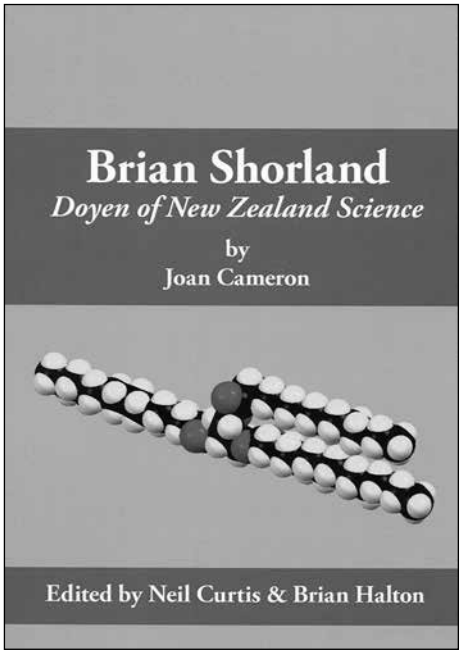
Book review

Joan Cameron

Brian Shorland: Doyen of New Zealand Science

Reviewed by Geoff Gregory



After an uninspired schooling, in which the only thing he excelled at was Latin (although he did eventually matriculate), and a brief spell in a boring job as an accounts assistant, Brian Shorland was urged by his sister Jessie to join the Agricultural Chemistry Laboratory in Wellington as a cadet in order to attend day-release classes at university. Work in the laboratory was a revelation for him, and a stimulus to start on an all-absorbing, prestigious career in biochemistry, which earned him international recognition and the accolade from then President of the Royal Society of New Zealand, Trevor Hatherton, that he was the 'doyen of working scientists in New Zealand'.

Dr Joan Cameron (née Mattingley), a former President of the New Zealand Association of Scientists, has combined information from interviews with Dr Shorland before his death in 1999 and from his family members and work associates, with Brian's published work, and compiled a fascinating biography of this brilliant and complex man. Now in poor health, she has latterly received considerable editorial support in this by Emeritus Professors Neil Curtis and Brian Halton, who have piloted the book through to publication.

The biography describes Brian Shorland's progression from his first unofficial analyses of New Zealand fish liver oils, to his PhD (on New Zealand fats, especially fish oils) under Professor Hilditch at Liverpool University, to his becoming senior chemist back at the Agricultural Chemistry Laboratory, to having the Fats Research Laboratory of DSIR specially created for him by Dr Ernest Marsden in 1946, where he was in charge until he retired in 1969. Initially in fairly meagre surroundings in converted houses in Sydney Street in Wellington, his group had to make their own distillation columns, but Brian insisted on meticulous experimental practice. Under his close scrutiny, the laboratory published a huge number of papers, containing analyses of fats and oils in a wide range of plant and animal species. From this database, Brian classified plants according to whether their main fatty acid constituent was omega-3-linolenic acid or omega-6-linoleic acid, 20 years before their biochemical roles in humans were recognised, and showed that omega-3-linolenic acid is a major component of green pastures and ocean plants and marine animals. He proposed an evolutionary progression in fat biochemistry, from fish, whose depot fats come mainly from their diet of plankton, to amphibia and reptiles and mammals, which can produce body fat endogenously to complement the dietary fat, to ruminants, which can hydrogenate the dietary fat, producing saturated fats. This led to his persistent advocacy of fish in a healthy diet, showing him to have been ahead of his time in this also.

In his 'retirement', based at Victoria University of Wellington, Brian continued to make contributions to these and other aspects of nutrition. In response to what the United Nations had labelled the 'impending protein crisis' in developing countries, he found a way of converting wool into edible protein and producing biscuits from it, which caused quite a stir locally. The crisis turned out to be wrongly conceived and was one of several examples of unsound experimentation and flawed scientific analysis that Brian wrote about over the next two decades. Another pioneering effort was to compile an impressive review of diets and longevity from around the world, from which he showed the importance of cereal fibre in a healthy lifestyle, and he promoted this in papers, articles and conference presentations.

He had an abiding interest in alternative energy sources, from his very first paper, which was on utiising geothermal steam, to his installation of windmills in his garden and solar panels on his roof in his latter years. He wrote several articles on wind generation and, with a friend, even patented a windmill.

Brian was active in several scientific organisations, including the New Zealand Association of Scientists, for which he was President in 1954/55, a Council member during three decades from 1963, and Patron as well as editor of *New Zealand Science Review* from 1985 until his death in 1999. His prolific output included lively editorials, in many of which 'he unrelentingly excoriated the myopic, bureaucratic, managerialist, politically-ruled straightjacket into which New Zealand science was being forced', to quote the book.

All of this and much more, including information about his family history and private life, is described in this absorbing biography. Not only this, but there is also a chapter giving brief biographies of the scientists who had a major influence on his career, and this in itself is an important contribution to New Zealand's archive of intellectual achievement. To help the uninitiated, who might otherwise find some sections not all that easy to follow, an explanatory chapter describing the biochemistry of fats has been included; it also outlines the history of research on fats, showing the paucity of information that existed before Brian began his work. The lack of an index is something that could perhaps be remedied for the electronic version. The book as a whole is a delight to read, and gives telling insights into the development of government science in New Zealand over much of the last century. It is a great accomplishment for all concerned. Dr Cameron is to be congratulated on her perspicacity and dedication in compiling this record, which thankfully the editors have managed to bring to a most satisfying completion.

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