Much of the book was written soon after the war, and already the methods of control that were developed then have been applied to such effect that some of the areas discussed are now malaria-free. In every area emphasis is laid on the general principles of prevention—the need to have enlightened commanders, to involve all men, and to strike a balance between environmental control and personal responsibility.

D. H. VAUGHAN

Epidemiology: Reports on Research and Teaching. Ed. by J. Pemberton. (Pp. 360; 55s.) London: Oxford University Press. 1963.

One of the features of recent progress in medicine has been the development of epidemiology, the ecology of man in terms of health and disease. Most of the published work is widely distributed in epidemiological journals and in general and specialist medical journals. There have also been a few compendia of articles on epidemiology, and this book is one of these. It contains an edited selection of papers given in Yugoslavia at a meeting of the International Epidemiological Association.

A wide variety of subjects by 39 authors has been classified into eight parts: Cancer; Diarrhoeal Diseases; Arterial Pressure; Occupational Diseases and Accidents; Neurological Disease, Anaemia and Nephropathy; Standardization of Diagnostic Techniques; Health Services; and Some Recent Developments in the Teaching of Social Medicine.

Some of the articles report recent work of the authors while others are more general; Richard Doll's 'Contribution of Epidemiology to Knowledge of Cancer' is outstanding among the latter. The sections on Neurological Disease, Anaemia and Nephropathy, Diarrhoeal Diseases, and Arterial Pressure offer good examples of geographic medicine.

The articles in Section VI show that surprising progress is being made in standardizing diagnostic techniques, important for comparative studies in the field of psychiatry. Carstairs and Wing show how this difficult subject can be advanced by the use of epidemiological methods.

Health Services have an article by Professor McKeown in which he advances his controversial views about the future of the general practitioners, and three articles from the United States of America, which are of an operational type. In the section on Social Medicine Drs. Prasad and San Martin describe some teaching efforts in India and Chile, methods adapted particularly to the rural conditions of those countries; and in the final article Dr. Stokes shows how, at the Harvard Medical School, he evaluated the teaching of family health. He found 'no effect'!

The section on Occupational Diseases and Accidents, like the other sections, is not a comprehensive or systematic survey of the work in this field. Recent work on byssinosis is well covered, and Ross A. McFarland writes on the epidemiology of industrial accidents in the United States of America. Much of this article and of others in the book has appeared previously, but nevertheless it is valuable to have a book which brings together a number of important subjects treated epidemiologically.

Readers who are not epidemiologists will find this book interesting and enlightening, and epidemiologists will in addition find it a useful source book because, even apart from the articles, there are good lists of references.

A. M. ADELSTEIN

Paramedical Microbiology. By Stanley E. Wedberg. (Pp. 462; illustrated; 54s.) London: Chapman & Hall. 1963.

This is apparently intended as a textbook for nurses, who are mentioned seven times in the introduction alone and repeatedly in the subsequent text. The author does not confine himself to microbiology, but ranges over a number of topics which are of interest in public health. Blood grouping occupies six pages; tobacco smoking and cancer, two. Twenty pages are devoted to food poisoning, including five pages on poisoning by chemicals and plants, but no mention of *Clostridium welchii*! Other omissions from the sections on pathogenic bacteria and viruses include *Str. viridans*, *Str. faecalis*, *Haemophilus*, *E. coli*, mumps, and herpes simplex. But space is wasted on non-pathogens like Gaffkya and Sarcina whose existence as clearly defined genera would be disputed by most bacteriologists.

The book is too long for an introductory textbook and suffers from repetition in its different sections. It condemns common practices, e.g. disinfection of thermometers in 70% alcohol, without suggesting an alternative.

Two admirable features are the inclusion of historical data scattered throughout the text and a glossary of microbiological terms, but even some of these are inaccurate or misleading. The book would appeal to those who enjoy a popular style ('miracle drugs', 'Achilles heel') and do not mind inaccuracies. It is printed on good quality non-shiny paper and has some very good illustrations.

N. W. PRESTON

Report of the Medical Research Council for the Year 1961-62. (16s. 6d.) London: H.M.S.O.

The extent of the work which is undertaken or supported by the M.R.C. may not be as generally recognized as it deserves to be. Some idea of its vastness and quality can be gained from the annual report of the Council for the year October 1961 to September 1962.

The report is presented in three parts. In the first part the work of the Council's recently formed Advisory Boards is reviewed, and matters of policy, administration, finance, and personnel are detailed. During the year four members of the Council's staff were made Nobel Laureates; two shared the prize for chemistry and two the prize for medicine and physiology. The second part of the report consists of 11 articles on selected aspects of research ranging from the genetic code to the application of engineering techniques to medicine and biological science. The third part is made up of summaries of the work of the National Institute for Medical Research at Mill Hill, London, and of the work of the numerous research units and groups, of the external scientific staff, and of the recipients of research grants.

