

BOOK REVIEWS

Human Nutrition

Edited by Norman Kretchmer and William van B. Robertson
W. H. Freeman; San Francisco, 1979
275 pages. \$16.80 (hardback); \$8.80 (softback)

Research in human nutrition had made great advances in the 40 or 50 years preceding the Second World War and most of the essential nutrients had been discovered. The knowledge which was then available was the basis for an intelligent food policy adopted by many of the nations which participated in that war. It was widely thought at that time that most of the major problems had been solved, and the main task was to apply existing knowledge to the needs of the nations, particularly the developing countries. The science of nutrition received relatively little support from public funds, and the intellectual attraction of nutrition appeared to be small. This situation has markedly changed during the last few years.

It is now widely realized that there are still considerable gaps in our knowledge, for instance, our understanding of the nutritional importance of trace metals. Reliable information is largely lacking on the long-term effects of different diets on the incidence of disease, and the introduction of modern technology in the processing of food raises many new questions. There is also a strong desire to link the science of nutrition more closely with other basic sciences such as physiology, biochemistry, and medicine: on the other hand the fact is becoming increasingly appreciated that food has been an important factor in the development of Man, in the evolution of many civilizations, and that diet is linked with many activities of mankind.

The book on 'Human Nutrition' consists of many excellent articles which appeared in the Scientific American over the last 25 years. Some of the older articles are of necessity somewhat out of date, but one is impressed by the fact that many of the papers could have been written recently. The individual chapters range from a discussion of nitrogen fixation and photosynthesis to an assessment of food additives, a survey of our knowledge on intravenous feeding, and a history of the development and 'domestication' of cereals. As one might expect, the standard of each article both in content and presentation is very good, but they necessarily represent to some extent the personal opinion of the author involved. It is difficult to single out individual contributions, but the reviewer particularly enjoyed the chapter by the late Dr Redcliffe Salaman, who had done such a lot of research on the history of the potato. There is also a most enjoyable paper on Captain Bligh and the breadfruit, and another on the social influence of salt. The importance of plant breeding and other activities in the field of agricultural science are properly emphasized, and in one section full consideration is given to the population problem and the difficulties likely to be encountered in feeding rapidly increasing numbers of mankind. The book as a whole is not primarily intended for the specialist, although even he will enjoy most of the articles and acquire some new knowl-

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edge from them. It will, however, be read with considerable profit by the scientist working in other fields and by the intelligent layman. Drs Kretchmer and Van Robertson have done a very good job in providing

both a general and specific introduction to various parts of the book, and in selecting such good articles for this purpose.

A. Neuberger

Trace Elements and Iron in Human Metabolism

by A. S. Prasad

John Wiley and Sons; Brisbane, Chichester, New York, Toronto, 1978

xv + 392 pages. £17.50

In this book which is published as a part of the Topics in Hematology series Dr Prasad has compiled a vast amount of information on the biological roles and nutritional requirements for trace elements in humans as well as the clinical conditions associated with inadequate and excessive intake of these elements, and with disorders in their handling in the body. In addition chapters are included on the effects of three metal ions (Cd, Pb, Hg) with known high toxicity for humans and in all of which there is much current interest.

The author seems to have seen his role as a gatherer and compiler of information and I can find little evidence of critical evaluation or of creative thought. However this is not an area in which there is any conceptual linkage between the constituent chapters

other than that most of the elements considered must be provided in small amounts in the diet for maintenance of health. In some cases even that is not well established for humans since for some of the more recently discovered trace elements the requirement can only be shown in experimental animals under very carefully controlled conditions. The book then covers ground very similar to that treated by Underwood in his text of similar title. The book considered here is somewhat more up-to-date and shows differences of emphasis — for example the extended and rather interesting treatment of the clinical aspects of zinc deficiency. However except for those most vitally and directly interested in this field it would be hard to justify purchase of both texts.

M. C. Scrutton

Receptors and Recognition, series A, volume 4

Edited by P. Cuatrecasas and M. F. Greaves

Chapman and Hall; London, 1977

270 pages. £11.50 (hardback); £7.50 (softback)

This series comprises review articles over a very broad range of topics related to cell membrane receptors. The editors are to be congratulated on expediting discussion and understanding in this area of funda-

mental significance to a great many fields of modern biology. By proceeding through these volumes, one is reminded of the diverse and far-ranging functions in which receptors and cellular recognition play a major