

Reviews.

FOURTH REPORT OF THE WELLCOME TROPICAL RESEARCH LABORATORIES.
Vol. A, Medical. 1911. Andrew Balfour, M.D., &c., Director.

This volume resembles its predecessors in the wealth of original matter which it contains, and in the excellence of its plates, printing and paper.

Colonel H. B. Mathias, D.S.O., R.A.M.C., reviews the measures undertaken to check the advance of sleeping sickness in the Southern Soudan. He believes that *Glossina palpalis* and *G. morsitans* have a much wider distribution in Lado than was supposed. It is probable that a tract of country 80 by 50 miles in area is infected.

Captain L. Bousfield, R.A.M.C., has studied six cases of relapsing fever, in one of which *Pediculus vestimentorum* was the probable carrier. These men had been bitten by bugs, *Cimex lectularius*, which Nuttall has shown to be capable of conveying spirochætes from mouse to mouse. No spirochætes, however, were discovered in bugs collected from the vicinity of these patients. Dr. Balfour regards the spirochæte of Egyptian relapsing fever as not identical with those causing the true African, American, European and Indian diseases. The differences between these varieties are concisely tabulated. A bibliography adds to the value of this useful paper. His study of the crisis and of the effects of salvarsan in spirochætosis of Soudanese fowls has led to curious results, the importance of which is great. Infected chicks were given salvarsan. As soon as the parasites had almost disappeared from the peripheral blood, examination of that taken from the liver, spleen or lung under dark-ground illumination showed that it was swarming with spirochætes in which were highly refractive granules. Some of these spirochætes attracted the attention by their violent contortions which ended in the sudden discharge of these shining particles from one or other extremity. The spirochæte finally became reduced to an inactive empty sheath. Captain W. R. O. Farrell, R.A.M.C., and Dr. A. Balfour reported similar observations on granule shedding of the *Treponema pallidum* in the JOURNAL OF THE ROYAL ARMY MEDICAL CORPS, September, 1911. The contribution by Dr. Balfour on the fallacies and puzzles of blood examination is of great practical value since he enumerates and illustrates various objects of not infrequent occurrence in blood-films which are not noted in text books. He quotes the well authenticated instance of cotton fibres being mistaken for filaria. The preventive measures which were deemed necessary entailed an expenditure of several hundred pounds. The plasmosomes of Ferrata, or Kurloff's bodies in a leucocyte, may be mistaken for Leishman parasites. Lieutenant W. E. Marshall, R.A.M.C., discovered Leishman bodies in the peripheral blood of thirteen cases of kala-azar out of fifteen examined. Though he seldom found more than one parasite in a slide. He infected monkeys by intra-peritoneal inoculation with human splenic blood, but he was unable to convey the disease to dogs. The bug, *C. rotundatus*, has not been procured in the infected

districts. Experiments with *C. lectularius* failed. Captain R. G. Archibald observed a diminution of the alkalinity of the blood of four kala-azar patients. This was to be expected since a similar reduction of the alkalinity occurs in all cases of pronounced anæmia. He noted some improvement in the condition of a boy suffering from kala-azar after intramuscular injections of salvarsan. Unfortunately this treatment has failed in the majority of cases reported.

Dr. Balfour and Captain D. S. B. Thomson describe two instances of keloid-like growths in which Leishman bodies were detected. Archibald has met with a somewhat similar condition. He isolated from the blood of three patients who were suspected to be suffering from enteric fever, a bacillus which fermented dulcitol and glucose, and produced alkalinity in milk. In these respects it resembled *B. paratyphosus* B. The auto-genous vaccine was employed with success in one case.

The water supply of Khartoum is derived from artesian wells 70 metres deep. The bacteriological purity is of a very high order. Dr. Balfour lays stress on the importance of the *B. coli* as an index of contamination. It was not until an impermeable lining had been introduced into the bore-hole for five-sixths of its length that this organism disappeared. The strata are oblique and have out-crops on the river banks near native villages. C. B.

