

**BRIEF OBITUARY FOR JOHN ROBERT PHILIP AO, FRS, FAA
(1927–1999)**

The author of the above memoir, John Robert Philip, was killed in a traffic accident in Amsterdam on 26 June 1999 shortly after completing the article. He was a pioneering figure in soil physics and micrometeorology. His early studies in unsaturated infiltration flows provided a unifying framework for understanding and making quantitative predictions in what was then regarded as disparate unrelated phenomena in irrigated agriculture. He also developed the first coherent mathematical-physical description of small-scale advection. His more than 300 papers, primarily in the fluid earth sciences, were skilfully crafted and were models of brevity and precision.

Born on 18 January 1927 in Ballarat in rural Victoria, Australia, he acquired a life long love of learning from his school teacher mother. A child prodigy, a scholarship to the elite Scotch College (High School) in Melbourne was his ticket out of rural poverty in the Depression era. He flourished in the highly competitive and intellectually stimulating environment. He was encouraged to write poetry and this remained a lifelong passion; his work appeared in numerous literary publications as well as the standard collection of Australian verse. Graduating from Scotch College aged 13 he spent another two years at school before being deemed old enough (at 16) to study Civil Engineering at the University of Melbourne. Plainly bored by the undemanding engineering course, which he described scornfully as merely 'learning which handbook to look up', he spent much of his time reading and writing poetry, and socialising. At age 19, he was youngest ever engineering graduate. By chance he spent a year as a research assistant at the CSIR research Station at Griffith in New South Wales to working on furrow irrigation. It was an absolute revelation to him that not all answers were known and that mathematics was a tool that could be used to extract the answers. He acquired then his passion for research, which never left him. After a sojourn as an irrigation engineer in Queensland he returned to CSIRO at Deniliquin where he pioneered the theory of unsaturated flow and, with Dan de Vries, the theory of coupled heat and mass transfer in porous solids. In 1957 they were awarded the Horton Award by the American Geophysical Union for this work.

He was gifted with incredible physical insight, which was coupled with a formidable mathematical ability and great capacity for hard work. His working day



started at 5 a.m. and the only concession he made on retirement seven years ago, was to continue to work fulltime and unpaid, but to start at 7 a.m. He was a doughty defender of scientific autonomy – ‘finding the right person for the task and encouraging them to get on with it’. He was the principal author of the Science Task Force Report of the Royal Commission on Australian Government Administration, which is a highly readable and persuasive description of the necessary environment for effective and creative scientific research. John and his wife Frances, a notable Australian painter, had a deep appreciation of art and architecture. Together with the architect Ken Wooley, they created the F. C. Pye Laboratory. Thirty years later, it remains a paradigm of good laboratory design; its frugal elegance fosters scientific interaction and accommodates a multiplicity of functions.

John Philip had a scientifically pugnacious character and enjoyed demolishing what he saw as the sloppy and the slipshod in science. The pompous and the vain were especially welcome targets and his mastery of the English language gave a special bite to his comments. We won't see his like again.

Canberra, Australia

PHILLIP FORD