

Preface: a tribute to Bill Williams and his contribution to limnology

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This volume is a tribute to the life and achievements of Bill Williams, a pioneer of limnology in Australia, an international champion to the cause of saline lakes and, later on in his life, a promoter of good management – through proper scientific knowledge – of aquatic ecosystems. It is also a tribute to a man whose personal generosity and academic guidance influenced an entire generation of limnologists in Australia and overseas to continue his work on many aspects of the ecology and management of inland waters, especially ephemeral and saline ecosystems.

Bill Williams was an extremely dedicated scientist who firmly believed that published papers and books were the best way to inform others, at all levels, of the need to better understand the many aspects of the aquatic sciences. Bill excelled at writing; he simply loved writing, rewriting, and eventually perfecting a text. This he did almost every day, or most precisely for long hours into the night. Bill also unselfishly took on the task of helping others publicise their research and knowledge about aquatic systems. He assiduously went through countless manuscripts to ensure they were comprehensive and readable. This he was able to do by consulting his formidable library of books and reprints which he continuously amassed over his lengthy career. It is very sad that such a productive career was cut short by leukemia because, had Bill been still alive today, many more important papers would have been either written by Bill or have passed through his diligent editing. He surely would have fended much about what he saw as the destruction of his loved “Spaceship Earth”; a quote from Bill in November 2001 was “*I have had a good life and if I have one professional regret, it is that I did not speak out more strongly about the destruction of spaceship Earth. A major concern is the poor use of our precious water resources*”.

Bill and Anne Williams came to Australia in 1961 from Liverpool to commence a long

commitment to Australia, and for Bill, to limnology. Monash University, where Bill took up a position, became the national centre of limnological investigations through his long-term and very productive collaboration with fellow-limnologist Ian Bayly, and many energetic and productive PhD students, many of whom now hold key positions, mostly in Australia. In 1973, Ian and Bill wrote a corner-stone volume ‘*Inland Waters and their Ecology*’ which, at the time, summarized newly acquired knowledge on all aspects of aquatic science. This collaboration between the two outstanding scientists was forged in Western Victoria where numerous salt lakes occur. Bill continued to investigate many more aspects of salt lakes after his move to the University of Adelaide where he took the position of Chair of the Department of Zoology. Due to the arid nature of most of South Australia, salt lakes were common features in that State, so Bill’s investigations continued. At that time also, Bill commenced collaborating with many other researchers abroad, also interested in saline lakes. His overseas trips became more numerous, and these played an important role in forging a global understanding and appreciation of aquatic systems so frequently neglected.

Bill was a tremendous ambassador for Australian limnology, and so well known internationally that he was often a common link when other Australian researchers traveled overseas to conferences or collaborative work. He had lifelong friends and colleagues across the globe, from China, India, Japan, Kazakhstan, South Africa to Uzbekistan to name a few countries he visited. Bill even went to Greenland to visit some ‘salt lakes’ as listed in the promotion brochure for an excursion organised as part of a SIL conference. He returned quite disappointed as the salinity of that salt lake there was lower than Adelaide tap water!

Bill took on the formidable task of publishing, editing and writing articles for a new journal

entitled *'Salt Lake Research'*. This journal is now published by Kluwer Springer Publishers. He also founded his own publishing venture 'Gleneagles Publishing', and actively solicited books that would advance Australian limnological knowledge. He personally inspired, read through drafts, and arranged funding for 'Australian Freshwater Ecology: Processes and Management', a textbook that attempted to build on the achievements in Australian limnology since his coauthored book in 1973. He insisted the book be no more than 300 pages long so that it could be cheap and accessible to as many people as possible, especially students.