SUPPLEMENT TO THE FOURTH REPORT OF THE WELLCOME LABORATORIES.

This volume is the second review of recent advances in tropical medicine, hygiene and veterinary science. It is a monument of industry, and gives a *résumé* of everything of importance published since the date of the first review. It is invaluable as a work of reference to all practitioners residing abroad, even to the inquirer within reach of well-equipped medical libraries it will prove of great service, for a search in its pages will save him the labour of seeking for the original papers. C. B.

FOR AND AGAINST EXPERIMENTS ON ANIMALS. Evidence before the Royal Commission on Vivisection. By Stephen Paget, F.R.C.S. London: H. K. Lewis, 1912. Pp. xxxii and 344. Crown 8vo. Price 3s. 6d.

This volume has been compiled by Mr. Paget on behalf of the Research Defence Society and makes most interesting reading.

After an introduction by the Earl of Cromer, the Act of 1876 is explained, and the work of the Research Defence Society described. Then follows a summary of the evidence given before the Royal Commission, both for and against vivisection.

The impression left on one after reading this excellent summary is the extraordinary ignorance of fact, the misrepresentation or the blind and narrow-minded adherence to "principle" displayed by many of the witnesses.

We may quote what Lord Justice Fletcher Moulton says in his evidence. After referring to some "absolutely false" poster, he proceeds, "It is not surprising that a great number of people join this organization (anti-vivisection), because they get their ideas from these very serious misrepresentations. They believe themselves to be humane, but

when one realizes the evil that ignorance does, and that the only way in which ignorance can be removed is by the experimental method, and the enormous advantages in the way of saving pain that these results have produced, one must feel that the truly humane men are the people who are defending scientific research." The last chapter gives a summary of the Report of the Royal Commission.

J. C. K.

INDEX OF DIFFERENTIAL DIAGNOSIS OF MAIN SYMPTOMS. Edited by Herbert French. Bristol: John Wright and Sons, 1912. Pp. xii and 1017. Price 30s. net.

This is a handbook for the use of practitioners and serves as a book of reference on those numerous occasions when we come across a symptom or group of symptoms which we are at a loss to explain or which are so far unusual that we feel we would like further light on the matter. Each symptom is taken up in turn and the various conditions in which it is found are discussed with reference to differential diagnosis, whilst at the end of the book there is an extremely copious index running to 166 pages. This is a special and very valuable feature of the treatise, it acts as a cross reference and enables one with the least difficulty to find references to all the other symptoms which may be present in any particular disease. The information that is given is full and the names of the twenty-two contributors are sufficient guarantee that it is reliable. It is somewhat invidious to single out any particular article, but as an example of the great value of the book one might draw attention to the article on Constipation, by Dr. Hertz, which should provide a wholly new outlook on this subject to those who are not already familiar with Dr. Hertz's work.

The editor asks for criticisms and if any are to be made one might say that the weak part of the book is in references to tropical disease, which is a pity, since tropical diseases are just the sort of things which are likely to puzzle practitioners in this country. For example, in the article on Diarrhœa, sprue is mentioned as a possible cause in old tropical residents, but no mention is made of chronic dysentery, which is very many times more frequently a cause of chronic diarrhœa in such subjects. Again in the article on prolonged pyrexia the classical undulant type of Malta fever is mentioned, but not the much more puzzling cases where there is a hectic type of fever with drenching sweats and which resemble acute tuberculosis so much. The description of the ankylostoma ovum with "the coiled up embryo parasite" would only apply to fœces that had been kept a few days and does not tally with the pictures on p. 94.

Apart from these comments we have nothing but praise for the book, which will be immensely useful and should have a wide circulation.

W. S. H.

A MANUAL OF SURGICAL TREATMENT. By Cheyne and Burghard. Longmans, Green and Co., 1912. Pp. xxviii and 570. Price 21s. net.

