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EDWARD TIMOTHY TOZER (1928–2010)

Edward Timothy (Tim) Tozer, who died in Vancouver, B.C., on 26 December 2010 at age 82, was a world authority on the paleontology and geology of the Triassic Period (250–200 million years ago). It was his work in the Canadian Arctic Islands, beginning in 1954, that laid the foundation for his subsequent brilliant career as a paleontologist and biostratigrapher specializing in the now-extinct class of coiled, marine molluscs known as ammonoids.

Tim Tozer was born in Potters Bar, Hertfordshire, England, on 13 January 1928. He and his two siblings spent the war years 1940–44 in Sarnia, Ontario. After returning home, Tim entered King's College, Cambridge, in 1945 to study geology. After graduating in 1948, Tim accepted a position as a sessional lecturer at the University of Western Ontario and returned to Canada for good. While teaching at Western, Tim undertook graduate study at the University of Toronto and was awarded the PhD in 1952.

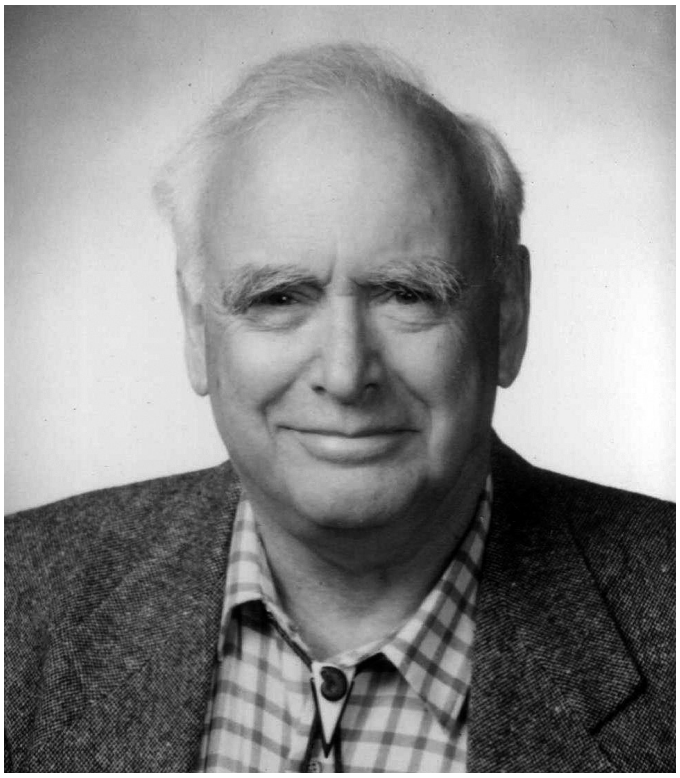
At Toronto, Tim met Raymond Thorsteinsson, a fellow graduate student of paleontology, and so began an association that turned into a lifelong friendship on both a professional and a personal level that was to have a profound impact on knowledge of Canadian Arctic geology.

Tim joined the permanent staff of the Geological Survey of Canada (GSC) in Ottawa in 1952. Two years later, he spent his first field season in the Arctic, working out of the recently established joint Canada-United States weather station at Mould Bay on Prince Patrick Island. Tim worked nearly six months in the field, first dog-sledging, then on foot, to produce the first reconnaissance geological map of Prince Patrick Island and parts of Eglinton and Melville islands.

In 1955, Tim and Ray Thorsteinsson, now a colleague at the Geological Survey of Canada, participated in the GSC's Operation Franklin, an air-supported geological survey covering some 260 000 km^2 of the Arctic Archipelago. This exercise marked the first use of helicopters for regional geological mapping in the Arctic Islands.

Tim's collaboration with Ray Thorsteinsson continued in 1956, when they embarked on a pioneering geological exploration of the country around the Eureka weather station on western Ellesmere Island. They arrived at Eureka in late April, accompanied by two Inuit dog drivers and 24 dogs. Sledge journeys of up to three weeks' duration were undertaken, mostly independently, during May and June. Traverses on foot and by motorized freighter canoe occupied the remainder of the field season, which lasted into September. The fieldwork, in geologically little-known terrain, resulted in major advances in our knowledge of mountain building during the Tertiary Period in the Canadian Arctic.

