

**OBITUARY: JACK WARCUP**

Jack Warcup, Patron of the Australasian Mycological Society, died on 15 May 1998 after a long period of ill health. Born in 1921 in Auckland, New Zealand, Jack studied science at Canterbury University College (B.Sc.) and Wellington University College (M.Sc.). In 1945 he went to Cambridge University, U.K., where in 1949 he obtained his D.Phil. In 1965 he was awarded a D.Sc. In 1996 he was made a British Mycological Society Centenary Fellow. Two monotypic genera have been named in his honour: *Warcupia* (Otidaceae) and *Warcupiella* (Trichocomaceae).

From 1949 to 1951 he was employed by the U.K. Forestry Commission while working in the Botany Department, Cambridge University. In 1951 he moved to the Department of Plant Pathology in the Waite Agricultural Research Institute, University of Adelaide. Jack retired from the Waite Institute in 1986.

Throughout his career Jack had a passionate interest in soil-borne fungi and in symbiotic associations between plants and fungi. At Wellington University College he became interested in the fungi associated with the saprophytic prothalli of species of Lycopodiaceae. Later this interest was to develop into highly original studies of the mycorrhizal relationships of the Orchidaceae, Myrtaceae, Casuarinaceae, Mimosaceae and Asteraceae. His view that an ectomycorrhizal association did not need a complete mantle or Hartig Net on the rootlet was hotly contested by other workers. Comments by referees of the various papers on this topic stimulated further study and Jack's view is now generally accepted.

A study visit to the Waite Institute by Dr T. Terashita from Japan resulted in studies of the relationship between *Armillaria* and the saprophytic orchid genus *Gastrodia*. These and later studies of other orchids showed virulent plant pathogens such as *Armillaria luteobubalina* or *Thanatephorus cucumeris* could also be benign symbionts.

Jack was fortunate to have Dr Pat Talbot, an insightful fungal taxonomist, working in the same laboratories. The two formed a close relationship and published numerous joint papers on the identity of fungi isolated from soil, or orchids or ectomycorrhizas. To the occasional irritation of Pat, Jack was always senior author.

During his studies of propagules of soil-borne fungi, Jack developed a few standard media (*e.g.* NDY/7), and standard techniques based on meticulous observation and very careful isolation techniques. One is reminded of Louis Pasteur who laboriously separated by hand under the microscope dextro- and laevo-forms of crystals of ammonium tartrate for his fermentation studies. Not for Jack endless counting, huge data bases (though he did keep comprehensive, accurate and careful records), and complex statistical analyses. The result was that he knew and understood better than anyone I have known, the fungi with which he worked. As a field observer he was, in my experience, without peer.

In the first few years after moving to Adelaide he continued the studies of soil penicillia begun at Lackenheath Warren. Manuscripts were prepared and submitted to Australian journals only to be rejected. The result was that he henceforth published in overseas journals principally the *Transactions of the British Mycological Society*, *Mycological Research* and *New Phytologist*.

One wonders in what direction his career might have developed but for those anonymous referees. Later he was to make significant contributions to our knowledge of the taxonomy and biology of the teleomorphs of species of *Aspergillus* and *Penicillium*.

Jack was a skilled and scholarly writer, an excellent editor, a good speaker but most of all he was a really nice man. Usually quiet and reserved he had the most expressive eyes and a droll wit. He could also be blunt.

He is survived by his daughters Susan and Catherine, and his sons John and Andrew. To them we offer our sympathy.

J. A. Simpson