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 tubocurarine. 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. 15s.) 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