

UNIVERSITY OF TORONTO

Edward W. Nuffield
1914-2006



Edward W (Les) Nuffield, Ph.D., FRSC, long time faculty member and former head then chair of the Department of Geology at the University of Toronto died in Vancouver on June 10, 2006.

Les was born in Gretna, Manitoba in 1914, completed his B.Sc. at UBC in 1942 and soon afterwards came to the University of Toronto to study with one of the world's leading mineralogists Martin Peacock. He received a faculty appointment before completing his doctoral studies and soon began to take over teaching and other responsibilities for the ailing Peacock. He was internationally recognized for his research on the structure and composition of sulphosalts and in 1972 the mineral nuffieldite, a complex lead, copper bismuth sulphosalts was named in his honour. He was elected to the Royal Society of Canada, received the University of Toronto Sesquicentennial Medal and the Mineralogical Association of Canada's Berry Medal.

Les's Ph. D. supervisor, Peacock, had introduced X-ray crystallography to Canada and constructed one of the country's first X-ray generators, a primitive and dangerous instrument requiring almost unlimited maintenance time on the part of Peacock's first two Ph.D. students Len Berry and Les Nuffield. These two men, together with other Peacock students, published numerous papers on the X-ray identification and internal structures of minerals, particularly the ore minerals. Les Nuffield was one of about a dozen Canadian mineralogists who founded the Mineralogical Association of Canada in 1955 and was its first President (1956-1958). He could be a commanding figure but was principally a person of quiet dignity with a dry sense of humour. As befits a crystallographer/ mineralogist, he was drawn to systematic order and quantifiable concepts in all aspects of his professional life. He was uncomfortable with intuitive theories and broad generalisations.

Like many geology faculty in post WWII Canada, Les supplemented his meager university salary by taking summer employment with the Geological Survey of Canada and later with the Ontario Department of Mines. His O.D.M. report on the Montreal River area was quoted for many decades after its publication. He and D.H. (Digger) Gorman established a company, Val Jon Exploration, that was active in the 1950's, particularly in the Maritimes.

Les is remembered by his partner and colleague as a great mapper and a first class exploration geologist. Les was Associate Dean of the Faculty of Arts and Science during the William Davis era of university and college expansion in Ontario and he led the search for a successor to George Langford, then Head of the Department, who was about to retire. I first met Les in 1963 at the Geophysical Laboratory, Washington D.C.. I subsequently learned he went there to recruit Hatten S. Yoder Jr. as the new head. He was not successful but subsequently Yoder's colleague, Gunnar Kullerud, did accept the position only to withdraw a few short months before he was due to move to Toronto. The Dean of Arts and Science, Vincent Bladen, then insisted that Les should be the new head. This happened in 1964 and Les immediately adopted many of the ideas proposed by both Yoder and Kullerud while adding several of his own that recognised the specifics of the Toronto scene. The university had promised new funding that far eclipsed anything dreamt of by the department – many hundreds of thousand of dollars for new equipment, major renovations to the Mining Building and numerous new faculty appointments and additions to the support staff. Any semblance of democracy had yet to make its appearance in the university administrative practices. Nuffield acted as a search committee of one to begin

the expansion of his professorial staff and made six appointments in his first two years. New faculty were encouraged to submit names of potential new colleagues and the next six appointees (1966 to 1970) were first reviewed by a small group reporting to the head (Les).

Many of these events brought certain anguish to some of the senior departmental faculty who were rarely consulted on the appointments. In the Mining Building additional space was allocated to geology and, impatient with delays in renovations, Les took matters into his own hands by wielding a sledge hammer to remove unwanted benches and dividing walls. Some faculty members shared offices and new labs sprang up on all floors of the building – analytical geochemistry and electron microprobe on the third floor, palynology on the second, structural geology on the first and experimental high temperature and pressure facilities, together with a state of the art machine shop in the basement. Even the sub-basement was partly renovated to house paleontology laboratories. He devised and implemented a unique cataloguing system for use in the department's Coleman Library. An internal telephone communication system was installed but phone connections to the outside world were a source of great irritation to the new department head.

Almost all office phones were removed and faculty could be summoned by office staff to take incoming calls in the telephone booths installed, one on each floor, adjacent to the main stair well. There was widespread relief when central administration oversaw a more normal university wide telecommunication system. The department had been, for many years, a well recognized teaching and research unit, dominated by field based studies. Thanks to Nuffield's efforts it took its place as an internationally respected modern, broad based earth science department.

Les is remembered by his former students as an excellent lecturer and teacher. He was instrumental in revising the undergraduate geology curriculum of the mid 1960's to probably one of the best anywhere at that time. A solid basic science background led to specialization options in geology with one of chemistry, physics or biology in the third and fourth year. In 1969 he published his textbook, *X-ray Diffraction Methods*, that was well received by practitioners in the field, one senior user commenting –'probably the best treatment of X-ray intensities ever written'. His writing, like his lectures, was clear, precise and unambiguous. At the same time he expanded the graduate program and realigned graduate teaching and supervisory responsibilities. He resisted significant expansion of geology appointments in the two new suburban campuses, feeling that numerically small units would find it difficult to establish themselves among the core basic sciences – a view that was not without some justification until more recent times. Ever mindful of the needs of students, he endowed, after his retirement, the Edward W. Nuffield Graduate Travel Fellowship in the School of Graduate Studies.

Never one to compromise easily, Les found the task of reconciling the sometimes aggressive ambitions of newer appointees with the long standing practices of senior faculty to be daunting and extremely stressful. After a series of confrontations he abruptly resigned as chair in the Spring of 1972. In close to eight years he had carried out an almost complete transformation of the department both in terms of personnel and of its home in the Mining Building. He had made seventeen faculty appointments (including three to the suburban campuses and two cross appointments) and almost tripled the number of support staff. He left such a rich chair's legacy

that the University was able to attract NASA scientist/administrator David Strangway as his successor. His experience with the Mineralogical Association of Canada convinced him of the need for geology departments to have both a provincial and national presence. In the late 1960's he was instrumental in founding CUDGO (Chairs of University Departments of Geology, Ontario) and, with others, CCCESD (Council of Chairs of Canadian Earth Science Departments).

Les was predeceased by his first wife Islay, a gracious lady on whom he relied greatly for extra-departmental advice. After retiring in 1980 he and Islay moved to Vancouver where he began a new phase of his life as author of several books on aspects of early Canadian history including *With the West in Her Eyes* based on the diaries of his maternal grandmother, *The Pacific Northwest; its discovery and early exploration by sea, land and river* (adopted for use in Vancouver schools), *The Discovery of Canada* and *Samuel Hearne; Journey to the Coppermine River, 1769-1772*. He remarried and continued his writing projects until shortly before his death.

Les is survived by his second wife Basilisa and children Lee (Vancouver), Joan and Jim (both Toronto).

Credits to the University of Toronto