In 1958, in the western Arctic Islands, Tim and Ray put into practice a novel idea for relatively inexpensive air transportation hatched by an experienced—later to become legendary—bush pilot, Welland (Weldy) Phipps. Phipps proposed operating a single-engine, single-passenger Piper Super Cub fitted with oversize, low-pressure tires from the raised marine beaches, terraces, and gravel outwash plains that are so widespread in the Arctic Archipelago. The experiment was a resounding success. That summer, in 300 hours of flying, Tim and Ray, with Weldy at the controls, geologically mapped much of the western Queen Elizabeth Islands, an area comparable to that of Vancouver Island (Tozer and Thorsteinsson, 1964). The following year, along with R.L. Christie and J.G. Fyles, they mapped Banks, Victoria, and Stefansson islands in similar fashion. As an aside, it is virtually certain that Tim was the first non-native to set foot on Stefansson Island when he and Weldy landed there for the first time in 1959 (R. Thorsteinsson, pers. comm. 2011). Offstrip flying, using larger aircraft such as the Twin Otter on "balloon" tires, is now standard operating procedure in the Canadian Arctic.



Tim Tozer in the 1980s, sporting a favourite, ammonite-encrusted bolo tie.

For several more years, Tim, focusing increasingly on the marine Triassic and its ammonoid fauna, divided his field time between the Arctic Islands and northeastern British Columbia, where the upper part of the Triassic stratigraphic column is particularly well developed. The painstaking task of developing an ammonoid-based chronology for the marine Triassic in Canada—but with implications for the rest of the world—culminated in a classic publication: *A Standard for Triassic Time* (Tozer, 1967).

Now established in the front rank of Triassic researchers, Tim continued to refine his biochronologic scheme by travelling to important localities of Triassic ammonoid-bearing

rocks, examining dozens of institutional fossil collections, and meeting fellow Triassic specialists in many parts of the world. He visited or revisited key areas in Western and Arctic Canada, often in the company of colleagues from home and abroad. Fascination with "the story behind the story" led Tim to produce *The Trias and its Ammonoids: The Evolution of a Time Scale* (Tozer, 1984), an engrossing account of the development of Triassic biochronology in the 19th and 20th centuries, laced with fascinating character sketches of the main protagonists.

Tim retired in 1995, but not before completing a monumental work, *Canadian Triassic Ammonoid Faunas* (Tozer, 1994), at 663 pages with 148 plates the largest paleontological treatise ever published by the GSC. The work documents more than 500 ammonoid species in 256 genera, spanning the entire Triassic Period. They form the basis of a biochronology of the Triassic that is of not only Canadian but also global significance.

Tim's scientific achievements were recognized by many honours and awards: the Medal of Merit of the Alberta Society of Petroleum Geologists, 1962; election to the Royal Society of Canada, 1966; the Royal Geographical Society Founder's Medal (jointly with Ray Thorsteinsson), 1969; the Willet G. Miller and Elkanah Billings medals of the Geological Association of Canada, 1979 and 1989, respectively; Member of the Order of Canada, 1993; and the Queen Elizabeth II Golden Jubilee Medal, 2002.

Tim has been aptly described as open, honest, and down-to-earth, with no pretensions. Drawn by two environments —the Arctic and open water—that have much in common, Tim reveled in camp life in the wide-open spaces of the North and was an avid sailor. He had a strong sense of history, as it related to both Arctic exploration and his own field of scientific endeavour, and was generous in his praise for those who had gone before him. A naturally genial man, he had a fine sense of humour and was not averse to playing the odd practical joke, but never in a mean-spirited way.

Tim's wife, Ruth, died in April 2010. He is survived by son Paul and daughter Sally.

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Thomas Frisch
545 Piccadilly Avenue
Ottawa, Ontario K1Y 0H9, Canada
tfrisch@sympatico.ca