This is an old friend revised and largely re-written by Messrs. Legg and Edmunds.

It is published in five volumes, of which the first two volumes are now issued, and their arrangement follows on the lines of the previous edition.

The first volume opens with chapters on Inflammation, Suppuration and Ulceration. These conditions are defined and classified, while the appropriate treatment suitable to their various phases are most fully given.

It is in the descriptions of treatment that this manual so pre-eminently excels, and one finds that in connection with inflammation the benefits to be derived from the use of leeches, cautery and bleeding have not been omitted, while more modern methods of treating this condition, such as Bier's appliances for local hyperæmia, have been given more notice than is usually to be found in English works on surgery.

There are six chapters devoted to Wounds, their complications and treatment. These are prefaced by much useful information on operations and their management, but the methods here recommended for the sterilization of sponges and dressings show a lack of confidence in modern aseptic technique.

In the chapter dealing with the treatment of incised wounds, the use of antiseptics is again insisted upon; and it is stated that in private practice the aseptic plan is almost impossible. Surely this is a too conservative view of the subject, and does not represent the experience of all surgeons.

Chapter XI. is devoted to the consideration of syphilis, and the use of salvarsan is well treated by Dr. D'Este Emery.

An account of the older methods of treatment by mercury is not forgotten, and some tables from the "Manual of Venereal Diseases," by Royal Army Medical Corps officers, are given as guides to the treatment of this disease by mercury pill and inunction. The treatment followed till recently at Rochester Row of injections of metallic mercury is also clearly given, and the formula for Lambkin's cream is included.

Chapter XII. gives a review of tuberculosis from a surgical standpoint.

The next chapter deals with tumours, which are classified according to their histological characteristics. Here the authors emphasize the point that when making an exploratory incision in a case of suspected malignant disease, the possibilities of infecting the wound from the growth and of disseminating the disease must never be lost sight of.

The remaining six chapters of this volume are devoted to deformities. The subject is exhaustively treated.

In regard to hammer-toe, the removal of the head of the first phalanx is strongly advised in all but slight cases, while amputation of the deformed digit is not recommended.

This volume is completed by an appendix containing chapters on anæsthetics and on the examination of the blood. The description here given of methods for the induction of general anæsthesia is excellent, but the short notice allocated to spinal and local analgesia is insufficient for the use of a beginner in these methods.

The chapter on the examination of the blood is very good; while not too long, it gives succinctly the necessary procedures to be undertaken for obtaining blood-counts, and describes most clearly various ways useful to obtaining blood for diagnostic purposes.

The second volume of this work opens with a chapter on affections of the skin and subcutaneous tissues, while affections of the lymphatics, their vessels and glands, are subsequently dealt with.

The diseases incidental to bursæ, tendons and muscles are next outlined, and the treatment appropriate to these conditions is fully indicated.

In the chapter on aneurysms, a very fair description has been given of Matas's operation for endo-aneurysmorrhaphy, and the obliterative and restorative methods are each described. Following this is an account of the operations used for the ligation of special arteries, such as the popliteal and internal iliac.

Division II. of this volume describes the surgical affection of bones and their treatments. This subject is particularly well done, and the authors seem to have balanced very nicely the counter claims for fixation and massage in the treatment of fractures, while the necessity for wiring in certain cases is clearly emphasized.

An excellent account is given of the treatment of the fractures more usually met with in general practice, and here a clear description of Hodgen's apparatus for fractured femora has been incorporated. This division of the volume is completed with chapters on tubercular disease in bone, actinomycosis, rickets and disorders of ossification.

Division III. deals with the general consideration of amputations. The present position of amputation in modern surgery is dispassionately discussed, and, thanks to the knowledge of asepsis, the excellent concluding chapters on set amputations are chiefly of historical value, except to the old-fashioned examiner or much harassed student.

Both these volumes are well and copiously illustrated, the print is large and the letterpress clear.

