It should be noted that these discussions of curve fitting do not significantly affect quantities discussed in the paper.

One revision could be mentioned here. The estimate of sediment deposition in Lake Roxburgh has been recalculated by Hicks (pers. comm.). The volume of sediment deposited in Lake Roxburgh between July 1978 and February 1979 computed from the original survey data rather than the plotted cross sections is 2.77×10^6 m^3 and is a more accurate figure than the 2.29×10^6 m^3 reported in the paper.

BOOK REVIEW

ADVANCES IN DESERT AND ARID LAND TECHNOLOGY AND DEVELOPMENT. VOL. 1. PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON APPLICATIONS OF SCIENCE AND TECHNOLOGY FOR DESERT DEVELOPMENT, Cairo 1978. ed. Adli Bishay and William G. McGinnies. pub Harwood Academic Publishers, London and New York 1979. (Price $US66.00).

It is appropriate to review this book in the *New Zealand Journal of Hydrology* and to dedicate this review to Kees Toebes. Kees died in Egypt whilst on a mission to advise on one of the subjects of this conference and if he had lived would certainly have been invited to make a significant contribution to the conference, of which this book is effectively the Proceedings.

Egypt has three great "surpluses": people, urban sprawl and desert. Its present population is in excess of 40 million, and is doubling every 25 years. Many of the 1½ million Egyptians working overseas, principally in the Arab countries of OPEC, were evicted after the Israel peace treaty. There are therefore immense pressures for the development of employment, living space and agriculture in the underdeveloped desert areas.

The conference was hosted by the American University in Cairo and supported by the National Science Foundation of the United States of America. It was primarily oriented toward Egyptian problems but did include papers relating to other desert regions, including a good general review of land use in arid Australia. The conference coincided with the significant increase in U.S. aid to Egyptian agriculture following the signing of the Camp David accords between Egypt and Israel and provides an interesting baseline of scientific perceptions of the problems facing Egypt and her advisers.

The topics covered are: Egyptian Deserts, Desert Development and Combating Desertification, Water Resources and Irrigation, Energy and Mineral Resources, Desert Plants and Environment, Technology Problems and Desert Communities, and Biosaline Research. The whole proceedings are preceded by four papers from a plenary session including two excellent keynote papers by Tolba and by Dregne. Dregne enunciates a fundamental principle of technological aid which he terms Dregne's Law; "If technology looks as though it is immediately

transferable, look again." Unfortunately some of the papers, particularly in the section on technology problems, pay at best only lip service to this law.

A problem in reviewing the whole volume is that it is impossible to give balanced attention to all the various sections which range from scenarios for the use of the Space Shuttle through the thermodynamic equations for hybrid solar-powered irrigation systems to the application of ordination analysis in determining phyto-sociological characteristics of perennial desert vegetation. This review will therefore concentrate on those sections on hydrology and water resource development, although these should be viewed with a knowledge that there are also papers setting out the pressing social problems of desert lands and of Egypt in particular.

There are papers which enumerate the water resources available to Egypt and which discuss at a fairly theoretical level the respective virtues of various irrigation techniques. There are also some instructive case studies of the problems of applying high-technology irrigation systems in the deserts of Libya and Saudi Arabia. In an excellent, if mainly descriptive, paper Gaylord Skogerboe points out that the heart of any irrigation system is the farm subsystem, and that sustained increases in agricultural productivity can only come from "successful on-farm water management". This point is reinforced by Martin Fogel. There are, however, no papers indicating current research activities in this area.

The principal weakness of the volume is the lack of a co-ordinated theme or a logical interlocking of case studies. Any researcher interested in the application of technology in arid lands will find one or two papers of interest, but hardly any outstanding ones. The volume will obviously be useful as a supporting document to workers seeking funding for projects in arid land research and particularly in Egypt. The book will find a regular place in the libraries of institutions supporting such workers but is hardly appropriate to the personal library of any arid zone technologist.

P. M. Fleming
Principal Research Scientist
CSIRO Division of Land Use Research,
Canberra, Australia