Many of the activities of the M.R.C. are of particular interest to industrial physicians and teachers. New research units on clinical pulmonary physiology and atheroma have recently been introduced. Among the principal committees are those on occupational health, lung cancer, mineral oils, acute bronchitis, the human factor in railway accidents, and several on radiation hazards. The work of many of the research units, such as those on industrial injuries, pneumoconiosis, toxicology, radiological protection, social medicine, and industrial psychology, is well known to practitioners in occupational health, and a summary is given of the current research of each unit. Examples of new developments are the possibility of demonstrating tumour viruses in man, miniaturized radio-transmitting pills to make possible the measurement of physiological parameters, and the conicycle, an instrument for measuring concentrations of respirable dust, which has retention characters similar to the human lung, rejecting particles outside the 1-7 μ range. A new breath alcohol indicator may have more general impact.

The report is clear, easy for the uninitiated to follow, and well indexed. The 11 articles on medical research, which constitute the second part of the report, and the section on the Council's Advisory Boards were published in booklet form by H.M. Stationery Office in September 1963, under the title 'Current Medical Research'.

T. S. SCOTT

The Biochemistry of Bladder Cancer. By Eric Boyland. American Lecture Series. (Pp. 75; 12 figures and 2 tables. \$5.75.) Springfield, Illinois: Charles C. Thomas. 1963.

This book is based on lectures given by the author in the U.S.A. and presents mainly his contribution and personal views on the subject. Thus, it is complementary to the Elsevier Monograph on the 'Carcinogenic and chronic toxic hazards of aromatic amines' by T. S. Scott, 1962, which deals mainly with the industrial hazards of aromatic amines used in the dye industry, and their prevention; and also with the medical aspects of bladder cancer, its diagnosis and treatment. The book under review represents the approach of an experimental cancer worker to the problem.

Aromatic amines, such as 2-naphthylamine* and 4-aminobiphenyl, which give rise to tumours of the bladder, an organ remote from the site of their application, belong to the type of carcinogenic agents that have to undergo metabolic transformation before they become 'proximal' carcinogens. The book deals therefore extensively with the metabolism of aromatic amines, in particular with that of 2-naphthylamine, with which the author was mainly concerned, and together with his co-workers he identified 21 of its metabolites. References are made to the recent finding of N-hydroxylation of aromatic amines, the role of certain N-hydroxylamines as proximal carcinogens, and their bearing on Clayson's theory of *ortho*-hydroxylation, which until 1958 appeared to fit the known facts.

The story of bladder cancer contains further instructive

examples of how reality defies hypotheses, however logical and plausible. Kennaway used to say that nature often does not behave as we expect it should. The author reports the unsuccessful attempts to prevent the induction of bladder tumours in dogs treated with 2-naphthylamine, or the recurrence of bladder cancer in operated patients, by the administration of the ammonium salt of 1 $\rightarrow$ 4 saccharolactone. This compound, a known inhibitor of the enzyme glucuronidase, was selected in the hope that it may prevent the hydrolytic liberation of carcinogenic metabolites from their respective inactive glucuronides. The activity of this enzyme is optimal at about pH 5, which is obtainable in the urine.

Several errors or misprints have been noted, especially in the chemical structures (e.g. p. 7, III, IV; p. 59, VIII; p. 61, XIII; p. 65, Table 2, methyl-3-hydroxyanthranilate). Certain double bonds are missing in the aromatic structures (p. 5, I, II, III, IV) or omitted (Fig. 11) contrary to the convention adopted in the book.

However, these are small points, which should not detract from the value of this book by an author who greatly contributed to the development of its subject.

R. SCHOENTAL

Compendium of Emergencies. Edited by H. Gardiner-Hill. (Pp. 328; 55s.) London: Butterworth. 1963.

This is not just another book on first aid. It is an informed treatise on the nature, pathology, differential diagnosis, treatment, and management of emergencies in medicine, surgery, and the specialities. The editor claims that it is a ready reference, written by experts, which will help the doctor on his own to deal with the immediate and subsequent treatment of emergencies. The claim is justified. It will also be of value to the hospital resident, the industrial medical officer and to the consultant outside his own speciality.

The industrial medical officer faced with certain emergencies will find it useful. He may well, however, have reservations about the methods of artificial respiration (Schafer's and Eve's) recommended in the chapter on poisoning (mouth-to-mouth ventilation is advocated by two other contributors), and he may not go all the way with the writer on cardiac arrest who states that external cardiac massage 'may break a rib or two but the greater mobility of the chest wall is some compensation'!

Each subject is dealt with by a specialist, and if the number of authors leads to some repetition and inconsistencies these are insignificant compared with the authority and mastery which the writers display. It is important to be reminded, for instance, that morphine must be avoided absolutely in head injuries or that nearly all non-industrial poisonings are due to carbon monoxide, barbiturates or aspirin. It is puzzling, however, when one writer condemns intramuscular paraldehyde as the most brutally painful and disrupting of all attempts at sedation whereas two others recommend it, one for status asthmaticus and the other as the treatment of choice for status epilepticus. In future editions contradictions like these should be eliminated and the modern view agreed. If this is not possible, enough data might be given for the reader to choose for himself.

*Also known as β -naphthylamine.