

## MEMORIAL TO MAX HANS FROHBERG



Dr. M. H. Frohberg passed away on August 30, 1970, after a long illness. His loss is a great one, not only to his devoted wife and friends, but also to the mining profession, which has so often consulted him on prospective mining ventures and benefited so much from his astute judgement.

It was my good fortune to meet Dr. Frohberg in 1959, shortly after my arrival in Toronto, and our friendship flourished from the very beginning. Over the years, I have come to think of Hans *in loco parentis* and so his absence is especially poignant for me. I shall miss him, as indeed, will all his friends and associates.

Hans was a young man of twenty-six when he first came to this continent to work as a research assistant for the Lehigh Cement Company in Pennsylvania. Born in Germany in 1901, he had recently graduated as a mining engineer from the Bergakademie in Freiberg. In 1929 he enrolled for graduate work at the University of Minnesota and started compiling data for a doctorate to present in Freiberg. On receiving his doctorate in 1932, Hans returned to Minnesota as Instructor

and Research Assistant. There Hans was fortunate to collaborate with Grout, Emmons, and Gruner, three giants in their field. In fact, it was in Gruner's home that he married his wife Hertha. They came to Canada in 1934 when Hans became mine manager at the Darwin Mine in Michipicoten. In those days, in remote outlying districts such as Michipicoten, a mine manager was not only an engineer and a geologist but a midwife as well, and on one occasion poor Hans found himself delivering rather more than the usual gold ingots.

Hans became a mining consultant in 1947. He was superbly qualified for the job, as his rapid success testified. Because his activities were always reported in confidence to his clients, they cannot be described here. This is a pity: his life's work is contained in these reports. His incomparable judgement was instrumental in bringing in a number of properties. As evidence of his ability, I can only say that mining companies from all over the world asked for his services and his consulting work carried him to all five continents. Because of his knowledge and honesty, Hans was appointed consultant to the Ontario Securities Commission in 1960, a position he held until his death.

Hans was active in M. A. C. affairs as Vice President in 1965, President in 1966, and Past President in 1967. In 1966 he and Bill Petruk organized the memorable spring field trip to the Cobalt area. Hans deplored the modern geologist's overdependence on machines to identify minerals and he chose this topic for his 1967 presidential address in Kingston. Instruments have replaced almost entirely, he said, the geologist's own powers of observation, so much so that the young geologist not only needs help with rare minerals, but with common ones as well. His criticism seemed well taken: after his speech, the applause amounted to an ovation.

Next to his wife Hertha, Hans' greatest love was minerals, and mineral-collecting was his avocation. Over the last thirty years, Hans built up probably the finest private collection in Canada. But a fine specimen did far more than fill a gap in his collection; Hans enjoyed it for its intrinsic beauty as well. Hans took an esthetic as well as scientific delight in his minerals. I lived near Hans for some years, and when he acquired an especially choice specimen he'd often phone me to drop in for a viewing. Of course I went. Who could resist a chance to see a new addition to an already superb collection, even without the always welcome stein of German beer which accompanied these tête-à-tête?

Hans never acquired specimens for the sheer sake of acquisition. Uppermost in his thoughts was the preservation of fine specimens for posterity. I think it was this belief that made him especially generous and sympathetic to the R. O. M. He hardly ever returned from a consulting trip empty-handed, and his travels can be traced through our Catalogue of Acquisitions. If a "Broadway angel" is a man who loves the theater so much that he will back a play with no hope of financial return, then Hans Frohberg was our R. O. M. angel.

Hans was justly proud of his prowess with a hand lens. He had an uncanny eye: minerals which should have yielded up their secrets only to x-ray diffraction analysis seemed to speak to Hans and his 10X lens. We played the Identification game with great gusto. Whenever I ran across a particularly tricky specimen, I'd set it aside to try to trap Hans. He was almost never deceived.

I remember well one of Hans' last visits to us, after a trip to Mexico. As usual, he appeared in our office within forty-eight hours of his return, with a briefcase bulging with specimens. I can see him now, striding into the lab, a powerfully-built man with a military bearing, exuding an aura of tremendous vigor and vitality. He wore, as usual, a dark suit, and bow tie. His white hair was closely trimmed in a crewcut; his face pink and glowing. Often austere with strangers, he was warm and jovial with his friends. I can see his broad smile and twinkling eyes as he took out his new finds from the bag. First, we had to guess what they were. This done, we were treated to a discourse on the paragenetic implications of each specimen, their exact locations in the mine, and the general geologic setting of the area. Then, Hans boomed heartily: "Joe! These are too good for a private collection. They should all be in the museum. You take them!" He often gave away his best specimens with a wave of the hand.

He was always ready to lend specimens to professional researchers as well. Dr. M. A. Peacock published many studies of sulphides and sulphosalts borrowed from Hans. In addition, Dr. R. M. Thompson discovered two new minerals among specimens Hans loaned him; montbrayite and, aptly, frohbergite.

The Frohberg Collection now resides in the Royal Ontario Museum. It will add lustre to the collection of the R. O. M. and serve as a lasting memorial to one of Canada's most enthusiastic mineral collectors.

If I ever get to Heaven, I expect to find places like Bancroft and St. Hilaire and Långban within easy walking distance, and God, who is

supposed to be all things to all men, the most ardent mineral collector of all. I imagine Him saying, 'I know where there are some fine serandite crystals. Want to come?' If my hunch is right, I imagine the first friend I'll see there on the dumps, his stocky figure striding over the landscape, will be Hans Frohberg.

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