Bill was a gifted and charismatic communicator. He realized that it was best to directly communicate with engineers and government departments about their approach to 'managing' waters in Australia, with the philosophy that better-informed engineers, farmers and bureaucrats will eventually 'manage' water in a sensible way. This is where Bill Williams' contribution to aquatic science is perhaps not well publicized because many of his reports and contribution to numerous meetings are not easily accessible. Nonetheless, Bill's impact was extremely important as these outputs were the very literature used to guide many critical man-

agement decisions. The founding of the Murray-Darling Freshwater Research Centre is a direct result of Bill's input and ideas, and this eventually led the formation of the federally-funded Co-operative Research Centre for Freshwater Ecology. Australia's research and interest in many aspects of aquatic science have made a huge progress since 1961 when Bill must have put his legendary net in an Australian lake! Some of these advances are described in papers to follow in this Special Issue but are only a subset of the many aspects directly inspired or initiated by Bill's wide interests.

Bill was a generous and very friendly person and interested in others, at all levels. He respected the opinion of others, and was keen to help all whom he always considered as his peers. It is no surprise to hear that Bill always introduced his PhD students as his 'colleagues' to more senior people. The professional communication and exchange of ideas continued at Bill's home with the magnificent contribution of Anne who was well known as being a superb cook. Hungry PhD students would never miss the opportunity for an excellent meal, and interesting conversations with overseas visitors. This was in contrast with Bill's



Photo 1. Bill Williams, on his 40th birthday, reading a few excerpts of Charles Darwin's book while in the field in Western Australia during a trip sampling over 100 lakes.



Photo 2. Bill accepting from Brad Mitchell a biscuit to accompany his cup of tea somewhere along the road in the Flinders Ranges, South Australia, during a field trip with his mentor and friend Noel Hynes and University of Adelaide PhD students.



Photo 3. The memorial stone unveiled during an excursion as part of the Australian Society of Limnology Conference held in Warrnambool just a few days after the Conference held in Adelaide as a tribute to Bill Williams. In the background is Lake Corangamite which Bill studied extensively and concerned Bill because of its increasing salinity levels as a result of changing climatic conditions and the management of local streams and irrigation. The text on the plaque is reprinted in the top left corner of the photo.

dry biscuits and cheese, with the cup of tea of course, in the field where once again Bill thrived. His love of the natural environment and the bush brought him the necessary relaxation from his hard work in the laboratory and writing desk, while he sampled salt lakes. Bill is best described as a very jovial character who frequently joked about himself. Once, he gave a lecture at the University of Adelaide in a monkey suit as a way of introducing the subject of evolution and Charles Darwin's contribution. On another occasion, he gave a lecture in pajamas, just to be different (apparently, at the following lecture, all the students turned up in pajamas). His public talks were always well-attended and he drew on his vast overseas experience to integrate viewpoints and opinions in an integrated and provocative fashion. He was not afraid to challenge dogma and, although born in England, he embraced his adopted antipodean experiences vehemently when claiming that 'limnological imbalances' with a northern temperate bias were hampering global limnology (see Synthesis).

Close to one year after Bill's death, Michael Geddes and others from the University of Adelaide organised a conference as a tribute to Bill's contribution to aquatic science, but also to convey their sympathy to Bill's family, friends and colleagues. The conference proved a great success as its aim was to bring aquatic scientists and managers together through communication. The end-product of this conference is elegantly pro-

duced in this volume which, we are certain, Bill Williams would have loved. This set of papers shows how far we have advanced in our appreciation and understanding of Australian aquatic environments. Note that our perception has now changed as shown in the volume's title by referring to water as a "resource". By better managing this 'resource', one ought to better appreciate the entire ecosystem.

Twelve papers are presented herewith, dealing with salt lakes, dryland rivers, and water resource management and conservation. All these themes were close to Bill's heart. The last four papers are headed under the theme of "Repairing Spaceship Earth", a theme that Bill became very interested in the latter part of his life. In hospital, Bill still found the energy to write a short article, in plain language, about his fears and concerns for our planet and how important it is to better manage it by better studying it and understanding all its complexities, and particularly one of its vital aspects: "water".

Let us hope that Bill's vision will continue to prosper through excellent science and well-planned management. We sincerely believe that this volume is a fine tribute to Bill's generous contribution to science and society.

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[A more comprehensive obituary of Bill Williams was written by K.F. Walker and published in *Hydrobiologia* 470, vii-ix in 2002].