each chapter may be read and enjoyed independently by anyone with a minimum of scientific training. If, from the lectures in this volume the reviewer selects some for special mention, this must not be deemed to reflect on the quality or interest of others. Of those with an anatomical bias, some six in number, the one on the blood supply of the pituitary gland by Professor Daniel and on the detailed anorectal anatomy by Professor Walls must be of interest to specialists in these fields. Feldberg, in a lecture with a deceptive title, summarizes much of his work on the pharmacology of the brain in the last decade. Of particular interest is the section dealing with the nature and localized effect of large and small doses of tubocararine. The 'seizure discharge' associated with large doses resembles in many respects the manifestations of epileptic attacks. Dr. Billing in her review of bile pigment metabolism deals in detail with the processes within the liver cell. In view of the increasing number of icterogenic drugs on the market, this is a timely review. Magnesium metabolism, of increasing interest to physicians and surgeons alike, is well dealt with by Dr. MacIntyre, while Professor Wootton devotes a chapter to the painstaking work he has carried out on the intermediaries of tyrosine in phenylalanine metabolism which can be identified in the dialysate from persons treated suffering from advanced renal failure treated by renal dialysis. This study is clearly a baseline from which much interest and illuminating work may flow.

The publication is of the high standard one would expect from the Athlone Press but that even Jove must nod is evidenced by the extraordinary misprint on page 201. At 40/- this book is remarkable value.

NICHOLAS H. MARTIN

BONE METABOLISM IN RELATION TO CLINICAL MEDICINE. Proceedings of a Symposium organized by the Association of Clinical Pathologists and the Association of Clinical Biochemists held in London at the Royal College of Surgeons, September 28-29, 1962. Ed. H. A. Sissons. (Pp. 129. 15*s*.) London: Pitman Medical Publ. Co. 1963.

The symposium consisted of 12 communications, as follows:—Microscopic structure of bone in relation to formation, absorption and mineralization (Sissons); the applied physiology of bone, mainly the chemical physiology (Fourman); A critical appraisal of the methods of diagnosis in metabolic bone disease (Anderson); The histological diagnosis of metabolic bone disease and the appropriate techniques of microscopic examination (Ball); The technical methods of determining calcium levels in serum and their reliability (MacIntyre); The theoretical basis and the significance of phosphatase estimations (King and Moss); The techniques of calcium balance studies and in particular the organization of a metabolic ward (Walker and Judith Collins); The methods available and the techniques of using isotopes in the study of bone minerals (Fraser, Belcher, and Robinson); A clinical account of osteomalacia and rickets (Dent); The chemical physiology of renal osteodystrophy (Stanbury); The investigation of patients with renal stones (Harrison and Still); and finally the definition, recognition and pathogenesis of osteoporosis (Nordin).

Throughout the symposium the stress is on the practical applications in the diagnosis and management of patients. The papers are all brief, clear and to the point, and are followed by appropriate references. This should be a practical and useful guide to anyone interested in metabolic bone disease.

C. V. HARRISON

DIAGNOSIS AND TREATMENT OF RADIOACTIVE POISONING Proc. Scientific Meeting, Vienna, 15-18th Oct. 1962 jointly org. by W.H.O. and I.A.E.A. (Pp. 450; illustrated).

One thing to be said for the use of radioactive substances is that they bring together a remarkable diversity of scientists from different disciplines and nationalities. 'Diagnosis and treatment of radioactive poisoning' is another product of that fertile union, W.H.O. and I.A.E.A.

The chief value of the papers and discussions is as a guide to the quite complex physiology of the elements radium, strontium, the rare earths, and plutonium. The pathological effects, which are in some ways more straightforward, receive less attention but include a good description of the cases of the Marshallese fishermen. One section is devoted to the relevant methods of measuring radioactivity in the body and in biological samples: other papers deal with treatment, in particular the removal of radioactive metals by chelation or other methods.

Few of us, one hopes, can expect to see cases to which this information is relevant but many with a marginal interest will find something of value in these pages.

H. E. M. KAY

AN ATLAS OF VASCULAR RINGS AND RELATED MALFORMATIONS OF THE AORTIC ARCH SYSTEM By James R. Stewart, Owings W. Kincaid, and Jesse E. Edwards. (Pp. xi + 171; 216 figures. $10.75.) Springfield, Illinois: Charles C. Thomas. 1963.

The vascular rings referred to in the title of this atlas are defined as malformations of the aortic arch system capable of interfering with the function of the trachea and oesophagus, while the related malformations are those not fulfilling the latter part of that definition. Surely 'An atlas of malformations of the aortic arch system' would have been a tidier title and would have meant the same.

