to investigate the reported appearance of a meteorite said to have fallen in the interior of the province. The two men "prospected" enthusiastically for the meteorite, although unfortunately they did not find it. However, John became one of the first members of a meteorite research society that Dr. Leonard was founding; it became the Meteoritical Society.

In 1947–1948 he was a Canadian Fellow of the Guggenheim Memorial Foundation. The project he chose reflected his continuing interest in the mineralogical basis of economic geology: a study of British Columbia Coast Range ore deposits and the rocks associated with them. Because there were then very few geologists in Victoria, John felt the need of the stimulation of others, and the



Stevenson family succeeded in visiting twenty-two different centers of mineralogical research, taking along vast numbers of rock specimens and thin sections in their luggage.

While in Victoria he also made several detailed studies of interesting minerals he encountered in his field work; some of these were included in Contributions to Canadian Mineralogy published as University of Toronto Studies, Geological Sciences, which later became the *Canadian Mineralogist.* At this time also he worked with Duncan R. Derry on the compilation of the Tectonic Map of Canada published in 1950; this was the first synthesis of structural data from government, university, and industry sources in Canada. John was responsible for the difficult British Columbia section of the map. He also began (with Dr. O. C. Lucas) the first of his studies in medical geology, a description and analysis of a kidney stone.

In 1950 John left British Columbia to take over the teaching of mineralogy at McGill University, Montreal, from Professor R.P.D. Graham, who had had the task for forty-five years. John had always enjoyed training his young field assistants and welcomed this opportunity to teach young people in the lecture room and in the laboratory. He kept closely in touch with the progress of students in the lab, frequently working with them individually and becoming immersed in their mineralogical problems. He served one term as chairman of the De-

0003–004X/88/0708–0922$02.00

partment of Geological Sciences and was appointed Dawson Professor in 1972. At McGill he supervised forty-one graduate theses and acted as external examiner for several Ph.D. theses at other universities. In 1978 his former students established the John Stevenson Medal, awarded annually to the outstanding graduate in the Master of Applied Science Mineral Exploration Program. He continued to teach in various capacities until 1984.

In 1952 he began a long association with the International Nickel Company of Canada, directing the Sudbury Basin Research Project from 1952 to 1965 and serving as Inco's consulting geologist from 1965 to 1982. His work was largely centered at Sudbury, but he also made major geological contributions at Thompson, Manitoba, and at other Inco locations. Perhaps his Sudbury work is best known for his espousal of a volcanic, rather than a meteoritic, origin for the Sudbury Basin. However, his true Sudbury legacy may well be the important series of papers he wrote on the basic mineralogy and petrology of these rocks. He had a unique opportunity for access to these showings and studied them with great dedication. He was continuing his basic Sudbury research at the time of his death.

The research of the McGill years also included several studies of specimens from the Redpath Museum. Working with Dr. Robert L. Carroll, he became interested in the well-preserved microsaur teeth collected by Sir William Dawson from the Carboniferous rocks of Joggins, Nova Scotia. These teeth were found to have a much higher fluorine content than any other fossil teeth. John also had a special interest in the unusual minerals collected from St. Hilaire and other Montreal area quarries. His particular interest was in the petrogenesis of these minerals and their broad geological setting; he found interesting analogies between the occurrence of some of these minerals and ore minerals he had studied in mines. He also continued his studies in medical geology with further work on urinary calculi and (with doctors from McGill hospitals) studies of ashed lung tissue relevant to silicosis problems.

In addition to being a fellow of the Mineralogical Society of America, he was also a fellow of the Royal Society of Canada, the Geological Society of America, the Geological Association of Canada, and the Canadian Institute of Mining and Metallurgy. He was an active member of the Society of Economic Geologists, the Mineralogical Society (London), and the Sigma Xi Scientific Research Society (president of the McGill Chapter). He was a founding member of the Mineralogical Association of Canada and its president for three terms. He was also an honorary member of the Montreal Gem and Mineral Club.

He is survived by his wife, Louise Stevens Stevenson, whom he met when both were graduate students in the Harvard seminar of Professor Esper S. Larsen, Jr., and with whom he co-authored several papers. Also surviving are his sons, John Stevens Stevenson of Ottawa, Ontario, and Robert Francis Stevenson of Sault Ste. Marie, Ontario, and six grandchildren, Malcolm and Moire of Ottawa and Sandra, Laurie, Richard, and Glenys of Sault Ste. Marie.

John Stevenson was a link between an older generation of distinguished geolgists, who had been his mentors, and geologists of the present day, including many of his former students and assistants, whose careers he followed with great interest and enthusiasm.

Selected Bibliography of John S. Stevenson[1]

Vein-like masses of pyrrhotite in chalcopyrite from the Waite-Ackerman-Montgomery mine, Quebec. Am. Mineral., 18, 445–449 (1933).

