



Department of Geology Seminar Series Presents

2018-2019 Science Atlantic-AGS Speaker Tour

Dr. Barrie Clarke

Department of Earth Sciences
Dalhousie University

*Forensic petrology applied to
the Titanic headstones*

TUESDAY, NOVEMBER 20 - 1:00pm
Science 411

Everyone is welcome to attend!



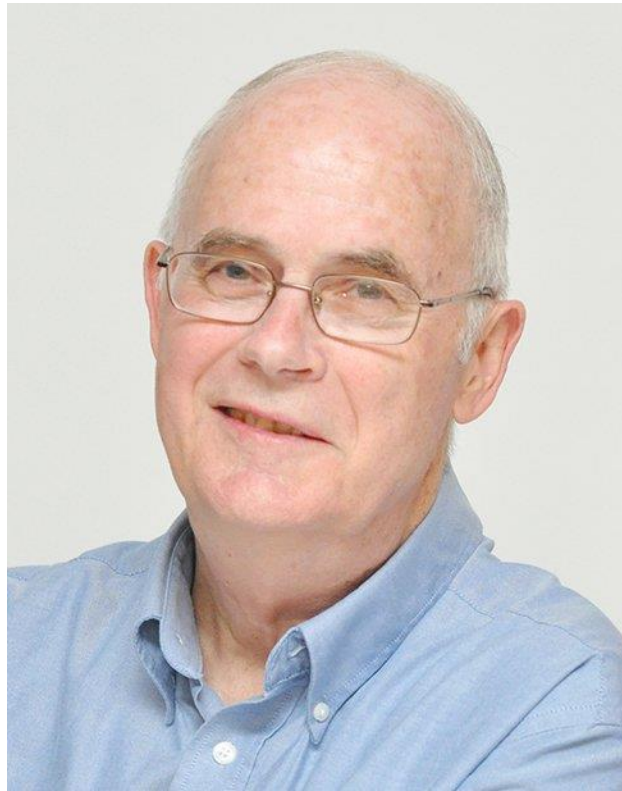
GEOLOGY
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Dr. Barrie Clarke
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Department of Earth Sciences
Dalhousie University
Halifax, NS

Barrie Clarke obtained a BSc. (1964) and M.A. (1965) in geology from the University of Toronto, and a Ph.D. (1969) in petrology from the University of Edinburgh. He became an Assistant Professor at Dalhousie University in 1970, and spent 37 years there teaching and doing research. His research work began on volcanic rocks in Baffin Island and West Greenland, expanded into kimberlites in the Arctic and southern Africa, and then mainly concentrated on the peraluminous granites of Nova Scotia. He is the recipient of the Gesner Medal from the Atlantic Geoscience Society and the Hawley Medal from the Mineralogical Association of Canada, and he continues an active program of research, primarily into the mineralogy, petrology, geochemistry, and origins of peraluminous granites.



Forensic petrology applied to the Titanic headstones

All but one of the 150 victims of the Titanic disaster buried in Halifax, Nova Scotia, have petrologically identical gabbro (“black granite”) headstones. After being in place for nearly a century, one headstone had become damaged, so the City of Halifax sought to replace it; however, there was no historical or archival record of where these headstones had come from, and thus the solution as to their place of origin had to be determined scientifically. Just as DNA is unique to each living thing, so every rock also has a unique set of characteristics (age, minerals, texture, and chemical composition) that sets it apart from every other rock. Ideally, the headstones should match only the quarry where they were extracted. But there are tens of thousands of quarries in the world, so which was the right one? This presentation describes how, using the best sleuthing techniques of Sherlock Holmes and CSI combined with multivariate statistics, we located the source quarry in southwestern New Brunswick.



Titanic headstones in Fairview Lawn Cemetery, Halifax, NS



Defunct Charles Hanson source quarry in Bocabec, NB