CSIRO Publishing

Historical Records *of* Australian Science

VOLUME 14, 2002–03

All enquiries and manuscripts should be directed to:

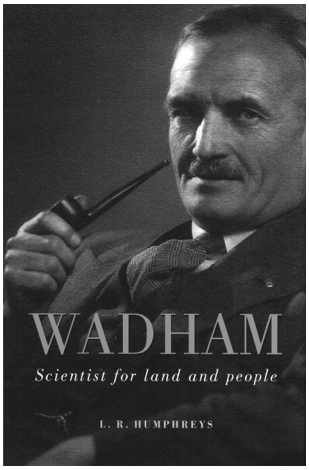
Professor R. W. Home
Department of History and Philosophy of Science
The University of Melbourne,
Parkville, Vic. 3010, Australia

Telephone: +61 3 8344 6556
Fax: +61 3 8344 7959
Email: r.home@hps.unimelb.edu.au

Published by **CSIRO** PUBLISHING
for the Australian Academy of Science

www.publish.csiro.au/journals/hras

L. R. Humphreys: *Wadham*: *Scientist for Land and People*. Carlton: Melbourne University Press, 2000, 225 pp., illus., ISBN 0 522 84934 2 (HB), $43.95.



Ross Humphreys is having an energetic 'retirement'. This is his second major scientific biography in three years. Following the pattern set by his earlier *Clunies Ross*: *Australian Visionary* (reviewed by Roy MacLeod in *HRAS* 13(2)), Humphreys' new subject is another key leader of institutional science in Australia. Wadham's biography, like Clunies Ross', is extremely valuable as a document about the place of science in society, as well as the more traditional stories of Wadham's particular science and his life story.

Sam Wadham arrived in Australia in 1926. Like a number of other Cambridge-educated professors in Australian universities in that era, he found himself appointed to a chair as a young man with limited experience in leading research or in teaching. Unlike some of the others, he had some teaching experience as a senior demonstrator in Botany at Cambridge, but he was well aware of his very limited experience as a research leader and knew nothing of the particular problems of agriculture under Australian conditions.

Perhaps the 'scientist' of the subtitle is misleading. Wadham undertook little scientific research between 1926 when he arrived in Australia until 1959, two years after his retirement, when he joined Lloyd Jones and Angela Milne in a laboratory to work on the question of what happened to soil-based silicic acid after it entered oat plants. Even this project was not initiated by Wadham himself. His real original talent was for recognising the wealth of different disciplines involved in managing land and people, and for communicating a broadly based public understanding of science. His agricultural research and extension courses, for example, were based on a generalist curriculum that included the economics of farm management and public speaking. His personal interest in rural sociology and surveys strongly influenced his undergraduate teaching, which was often based on case studies of farm situations. His approach was always to listen first, and to temper any 'expert' opinions with an awareness that 'when you go on to a farmer's property, never forget that he knows more about that property than you'll ever know' (p. 161). The high value Wadham attached to local and particular knowledge rather than disciplinary expertise endeared him to his farming audiences, and put him in a position to learn right from the outset of the specific pressures of the Australian environment on European-style agriculture.

Under Wadham, the Melbourne School of Agriculture came to be known for regional survey work and agricultural policy advice, rather than biological research, something much stronger in Adelaide and Sydney, as Humphreys notes. Such was the superior status given to experimental and biological research in agriculture in 1946, that Wadham 'scarcely dared' call himself a scientist. He avoided overly theoretical scientific conferences, preferring those that dealt with 'practical agriculture in its economic aspects' (p. 69).

 10.1071/HR02901B_BR 0727-3061/02/010102

Wadham's methods were not unlike those of Francis Ratcliffe, who in the 1920s and 1930s studied both fruit bats and soil erosion through talking with the people on the land, whose lives were most affected by them. Like Wadham, Ratcliffe was anxious that the work that he undertook towards what eventually became the well-known book *Flying Fox and Drifting Sand*, was not 'real science'. But Ratcliffe and Wadham, perhaps because of the status lent them by their respective Oxford and Cambridge training, shared a confidence that interviews and listening were useful techniques in understanding land and people, whether it was 'science' or not.

