more than ever before, the most careful consideration, and the very wisest of constructive statesmanship.

R. K.

A TREATISE ON HYGIENE AND PUBLIC HEALTH WITH SPECIAL REFERENCE TO THE TROPICS.—By Dr. Birendra Nath Ghosh, F.R.F.P. & S. (Glasgow). 5th Edition, 1924. Hilton & Co., Calcutta. Pp. 586. Price Rs. 6 or 9/6d.

We have pleasure in noticing a new edition of this well-known text-book on sanitation, the former editions of which appeared under the joint authorship of Dr. B. N. Ghosh and Dr. J. L. Das. The new edition is from the pen of Dr. Ghosh alone.

This book bears evidence of thorough revision and presents several new features which add greatly to its value as a student's text-book. The chapter on water has been brought up to date, and a good description of the principles of water purification given. The technique of rapid filtration is clearly described and supplemented by an excellent diagram of a Paterson Gravity Filter. The chlorination of municipal water supplies on modern lines is discussed and the value and sanitary significances of tube wells mentioned. A feature of this edition is the number of excellent new pictures and diagrams illustrating the text. Of these we would mention particularly those on the activated sludge process, those illustrating the chapters on night soil disposal, village and "fair" sanitation. Full advantage has been taken of the advances made in the Great War. A very commendable addition is the interpolation at the end of each chapter of the local legislation on the chapter subject; this should bring home to the student the practical bearing of sanitation and preventive medicine in every day life, and will be useful to those appearing in the higher examinations in public health.

The chapter on insects is much improved by new pictures of mosquitoes, fleas, bugs and lice. In a book of this sort it might be better in dealing with insects as disease bearers to convey only established facts; it is stated that the "bed bug is responsible for many communicable diseases," but the charge has not really been brought home in a single instance. The latest work on the bionomics of the sandfly in Malta by Whittingham and Rook has been made use of.

The chapter on restraint of infection has been largely re-written and gives definite and clear descriptions of disinfecting methods. The section on vital statistics has been revised. A few mistakes which occurred in previous editions have been corrected and several interesting tables of Indian vital occurrences added.

The chapters on village sanitation, and fairs, and the appendices giving the duties of district health officers and sanitary inspectors will be useful to those engaged in district sanitary work.

There are a few misprints..... on page 38 "Chloramine" should be NH_2Cl and Farr's formula is not given correctly on page 548. In the chapter on ventilation more stress might have been laid on the physical changes in the air of occupied rooms in the light of Hill's recent work in England, and a description of the kata-thermometer would have added to the value of the section.

The book is very well printed and bound; the illustrations and diagrams are excellent. We thoroughly recommend this edition as a reliable text book for students and workers in public health in the tropics.

A. D. S.

DYSENTERY IN THE FEDERATED MALAY STATES.—By Dr. W. Fletcher, M.D., and Miss Margaret W. Jepps. Studies from the Institute for Medical Research, Kuala Lumpur, No. 19, 1924, pp. viii+82. 44 Illustrations and Plates. London: John Bale Sons and Danielsson. Price 10s. 6d. net.

We trust that this admirable book will have a wide circle of readers in India, for it is very ably and clearly

written, and its lessons in medical practice in the tropics are of very great importance. The Kuala Lumpur Institute is doing an admirable service to tropical medicine in the publication of its admirable series of special monographs. The authors of the present volume, Dr. Fletcher, Bacteriologist to the Institute, and Miss Jepps, formerly a collaborator with Professor Dobell, and now Protozoologist to the Institute, are both of authoritative standing in the subject discussed.

Dysentery and diarrhoea constitute an exceedingly important factor in the death rate in the tropics; in 20 years in the government hospitals in Malaya alone over 47,000 deaths were recorded from these diseases among a population of one and a quarter million. The authors set out to investigate on a large scale basis the answers to several questions:—(a) the relative frequency of amoebic and of bacillary dysentery; (b) the most expedient method of diagnosis during life; (c) the distinguishing post-mortem features of amoebic and of bacillary dysentery respectively; (d) the therapy of dysentery in general; (e) the pathology of the carrier state in bacillary dysentery; and (f) the role played by secondary infections; a not unambitious programme, but one which has been very well carried out, with most instructive results.

