BOOK REVIEWS

Adaptation of Work to Man and Occupational Health Problems in Countries Undergoing Industrial Development. International Labour Office, Occupational Safety and Health Series No. 3. (Pp. 19; no price quoted.) Geneva. 1964.

This report examines the implications of trying 'to adapt work to man and each man to his job' in countries undergoing industrial development. It is suggested that it might be wrong to apply the ergonomic principles established in a Western society to these new situations. Basic research in anatomy and physiology is necessary before the best designs for machinery for use in these countries become available. These, however, are not the major issues; more important matters arise in the field of Psychosociology—religions, rites, and customs play an important part in the process of adapting to a factory system. It is necessary to take account of 'a whole series of fundamental data from branches as varied as human geography, ethnology and sociology' as well as of medicine and its basic sciences.

The important part that may be played by the 'industrial doctor on the site' is emphasized, though it is held that he is not likely to be able to contribute much to the basic researches referred to above. (This depends on the training he has received and the co-operation that is available from nearby research bodies.)

It is argued that in planning occupational health services it would be a grave error to underestimate the importance of other health problems, *e.g.* diet and infections. It may well be that sufficient weight is not given in the report to the importance of allocating priorities to the different aspects of a health plan.

The report is authoritative. It is unfortunate that it is written in such a turgid style that rapid reading is impossible.

R. E. LANE

The Rochdale Industrial Health Service Limited. First Annual Report and Accounts with Chairman's Statement for year ended December 31st, 1963. (Typescript. Pp. 7.)

This is the first Annual Report of the newly formed Rochdale Industrial Health Service, but in fact it covers the period from its inception in October 1962 to March 1964. The number of workers attending for treatment and consultation rose steadily and had nearly trebled by the end of 1963, and the introduction of a mobile Surgery which came into service early in 1964 may be expected to quicken the increase.

Good relations have been established with local bodies including the Staff of the Rochdale Infirmary and the local practitioners, and collaboration has taken place with the Nuffield Department of Occupational Health of Manchester University in two research projects concerned

with the effects of noise on hearing, and byssinosis, respectively. First aid training has also been encouraged during the period under review, and further courses are to be held during 1964.

The Service is still without a home of its own, but a permanent headquarters is planned in a convenient and central situation.

The Director has obviously put much energy, initiative, enthusiasm, and experience into this project, and it must indeed be a disappointment to him that so far only 13 industrial organizations out of a potential 117 are participating in the scheme.

G. F. KEATINGE

Basic Principles of Ventilation and Heating, 2nd ed. By Thomas Bedford. (Pp. xii + 438; illustrated; 52s. 6d.) London: H. K. Lewis. 1964.

Dr. Bedford completed the manuscript for this new edition of his well-known book only a short time before his death in 1963. Throughout the text there is evidence of revision to bring the contents up to date. This is particularly noticeable in the sections on comfort, scales of warmth, and domestic heating. The chapter on work at high temperatures has been largely re-written to take account of the considerable volume of published work in recent years on indices of heat stress and acclimatization. There is a new chapter on the heating and ventilation of hospitals.

In its revised form this work will surely continue to serve as a standard source of reference and instruction for many years.

D. TURNER

A Synopsis of Cardiology. By D. Weitzmann. (Pp. vii + 200; 48 figs.; 30s.) Bristol: John Wright. 1964.

This is a compact, pocketable summary of the essentials of cardiology. It originally formed part of Tidy's Synopsis of Medicine and follows the same style of presentation. It has some advantages derived from its format, including handiness and an ease of reference largely due to numerous bold sub-headings. The index is full and useful. It has counterbalancing disadvantages in that the style is rather staccato for continuous reading and the page size implies rather small illustrations; somewhat unexpectedly, the x-ray reproductions survive this better than some of the electrocardiograms, but both are adequate and sufficiently numerous.

The balance of space allotted to the various subjects is good (as Dr. Maurice Campbell points out in the introduction) and the factual material is, if not beyond criticism, at least well able to meet it. The mixture of old

and metric terminology in drug dosage is an anomaly. Many will be surprised to find short total diastole time in the arrhythmias quoted as a cause of peripheral circulatory failure, and it is not representative of current opinion to describe restenosis after mitral valvotomy as 'rare'. Limitations of space impose limitations of content, but it seems a pity in a clinical guide to find little or no reference to the management of the patient, despite adequate descriptions of the management of diseases. The subject of long-term anticoagulant therapy in ischaemic heart disease is, perhaps wisely, largely evaded. But these are details for, in general, this is a sound introduction to clinical aspects of cardiology, and it can be confidently recommended to medical students and others seeking a compact, clearly written, and comparatively inexpensive guide to the essentials of the subject.

