

OBITUARY

Professor Emeritus Ray Whitmore AM, 1920-2008



Ray - Professor Raymond Leslie Whitmore - was a man of many and varied talents who died peacefully on 20 December 2008. His professional life spanned a wide range of disciplines and he made outstanding contributions in fields as varied as radar development, medical research into the properties of blood and the circulation system, mining and metallurgical engineering and as a noted Queensland historian. His contribution to professional and community organisations was outstanding and included important roles with Engineers Australia, Australasian Institute of Mining and Metallurgy, Brisbane and Ipswich City Council Heritage Committees, the Queensland Museum and Royal Historical Society of Queensland. Outside his professional life Ray and his wife, Ruth were a closely knit team.

Ray was born near Luton in 1920 as the second of three sons of Leslie and Ada Whitmore. The crucial opportunity for Ray to show his talents came when he finished school and was appointed as a laboratory assistant in the Mining Department at the University of Birmingham. It was the start of a career in mining and metallurgical engineering that was to underpin the rest of his professional life. Most importantly it also gave him the opportunity to study externally for a Physics degree with the University of London which was completed and awarded in 1942. His growing confidence and skills were demonstrated by being awarded the Sumpter Prize for Special Physics at the Central Technical College in 1941. This apparently led to an invitation to undertake a course of practicals and lectures organized by the Physics Department at the University of Birmingham which started his involvement in the development of radar - then a new and highly secret technology.

There was really no decision for Ray to make when it came to joining the armed forces after graduating. He had been interested in the development of aircraft from childhood and had regularly attended air shows to see the latest types; like his elder brother, Maurice, he volunteered for the RAF. After initial training, Ray was posted to the officers radio location training school at Yatesbury, where he learned the practical skills involved in operating radar stations. In March 1943 he was posted to RAF Aberdaron as Technical Officer of the 'Chain Home Low' radar station at Pen-y-Bryn but, on arrival, found that he was also effectively the commanding officer. With a complement of 80 personnel, he rapidly learned management and administrative skills, and also recognized his interest in leading teams. However, by July he was transferred to RAF Malvern to undertake 'special radar duties'. For the rest of the war he was to work with TRE (Telecommunications Research Establishment) on radar development, particularly with the group producing counter measures to German radar. His primary involvement was in turning promising new technical ideas into practical equipment and guiding this through the production stages. High points included involvement in deploying the counter measures that helped to confuse German defences and significantly assisted in the successful Allied D-Day landings in Normandy.

Following demobilisation at the end of the war he initially returned to work at the University, resumed his academic studies and in November 1949 was awarded his Ph.D. At the same time he started an enduring involvement with professional organisations, starting with the Institute of Fuel. In October 1947 he married Ruth Franklin, whom he had known since the pre-war days in Birmingham.

His academic career gained pace in May 1953 when he was appointed as Senior Lecturer in the Department of Mining and Fuels at Nottingham University. The appointment was supported financially by the National Coal Board to stimulate research on coal preparation and mineral dressing. His research focused on the cleaning of coal, especially the viscosity and sedimentation of material suspended in fluids. He published extensively and by 1959 had been awarded a D.Sc. by the University of Birmingham. This was followed shortly afterwards by promotion to Reader in the Department. In addition to his university work he also lectured at courses in coal preparation organized by the National Coal Board.

Ray had recognized for some time that the properties of heavy mediums, and the flow of particles through them, had relevance beyond minerals preparation. In 1959 he co-authored a paper on 'The Theory of the flow of blood in narrow tubes' in the American Journal of Physiology. This was to lead to extensive research in Britain and the United States relating to the behaviour of blood in the circulation system, and to a serious contemplation of moving permanently into this field.

In September 1967 Ray was appointed to the Chair of Mining and Metallurgical Engineering at the University of Queensland. The department had been without a permanent head of department for two years and staff numbers had been declining. Mining was booming in the state, particularly the rapid expansion of coal mining in Central Queensland, and there was concern about the future supply of mining and metallurgical engineering graduates.