Amongst Europeans dysentery is a cause of invalidism, but only very rarely of death; in the Asiatic however matters are different. Most of the authors' material came from the government Home for Decrepit Indians, Kuala Lumpur, where the inmates are mostly coolies who have come down in the world, deserted from rubber and other estates, are saturated with malaria and in the very depths of poverty. The mortality rate of dysentery in such persons is very high. In the Dardanelles during the war the case mortality rate among the troops probably never exceeded 5 per cent.; at the General Hospital, Kuala Lumpur, where a small fee is charged for beds, and a better class Asiatic hospital patient is the result, the case mortality among 1,678 cases observed was 17 per cent.; at the district hospital where the class of patient is much poorer, the case mortality during the same period was 36 per cent. Hence the first great lesson of the book,—the terrible effect of malaria and of poverty in raising the death rate from dysentery; a lesson emphasised by the terrible photographs of such cases, including one of a group of four men who were cured of dysentery, but died at a later period simply from lack of recuperative power. One male adult of 25 years weighed only 46 lbs. "Poverty is the chief factor in the prevalence of fatal dysentery in the Malay States, and one of the principal causes of poverty is malaria." Malaya is a country of immigrants; the indigenous Malayan is comparatively free from dysentery, the poverty stricken immigrants are devastated by it.

Dropsy is noted as a frequent complication, especially in fatal cases. (The authors do not go into the question of the causation of this dropsy; but the reviewer, who has very frequently seen such a condition of post-dysenteric ascites, does not agree with Colonel Megaw as to its special relationship to bacillary dysentery. It is an equally fatal complication in kala-azar; and in both conditions what appears to happen, as stated by Major Acton, is adrenal exhaustion, with adrenalin deficiency, possibly also with calcium deficiency and parathyroid defect. The daily administration of a maximal dose of adrenalin hypodermically to such cases will often help in the most surprising manner to ward off death.)

In common with all recent workers on the subject, the authors find that bacillary dysentery is far commoner than is amoebic; the figures for 983 cases being *E. histolytica* found in 20 per cent., Flexner's bacillus in 55 per cent., and Shiga's bacillus in 3 per cent. The respective mortality rates for these infections were 20, 30 and 55 per cent. Shiga infections were not common but tended to occur in very severe localised outbreaks, choleraic in character, and with high mortality; even the convalescents may tend to die later from wasting and debility. Flexner infection is far more important, and here the authors do well to lay stress upon the unsound policy of

multiplying strains of this type or organism. The more sugars that are introduced into the test, the greater the number of varieties that can be enumerated; but they should all be put collectively into the mannite-fermenting group. Occasionally a true Flexner strain, as proved by its serological reactions, may lose its property of fermenting mannite, but conform to the type of strain in every other respect.

In bacillary dysentery, the disease begins as a surface catarrhal inflammation, which may go on to massive necrosis of the whole of the mucosa; in amoebic dysentery the pathogenic amoebæ lie deeply buried in nests in the colon mucosa and the amoebic lesions commence from beneath the surface and break through into the lumen of the gut. In chronic cases the bacillary lesions are centred around the rectum and lower part of the colon; in amoebic cases the lesions are most numerous in the higher part of the colon, including the cæcum. And here one may draw special attention to the splendid black and white plates with which the authors illustrate every phase of both acute and chronic lesions as met with in post-mortem, with details of the case histories given. This collection of plates is the best which we have yet seen on the disease; and the whole description of the morbid anatomy of different types of dysentery is here very clearly and ably set out.

Double infections were surprisingly numerous. On examination of the faeces, *E. histolytica* and dysentery bacilli were found together in the same specimen upon only two occasions, but at autopsy ten fatal cases of mixed infection occurred; whilst acute dysentery of one type may easily be associated with the presence of a carrier state of the other type. What is more, dysentery is a disease which is not infrequently contracted in hospital by patients admitted for other diseases.

The carrier question is very fully dealt with and on the basis of abundant material. The typhoid carrier has his bacteria living in the gall-bladder; in the bacillary dysentery carrier, however, the bacilli occur in the "retention cysts" first described by Manson-Bahr, little collections of mucus-walled in by granulation tissue; in collections of pus beneath the pigmented scars of healed ulcers, and beneath the edges of chronic ulcers in what is often a tattered and festered mucosa.