A. MORGAN JONES

Heat Stress and Heat Disorders. By C. S. Leithead and A. R. Lind. (Pp. 304; illustrated; 35s.) London: Cassell. 1964.

The authors of this book set out to bring together in an authentic practical form, for use by medical officers and others concerned with the supervision of men at work in hot environments, the considerable volume of published information on heat stress and its effects. This they have achieved in a style which is lucid and direct; the reader who wishes to pursue a particular aspect further is provided with the essential references.

The first six chapters consider the assessment, management, and control of heat stress. After a necessarily brief but lucid discussion of the occurrence of heat stress and man's physiological reactions to it in terms of thermoregulatory mechanisms and acclimatization, consideration is given to the physical factors governing the rate of heat exchange between man and his environment. This leads to a description of the various indices of heat stress and an evaluation of their usefulness in given circumstances. Limiting conditions for various occupations on three criteria—intolerable, just tolerable, and easily tolerable—are developed. The final chapter discusses ways of controlling the hazard and reducing the level of stress by such means as shielding, insulation, and ventilated clothing.

There follow five chapters devoted to the disorders due to excessive exposure to heat. These are considered in four groups—heat syncope, disorders of water and electrolyte balance, disorders with skin lesions, heat stroke and heat hyperpyrexia. For each group the aetiology, pathogenesis, diagnosis, and treatment are clearly described. There are also sections on prevention which merit the attention of the lay reader as much as of the clinician.

The final chapter in the book was contributed by Dr. R. D. Pepler and considers the psychological effects of heat. It is shown that both short-term and prolonged exposure to heat result in a deterioration in the performance of certain skilled tasks; it is claimed that there is no evidence for any true neurotic reaction to prolonged exposure to heat.

There is a fairly extensive bibliography and a useful collection of tables of normal values and conversion

factors in an appendix. The volume is adequately indexed. Many will find this a useful publication.

D. TURNER

Air Pollution—A Survey of Existing Legislation. (Pp. 45; 3s. 6d.) Geneva: WHO. 1963.

Air pollution is 'news'. The problems of control of emissions from industrial and domestic sources arouse widespread concern nowadays. In industrialized countries of the world the reviewer has noticed that the threshold of complaint is lower. Levels of pollution which were tolerated without complaint in the past are now resented. Consequently it is timely and useful to have a survey of the legislation, which public and professional opinion has demanded, in the developing as well as in the developed countries. The difficulties are great in view of the lack of agreement on standards of maximal concentrations of pollutants. Some countries, as this excellent WHO booklet points out, have laid down precise standards. Others refer problems to groups of experts—a happy solution on the whole—for standards vary in accordance with technical developments available at the time. It is of interest to notice that in Czechoslovakia it has been decreed since 1954 that dust pollution from building construction and demolition is controlled, as is the siting of refuse and slag heaps and sewage works. *Verb. sap.* It also provides for a lessening of pollution from road vehicles by requiring that roads and means of communication shall be chosen and organized so that their use presents the least possible risk for the purity of the atmosphere. The report also gives some provisions of draft laws for Poland whereby industrial plants are divided into five classes depending on types of emission, and then they propose health protection zones in which no houses are to be built within defined distances from different types of industrial plants.

The practical value of legislative surveys is lessened by the fact that nations are often reluctant to adopt ideas, however good, from other countries in view of very differing conditions, political as well as technological.

The legislative provisions for the United Kingdom are accurately reported, as one would expect from the high quality of WHO reports. This booklet is to be highly commended.

J. L. BURN

Industrial Toxicology and Dermatology in the Production and Processing of Plastics. By K. E. Malten and R. L. Zielhuis. (Pp. 258; 50s.) Barking: Elsevier. 1964.

This new volume of the Elsevier Monographs is a comprehensive review of the up-to-date literature on the toxicology and dermatology of the production and processing of plastics.

The book begins with a chapter on the chemical composition of plastics and their biological activity; it then explains the classification into thermoplastic and thermosetting resins.

The third chapter deals with the nature and function of auxiliary substances such as plasticizers, accelerators, and antioxidants.

This is followed by an excellent chapter on the skin effects of plastic raw materials. A good description of