Mineralization and metamorphism at the Eustis mine, Quebec. Econ. Geol., 32, 335–363 (1937).

Molybdenum deposits of British Columbia. B.C. Dept. Mines Bull. 9, 96 p. (1940).

Tungsten deposits of British Columbia. B.C. Dept. Mines Bull. 10, 103 p. (1941).

Hypogene native arsenic from Criss Creek, B.C. Univ. Toronto Studies Geol., 48, 83–91 (1943).

Geology of the Red Rose tungsten mine, Hazelton, B.C. Econ. Geol., 42, 433–464 (1947).

The geology and mineral deposits of the Zeballos mining area, B.C. B.C. Dept. Mines Bull. 27 (1950).

(with O.C. Lucas and Louise S. Stevenson) Petrologic study of a urinary calculus. Royal Soc. Can., XLIV, series III, 35–40 (1950).

(with Alan R. Smith) Deformation and igneous intrusion in southern British Columbia. Bull. Geol. Soc. Amer., 66, 811–818 (1955).

Mineralogy and the Field Geologist. Presidential Address, Can. Mineral. 6, pt. 3, 303–306 (1959).

Recognition of the Quartzite Breccia in the Whitewater Series, Sudbury Basin, Ontario. Royal Soc. Can. LV, series III, 57–66 (1961).

The tectonics of the Canadian Shield (Editor). Royal Soc. Can. Spec. Publ. series 4 (1962).

The upper contact phase of the Sudbury micropegmatite. Can. Mineral., 7, pt. 3, 413–419 (1963).

(with W.G. Jeffery) Colloform magnetite in a contact metasomatic iron deposit, Vancouver Island, British Columbia. Econ. Geol., 59, 1298–1305 (1964).

(with Louise S. Stevenson) The petrology of dawsonite at the type locality, Montreal. Can. Mineral., 8, pt. 2, 249–252 (1965).

(with Louise S. Stevenson) Fluorine content of microsaur teeth from the Carboniferous rocks of Joggins, Nova Scotia. Science, 154, 1548–1550 (1966).

(with G.L. Colgrove) The Sudbury irruptive: Some petrogenetic concepts based on recent field work. Proceedings, 23rd International Geological Congress, 4, 27–35 (1968).

(with Louise S. Stevenson) Manganese nodules from the *Challenger* Expedition at Redpath Museum. Can. Mineral., 10, pt. 4, 599–615 (1971).

The Onaping ash-flow sheet, Sudbury, Ontario. In New developments in Sudbury geology. Geol. Assn. Can. Spec. Paper 10, 41–48 (1972).

(with Louise S. Stevenson) Medical geology. In R.W. Fairbridge, Ed., Encyclopedia of geochemistry and environmental sciences, p. 696–699. Van Nostrand Reinhold, New York (1972).

(with Louise S. Stevenson) Dawsonite-fluorite relationships at Montreal-area localities. Can. Mineral., 13, 117–120 (1977).

(with Louise S. Stevenson) Contrasting dawsonite occurrences from Mont St. Bruno, Quebec. Can. Mineral., 16, 471–474 (1978).

Geological concepts developed in the Precambrian of Sudbury, Ontario. In W.O. Kupsch and W.A.S. Sarjeant, Eds., History of concepts of

[1] A copy of the complete bibliography of John S. Stevenson may be ordered as Document AM-88-380 from the Business Office, Mineralogical Society of America, 1625 I Street, N.W., Suite 414, Washington, D.C. 20006, U.S.A. Please remit $5.00 in advance for the microfiche.

Precambrian geology, p. 225–244. Geol. Assn. Can. Spec. Paper 19 (1979).

(with Louise S. Stevenson) Sudbury, Ontario, and the meteorite theory. Geoscience Canada, 7, 103–108 (1980).

(with Louise S. Stevenson) Training geologists for industry: Observations from Canada. 26th International Geological Congress, Paris, 1980. Can. Inst. Min. Met. Rept. 7, 18–20 (1981).

Sudbury problems and suggestions for further research. In E.G. Pye, A.J. Naldrett, and P.E. Giblin, Eds., The geology and ore deposits of the Sudbury structure, p. 523–531. Ontario Geological Survey Special Volume 1, chapter 24 (1984).

(with Eva S. Schandl and Robert F. Martin) Feldspar mineralogy of the Sudbury Igneous Complex and the Onaping Formation, Sudbury, Ontario. Can. Mineral., 24, 747–759 (1986).

The volcanic origin of the Onaping Formation, Sudbury, Ontario. Presented to the International Workshop on Cryptoexplosions and Catastrophies, Parys, South Africa, 1987. Journal of Geophysical Research, in press.