The authors conclude with regard to cytological diagnosis that the method is of great value; 88 cases were examined in this way and provisionally diagnosed from the characters of the cellular exudate in the stools. In 69 the provisional diagnosis was confirmed by later finding the specific organism concerned; in 19 the provisional diagnosis was either wrong or doubtful. "A single microscopical examination is of more use as a guide to treatment than a single cultural examination."

Turning to treatment, the results with serum therapy in bacillary dysentery on the whole were very disappointing. An enquiry into the reasons for this shewed that the serum had not lost its potency, but it failed to benefit the patients because lack of nourishment, malaria and other diseases had reduced them to a state of exhaustion where recovery was impossible. In 1921 the cost of the serum employed was £305; had the same amount been expended on better nursing and food, results would probably have been better. In amoebic dysentery emetine at first sight appeared to be a failure; in one instance 65 days of continuous emetine treatment left the patient still suffering from acute amoebic dysentery with pathogenic amoebæ present in the stools. The authors accordingly undertook personal supervision of the emetine treatment, the solution being made up by them personally and given by a reliable assistant. Of 78 patients thus treated with one grain hypodermically daily for 12 days, in 71 no *E. histolytica* could be found, and cure was apparently established. Only one case appeared to be "emetine-resistant." The fault does not lie in the drug, but in its administration. A twelve-day course under personal supervision can usually be relied upon to cure.

The final chapters deal with the secondary infections in dysentery and the viability of dysentery bacilli in the passed faeces.

If we have dealt at some length with this valuable book, it is because we wish that every practising physician in India would read, mark and mentally digest it. He could have no more instructive a guide.

R. K.

SQUIRE'S PHARMACOPOEIAS OF THE LONDON HOSPITALS.—9th Edition, 1924. Revised by W. S. Boyack. London: J. & A. Churchill. F'scap. 8vo, 451 pp. Price, 12s. 6d. net.

THE publication of this new edition of Squire's "London Hospitals' Pharmacopœias" marks the ninth of its series. The book is a systematic comparison of the formulæ of thirty-one of the London hospitals, including the Children's hospitals, and the French hospital. The formulæ are arranged under the headings of the various preparations, so that an immediate comparison may be made between the formulæ of the different institutions.

The original object of the book was to present its readers with a choice of formulæ framed by the medical staffs of the respective hospitals, and the method adopted so successfully then and since has been closely followed in the new edition.

The first edition was published by the late Peter Squire in 1863, and for over half-a-century the book has been a recognised work of reference for the medical profession. The idea of such a book was first conceived as a result of similar work done in the comparison of the three pharmacopœias of the London, Edinburgh and Dublin hospitals.

The various subsequent editions edited by the late Sir Peter Squire show the developments that have taken place during the last half century in the art of prescribing, and the present edition may be said to be an epitome of the practice followed by the leading members of the medical profession in London.

Since the publication of the 8th edition no fewer than 25 of the hospitals concerned have published new editions of their pharmacopœias, and probably during no previous period have there been so many changes both in the old formulæ and in the introduction of new ones. In this respect one of the outstanding features of many of the hospital pharmacopœias abstracted has been the division of their formulary into sections representing the general hospital formulæ and those of the various departments. In view of this, the departmental formulæ when such are given have been specially indicated in this edition to distinguish them from those of the general hospital formulary.

Many of the groups of formulæ are of more than ordinary interest such as the collunaria, collutoria, gargarismata, guttæ, injections, nebulae, etc., indicating as they do a wide range of possible methods of presenting the various drugs and therapeutic agents.

The book will be invaluable to members of the medical profession, indicating, as has been said, representative methods of prescribing the principal drugs in general use. It also forms a practical compendium of the prescriptions employed by the leading authorities of the medical profession. The popularity and the high esteem in which this book is held by medical men is a proof of the practical value of the information contained within its covers. For these same reasons it will also be found extremely useful to dispensers, and should prove to them a valuable aid in understanding and interpreting the wishes of the prescriber.

The section dealing with the preparation of foods and nutrient enemata is worthy of special attention, as it provides careful comparison and elaboration of the formulæ in use in the various hospitals.

The book is published by Messrs. J. & A. Churchill, of 7, Great Marlborough Street, London, W.1, and the price is 12s. 6d. net. A descriptive leaflet briefly reviewing the aims and objects of the book, and giving typical specimen pages, will be forwarded gratis on application to Squire & Sons, Ltd., 413, Oxford Street, London, W.1.