

Jim Shannon at Coal Research August 1955–April 1964

When Jim Shannon joined the CSIRO Division of Coal Research, I had already been an inhabitant (inmate?) for almost two years and was engaged in applying the classical methods of organic structure determination to the awkward, still unsolved and in a way unsolvable problem of the chemical structure of coal. Jim, then a fairly recent PhD from Imperial College, was a breath of fresh air, if not a hurricane, blowing from the frontier world of high-powered science into the active but quaint and isolated world of coal research in Australia. In the longer run, his most obvious contribution was the introduction of modern methods of determination of structure, viz., mass spectrometry and NMR and it was largely due to his strong and brash advocacy that the Division of Coal Research was to house in 1962 the very first commercial organic mass spectrometer (Atlas CH4) and the very first commercial NMR spectrometer (Varian A60) in Australia. However, in the shorter run, Jim started his career in coal chemistry by working on model compounds, mainly polynuclear quinones, as well as collaborating with Jim Brooks, the section leader, myself and Bob Durie, then the resident infrared expert.

Jim's impact on the Division of Coal Research was quite out of proportion to his then relatively junior status (he later had a meteoric rise through the ranks). To understand how this arose it is necessary to diverge momentarily to describe the first Chief of the Division of Coal Research, the recently deceased H. R. Brown, a figure around which anecdotes verging into legend swirl like mists. In perspective, I can see now that Roy (he hated being called Horace) was, in fact, a not all that historically unusual example of a man of enormous energy, vitality and ambition but of little formal education and social polish who was placed in a position of considerable responsibility and more potential than he had ever expected to. He was like a bulldozer, capable of great achievement once pointed in the right direction and it was largely Jim Shannon who supplied this direction turning a very modest group into a formidable scientific team. At its height, the chemists in the Division numbered among their ranks besides Jim Shannon, Jim Brooks, Bob Durie and myself; Tom Spotswood (recently retired Reader from Adelaide), Jack Willshire (later in CSIRO Wool Research), Colin Macdonald (later in CSIRO Entomology), Ruth Lack (later at Sydney University) and the gentle H. Silberman, helped by many excellent Experimental Officers. We also had a world class coal petrologist, in the person of G. H. Taylor, later Professor at ANU Research School of Earth Sciences. No wonder J. R. ('Jerry', later Sir Robert) Price, the Great White Chief of CSIRO, bestowed on us the somewhat ambivalent praise 'that we were the best chemical research team in CSIRO outside the Division of Industrial Chemistry'. Jim and I, driving and being driven by the formidable Roy Brown, were in fact aiming for the number one spot. Undoubtedly, this overreach contributed to the virtual sacking of Roy Brown and the dispersion of the chemists from the Division. By that time, I had already left what looked like a splendidly afloat ship transferring to Sydney University in April 1964.

Jim's time at Coal Research marked his emergence as a mass spectroscopist and hence the beginning of a world-class scientific career.

Jim Shannon's impact on Coal Research was two-fold: scientific (viz., the introduction of modern instrumentation) which endures there to this day and political, which produced some great research teams and a lot of results, but which did not endure. Jim, however, had an even more profound impact on individual life-paths, not least on my own. In 1958 I won a CSIRO Overseas Postgraduate Scholarship and my immediate supervisor,

Jim Brooks, was trying to persuade me to pick a place in the UK with a research programme most relevant to coal research. I still remember Jim Shannon thundering at me: 'No, you do not pick a topic, you pick the best man and the best laboratory'. That is how I came under the influence of Sir Derek Barton who introduced me to real organic chemistry and coincidentally met Lloyd Jackman at Imperial College who introduced me to NMR spectroscopy. Without Jim's advice, my professional life would have taken a different and inferior path. I shall remain forever grateful to him.

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