It would, indeed, be difficult to find a more useful guide to surgical practice than is contained in this revised edition of an old friend, the "Manual of Surgical Treatment."

J. W. H. H.

MICROBES AND TOXINS. By Dr. Etienne Burnet. Translated by Dr. Charles Broquet and W. M. Scott, M.D. London: W. Heinemann, 1912. Pp. xvi and 316.

This book is a translation of a publication in the "Bibliothèque de Philosophie Scientifique." It is intended to give a *résumé* of what is known up to date regarding the science of microbes and their toxins. The idea is well thought out and the consecutiveness of the idea is well maintained.

After dealing thoroughly with the biology of microbes and their rôle in nature, the question of pathogenic microbes is considered. This leads to a consideration of the part played in infection by the microbe on the one hand, and by the host on the other; and then follow several chapters on toxins and immunity. There is a very readable chapter on anaphylaxis, and the last three chapters deal with diagnosis, vaccines, sera, and chemical remedies.

There is a useful glossary of terms at the end and a preface by Professor Metchnikoff.

It is a big undertaking to give a comprehensive account of the subject which can be read and understood by others than bacteriologists, but the author has succeeded in placing before the public an eminently readable and very interesting book which will well repay perusal by even the specialist.

J. C. K.

FILARIASIS AND ELEPHANTIASIS IN FIJI. By P. H. Bahr. London: Witherby and Co. Price 6s. net.

In this first supplement of the *Journal of the London School of Tropical Medicine*, Bahr gives the results of his investigations into filariasis in Fiji, the report is very detailed and elaborate, and it is only possible to mention some of the leading points. Filariasis is extremely prevalent in Fiji, 64·8 per cent. of the male and 40·3 per cent. of the female population showing signs of infection in one form or another; of these, about half the cases show signs of filariasis, but no microfilariae in the peripheral blood. Bahr suggests as possible explanations, that the adult worms may be immature, that they may be so situated that the larvæ are unable to enter the circulation, that the female may only produce larvæ at intervals, or that there may be only one sex of adults present; in seven cases the author has seen microfilariae disappear, apparently permanently, from the blood; in each instance inflammatory phenomena and fever preceded the disappearance. The microfilariae exhibit no periodicity, and although *Culex fatigans* is an efficient intermediary, the more usual one is *Stegomyia pseudoscutellaris*, which is the common mosquito of the Fiji group of islands; the author describes in great detail his experiments with this mosquito, as well as with *C. fatigans*, and others. With regard to the identity of the parasite, morphologically the microfilariae are identical with *Microfilaria bancrofti*, and Bahr thinks that from its general characters and from its absence of periodicity, it is the same parasite as "*Filaria philippinensis*," as described by Ashburn and Craig. The adult again is morphologically indistinguishable from *F. bancrofti*, for which the author has proved *S. pseudoscutellaris* to be an efficient carrier. Bahr suggests that the filaria of Fiji is really a *F. bancrofti* which has been modified in the direction of losing its periodicity. The rest of the monograph deals with the question of the relations of elephantiasis to filariasis.

The book is very fully illustrated, and represents the results of an enormous amount of painstaking work. One criticism might be made, and it applies to a very great number of medical writings, that is, that percentages drawn from a small number of cases are utterly illusory, and the labour spent in calculating them is wasted.

W. S. H.

Current Literature.

Beri-beri. — Schaumann (*Transactions of the Society of Tropical Medicine and Hygiene*, vol. v, No. 2, 1911) describes experiments which go to show that beri-beri is dependent on the absence from the diet of two substances: (1) Organic compounds of phosphorus; (2) a substance which is essential to phosphorus metabolism, and which acts as a catalase. The latter substance is found in rice, bran, rice polishings, meat, yeast; in certain grains, e.g., rye; and in certain beans (katjang-idjoe), &c. It can be extracted from these substances by alcohol and by 0·3 per cent hydrochloric acid, after previous treatment with acetone and ether; it is labile, and is destroyed by heating to excess, as in an auto-