Ray embraced the new position with characteristic vigour. He quickly appointed two new staff in the depleted Mining Engineering area. He also pressed forward with a new building for the department, which was the last in the Engineering Faculty to move from George Street to the St Lucia campus. It was to prove a challenging but ultimately successful project. At the same time, he developed close links with the mining industry. This yielded increasing support for scholarships for students and, perhaps most importantly, provided the basis for discussions between the University and MIM Holdings Ltd. into the establishment of a Mineral Research Centre associated with the University and funded by industry. In February 1970 formal approval was given by the MIM Holdings Ltd. Board and the University Senate for the establishment of the Mineral Research Centre; the Centre was named the Julius Kruttschnitt Mineral Research Centre and buildings for the Centre were built at the University Experimental Mine site at Indooroopilly.

Other major developments followed during the late 1960s and early 1970s. A Senior Lecturer was appointed to establish teaching in Petroleum Engineering. Ray also persuaded the University to expand a commitment for a Chair in Metallurgical Engineering into the rapidly growing field of materials. A Chair in Metallurgy and Materials was established, and an appointment to this Chair was made in September 1971. Another innovation he pioneered jointly with the Department of Geology and Mineralogy was the establishment of a Mineral Industry Advisory Committee to be chaired by an industry representative.

At the same time he became a very actively involved with the mining industry and relevant associations. From 1970-74 he represented the University on the Australian Research Grants Commission, and held the first of a series of positions with Engineers Australia, ultimately serving as Chairman of the Queensland Division in 1982, and as a member of the National Council - service which was recognized by the conferring of an Honorary Fellowship in 1998. He was also a Fellow of the Australasian Institute of Mining and Metallurgy and became a life member of the Australian Coal Preparation Society. Meanwhile he continued lecturing in minerals processing and was also Dean of the Faculty of Engineering from 1974-75.

In 1976, he decided to relinquish the Headship of the Department, while continuing as Professor of Mining and Metallurgical Engineering. This allowed him to focus more on scholarship and research. His latent interests in history began to blossom at this time, something which was at least partly triggered when he noticed, carved into the stonework of the University of Queensland, a representation of the discovery of coal in the state. Unfortunately it represented the wrong person in the wrong place in the wrong year - and he determined to put the record straight. This project ultimately evolved into the definitive three-volume history of Coal in Queensland, with the first volume published in 1981. At the same time, Ray decided to address his concern that engineers seemed insufficiently interested in the identification and preservation of the nation's engineering heritage. He formed the first Engineering Heritage Panels within the Institution of Engineers Australia, initially in Queensland and then nationally in 1976. The foundations that he did much to establish have resulted in a sustained programme of identification, recording, assessment and conservation, supported by regular conferences since 1982.

Following retirement from the University in 1985 as Professor Emeritus, Ray was able to devote his full attention to heritage. He was a member of the Ipswich City Council Heritage Advisory Committee from 1991-2004 and spent almost a decade on the Brisbane City Council's Committee. Education was not ignored, with a decade of service on the board of the Queensland Museum's Science Centre and as advisor on mining education to the Papua New Guinea University of Technology, where he assisted in establishing the country's first Mining School. At the same time he was a very active member of the Royal Historical Society of Queensland, the Brisbane History Group, the Queensland Heritage Council and other heritage groups. He undertook a range of heritage commissions ranging from smelters in north Queensland to the Mount Crosby Waterworks and the Tower Mill in Brisbane. Other heritage/industrial archaeological studies included coke-oven technology in the Ipswich area, Rhondda colliery, Hancock's sawmills and the Ipswich Heritage Study. Until recently, he was a trustee of the Willis L. Haenke Foundation for researching, promoting and recording the history of the Ipswich and West Moreton coal fields. It is rather fitting that one of his last pieces of research was on a radar station in Queensland. In all he produced some forty heritage related papers in addition to six books. His outstanding achievements in engineering heritage were recognized by the award of the John Monash medal for Engineering Heritage in 2005.

It was fitting recognition of his 'service to mining and metallurgical engineering and to engineering history, heritage and industrial archaeology' that he was appointed a Member of the Order of Australia in 1994.

Ray is survived by his wife, Ruth and two sons, John and Mark as well as six grandchildren and two great-grandchildren.

Author: Ray's son John Whitmore