The study of an approach like Wadham's, which integrated seriously across C. P. Snow's 'worlds' of science and the humanities long before Snow gave his famous lectures in the 1950s, also serves to undermine the fruitless distinction between so-called 'pure' and 'applied' in science itself. Interdisciplinary integration is eagerly sought-after by land managers and environmental scientists in the early years of this new millennium, and the study of historical models of the quality of Wadham, working half to three-quarters of a century before such ideas became broadly fashionable, must be beneficial to present quests for new methods in uniting science, land and people.

Wadham's contributions to science proper were sometimes indirect, but no less important for that. He had a significant role in curriculum development, both in secondary schools and in forestry education through the Creswick School of Forestry. He and Professor John Turner, another young man from Cambridge who was appointed in 1938 to a chair (Botany and Plant Physiology) with Wadham's support, were both involved in the introduction of General Science into the secondary school curriculum at year 10. Although Wadham's work on the Geelong Grammar School Council is mentioned, his other work on making the science curriculum more appropriate to Australian conditions has gone unremarked in this biography, possibly because the sources for it were not in the University of Melbourne Archives. Rod Fawns' excellent PhD thesis on 'The Maintenance and Transformation of School Science' (Monash, 1987), covered this era very well, but remains, alas, unpublished.

Wadham's other indirect contribution to the fabric of scientific life was the strong personal support he gave fellow professors like Turner. Humphreys alludes to the fact that Turner was appointed over a distinguished local woman, Dr Ethel McLennan, and this might have led to some difficulties. But both McLennan herself and Wadham were helpful in ensuring that Turner did not lead a lonely intellectual life in an ecologically strange place. McLennan introduced him to the plants and the botanical debates, and Wadham to the key scientific and management issues in forestry, agriculture and land management, something that Turner appreciated greatly and referred to at length in an interview with me in 1990. It was Wadham who directed Turner to support new, distinctively Australian, research initiatives in fire, soil conservation and ecological management.

Not just professors, but also students and the wider public benefited from the influence of the major book *Land Utilization in Australia* by Wadham and geographer Gordon Wood. Published first in 1939, it stayed in print over twenty-five years through four editions. This was a central textbook for agriculture and geography courses, as well as attracting a significant wider readership. As Humphreys notes, it was important in 'debunking political myths about the virtue of expanding settlement' (p. 53). It also introduced Australians, whose sense of place was predominantly derived from Australia's south-eastern corner, to the diversity of landscapes in the continent, and to shaping a broader national identity.

The challenge of Wadham's life is to integrate the institutional, the scientific and the personal strands into one holistic narrative. Humphreys has handled this through covering different themes in different chapters. This tactic serves to make each of the narratives clear and easy to read, but perhaps loses some of the sense of the life as a whole — where daily pressures of science, institutions and personal life are juggled simultaneously. Humphreys handled well the difficult subject of Wadham's major personal tragedy, a car accident in England in 1930, in which two of his three children were killed, when he was far away in Australia. The 'unusual marriage' to Dorothy Baylis, a childhood friend, with long separations with Dorothy in England and Samuel in Australia, was strongly coloured by the tragedy. There are hints that Wadham's highly intelligent wife was in fact very little interested in his work, so the separation of themes may be to some extent a quirk of the circumstances of the subject.

Wadham emerges as an interesting public intellectual, with his finger on many of the key pulses of Australian life in the twentieth century including rural reconstruction, land settlement and migration, commercial policy for agriculture and questions of irrigation. Because each of these concerns is socially, institutionally or governmentally driven, Wadham chose to work like a judge, weighing evidence of all sorts — scientific, local, economic and sociological. This is very different from the idealised view of a scientist proactively driving new policy initiatives, using the products of technical or experimental research. Perhaps this is what actually makes for brilliant agricultural science, where the cutting edge is on the land, not the international conference circuit. Given Humphreys' own distinguished career in agricultural science, I would have been interested in a little more reflection on the value of such 'responsive' science, and its difference from the proactive model of idealised science.

Libby Robin
CRES,
Australian National University, Canberra