First there is a brief account of the development of the arch system: next a classification based on the development and depending on the persistence of embryonic vascular segments which normally regress: and finally, forming the major part of the volume, accounts of numerous examples of the many different varieties of malformation. Even those varieties which theoretically could occur, but which have never been reported, are included.

As befits an atlas, the text is commendably brief while the illustrations are profuse. They consist mainly of splendidly clear annotated black and white photographs of anatomical dissections, *x*-ray pictures, and line diagrams.

The book is beautifully produced and carries a full bibliography. It will undoubtedly be of great interest and

practical help to pathologists called upon to unravel the intricacies of these often puzzling anomalies.

T. CRAWFORD

OCCLUSION OF THE SUPERIOR MESENTERIC ARTERY By Benjamin B. Jackson. (Pp. xiv + 141; 41 figures. $7.50.) Springfield, Illinois: Charles C. Thomas. 1963.

The author, a surgeon, has based this monograph on his own clinical and experimental work and on some 1,500 cases of acute and chronic mesenteric artery insufficiency which have, so far, been reported in the literature. The various aspects of mesenteric artery occlusion are considered and the resulting account is well balanced. While the book will probably be of most interest to surgeons, pathologists and others will find much of value in it.

P. D. STEWART

THE PATHOGENESIS OF LEPROSY Ciba Foundation Study Group No. 15. Edited by G. E. W. Wolstenholme and Maeve O'Connor. (Pp. ix + 101; 19 figures. 15*s*.) London: J. & A. Churchill Ltd. 1963.

This is a record of papers read at a special study group in 1963 and of the discussions which followed. Anyone interested in leprosy or Mycobacteria generally will find, in this small volume, much valuable information concerning recent experimental and research work into the pathogenesis of leprosy.

P. D. STEWART

PROGRESS IN MEDICAL LABORATORY TECHNIQUE 2 Edited by F. J. Baker. (Pp. vii + 191; illustrated. 35*s*.) London: Butterworth & Co. Ltd. 1963.

This is the second in a series of articles on new laboratory techniques written by those well versed in them. In comparison with the first it is disappointing. The methods are well described but highly specialized and on the whole are suitable for those working in reference or research laboratories. Those finding this book useful in one subject will have little practical use for the methods described in the others. There are 10 articles all by experienced technicians: two are histological, one chemical, two about cardiovascular bypass, three on haematology, one on bacteriology, and one on virology.

Some of the articles need more drastic editing. For example, advice on Mantoux tests and chest radiographs for laboratory staff is out of place as it is not laboratory technique and has been standard practice for many years. In the same chapter hypochlorite is recommended for pipette disinfection but no strength is given. A method for pyrazinamide sensitivity would have been valuable and also advice on weighing tubercle bacilli safely. Both are mentioned but no details are given.

The book is well set out, clearly printed, and for the most part easy to read. The price is reasonable.

JOAN STOKES

AUTOMATION IN CLINICAL CHEMISTRY By Walton W. Marsh. (Pp. xiv + 132; 38 figs. $6.00.) Springfield, Illinois: Charles C. Thomas. 1963.

This little book is a valuable quick reference to automatic techniques which can be applied in clinical chemical laboratories. Its greatest value will be for those who are contemplating the introduction of machines such as the Technicon AutoAnalyzer into their departments. The early chapters on the principles of the various types of apparatus are the most helpful and the author discusses many practical points not mentioned elsewhere. This aspect could well be expanded in a later edition. The description of individual methods inevitably leads to a discussion of dated techniques though there is much of interest in the less familiar methods using such apparatus as the Benchtop Robot Biochemist.

J. RIDEOUT and M. G. RINSLER

CORRECTION

The author of 'Quantitative estimation of formiminoglutamic acid in urine' (*J. clin. Path.*, **17**, 466) wishes to make the following amendments. The eighth sentence of the Procedure should read 'The resultant coloured solutions are transferred to small cuvettes of 1 cm. light-path and the optical densities measured, without delay, at 540 mμ using the solutions from the corresponding non-ammoniated spots as a blank'. The eleventh sentence should read 'The tubes are stoppered, the stained spots eluted for about 5-10 minutes with occasional shaking and centrifuged if the eluate shows any turbidity. The eluate is measured at 525 mμ'.

CLINICAL CHEMICAL PATHOLOGY, 3rd ed. By C. H. Gray. (Pp. viii + 196; 32 figures. 16*s*.) London: Edward Arnold. 1963.

This is the third edition of a valuable little book. It contains the chemical pathology that an undergraduate medical student must learn set out in very readable and comprehensible form. The whole book can be read in an evening: it should be in the possession of every medical student.

ARTHUR JORDAN

BOOK RECEIVED

(Review in a later issue is not precluded by notice here of books recently received.)

ENDOCRINOLOGY By A. Stuart Mason. (Pp. 136. 36*s*.) London: Staples Press. 1963.