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### *Obituary*

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Robert Cameron Mackenzie, one of the most outstanding thermoanalysts and clay mineralogists, the main pillar of the former ICTA and that of the present ICTAC and the best friend of many scientists all over the world left us on July 4, 2000.

I first met him in Prague in May 1961, at the Second Conference on Clay Mineralogy and Petrology organized by prof. Jiří Konta. Apart from Robert C. Mackenzie, this conference was also attended by many other prominent scientists from all over the world, e. g. Lisa Heller (-Kallai), Radko Kühnel, Joe L. White, Toshio Sudo and the late lamented Robert H. S. Roberston, Mária Földvári-Vogl, H. W. van der Marel, Douglas M. C. McEwan, Hans Lehmann, Ivan Th. Rosenqvist and some other similarly outstanding clay mineralogists.

In the next years I met Robert at many congresses, conferences and meetings concerned both thermal analysis and clay mineralogy, as well as privately in Poland and recently in Aberdeen in December 1996. I shall always remember his friendship, warmth and constant willingness to advise and to support.

Born on 7<sup>th</sup> May, 1920 in Scotland as the only son of a farmer, Robert C. Mackenzie was educated at the local primary school and then at the Tain Royal Academy and subsequently at the University of Edinburgh. In 1938 he commenced an Honours Course in Chemistry studying in the first two years chemistry, physics and mathematics, but in his third year he included geology, which undoubtedly resulted as the sound ground for his further deep knowledge of clay mineralogy. He graduated with a First Class Honours degree in Chemistry in 1942 and was awarded a PhD in 1944 for the studies in gas-phase reaction kinetics. In 1957 he was also awarded a DSc degree by Edinburgh University for contributions to clay mineralogy.

Robert C. Mackenzie commenced his appointment at Macaulay Institute for Soil Research in Aberdeen in 1942 and subsequently all his further professional life was connected with this institute until his retiring in 1983. In 1959–1983 he acted as the Head of the Department of Pedology. His international acknowledgment also enhanced the Macaulay Institute. It also resulted in Robert's status as Visiting Professor at the universities of Cairo, Riyadh and Jordan. Later, as an emeritus he remained scientifically active through the following years.

He was a pioneer in thermal analysis method and its application in clay mineralogy. The book 'The Differential Thermal Investigation of Clays' issued in 1957, a splendid piece of work, which made him internationally known as an expert both in thermal analysis and in geosciences (Robert was its editor and author or co-author of three chapters), and which has been an inappreciable help for geo-thermoanalysts all over the world up to now

and still accompanies them in their everyday work in spite of the passage of almost half a century. Similarly the next monumental two-volume 'Differential Thermal Analysis' (1970, 1972). A large number of his papers dealing with different problems of the junction of thermal analysis and clay mineralogy as well as with nomenclature and with the history of thermal analysis and that of ICTA and ICTAC are of lasting value. The scientific contribution of Robert C. Mackenzie besides the above-mentioned books contains about 130 papers published in several journals in the fields of thermal analysis and clay mineralogy and all of them are of significant importance and have been currently used.

Robert's merits for ICTA formation and its further development are inestimable. He, along with Dr. J. P. Redfern and a small international committee, initiated the organization of the first International Conference on Thermal Analysis in Aberdeen in 1965, which led to the formal establishment of ICTA in 1968. Since its inception he was the most active member of ICTA Council, simultaneously serving in different bodies in the field of clay mineralogy. He acted in numerous scientific and editorial bodies as the Secretary of Clay Minerals Group (1949–1956), Chairman of the Nomenclature Committee of AIPEA (Association Internationale pour l'Etude des Argiles, 1958–1966), Editor of the journal Clay Minerals Bulletin (1959–1964) and for a long time the member of the Editorial Board of its successor Clay Minerals up to the late 90s, Chairman of the Thermal Methods Group of Analytical Division of RSC (1963–1965), the first Chairman of the Thermal Methods Group of the Royal Society of Chemistry (1965–1967) remaining in this committee as a member until 1994, ICTA Treasurer (1965–1980), Chairman of the ICTA Nomenclature Committee (1965–1982), Secretary of the ICTA Standardization Committee (1966–1972), Chairman of the Clay Minerals Group (1972–1975), President of AIPEA (1978–1981), convenor of the Scientific Committee of the Sixth International Clay Conference in Oxford in 1978, Editor-in-Chief of Thermal Analysis Abstract (1984–1986) and Editor-in-Chief of ICTA News, member of Journal of Thermal Analysis Editorial Advisory Board since 1969, i. e. from the establishment of this journal.

His exceptional talent for foreign languages (he had reading and speaking knowledge of French, Italian, Spanish, German and Russian), efficient and diplomatic approach, keen accessibility, reliable willingness to advise, open-minded and friendly approach to numberless people from all the world resulted in the deep respect of his environment in the fields of both thermal analysis and clay mineralogy.

Due to his achievements in science and editorial and organizing activity many honours came to him. Robert C. Mackenzie was elected Fellow of the Royal Society in Edinburgh (1961) and that of the Royal Society of Chemistry, NATAS Fellow by North American Thermal Analysis Society (1985), he was also appointed Distinguished Member of UK Clay Minerals Group (1983) and First Honorary Member of ICTA (1988). He was also the recipient of many awards as 6<sup>th</sup> Centenary Medal of the Charles University, Prague (1961), 1<sup>st</sup> Mettler Award in Thermal Analysis (1968), 15<sup>th</sup> SAC Gold Medal by the Analytical Division of the Royal Society of Chemistry (1980), Archiginnasio Award-Bologna (during the International Clay Conference, 1981), Netzsch-GEFTA Award (1982), Emanuel Boricky Medal from the Faculty of Science, Charles University, Prague (1983), ICTA-DuPont Award (1985), Diploma de Sociode Honor de la Sociedad Espanola de Arcillas (1987).

Robert, we miss you very much. But you will remain in our memory, we know how much we owe you and we are most grateful to you for your invaluable friendship and superb achievements.

**Professor Anna Langier-Kuźniarowa**

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