## Our Bookshelf.

*Petrographic Methods and Calculations.* By Dr. Arthur Holmes. Part 1: Specific Gravity, Separation and Determination of Minerals, Detrital Sediments. Pp. xv+230. Part 2: The Study of Thin Sections. Pp. xiii+231-383+4 plates. Part 3: Chemical Methods and Calculations. Pp. xiii + 384-515. (London: T. Murby and Co., 1923.) Part 1, 15*s.* 6*d.* net; Part 2, 10*s.* 6*d.* net; Part 3, 8*s.* 6*d.* net.

THESE attractive and handy volumes, which cover the whole field of practical petrology, present in the form of convenient "Parts" the matter contained in the original treatise which appeared three years ago as a single volume. They deal separately with the three divisions into which the subject naturally falls, according as the methods described concern (*a*) raw material, such as rock specimens, crushed rock, or loose detritals; (*b*) material mounted for study under the microscope; and (*c*) chemical analyses.

Part 1 is designed to meet the special needs of the stratigrapher and the worker in sedimentary petrology. It contains 12 tables of data, and numerous illustrations. Part 2 deals exhaustively with determinative work (petrological, microchemical, and micrometric) based on thin slices of igneous, sedimentary, and metamorphic rocks. Nine figures appear in the text, and 25 admirable microphotographs, appropriately described, form a useful appendix. Part 3 expounds with clearness and precision the methods whereby analyses of both minerals and rocks may be probed for characteristics and other significant data. The text is well illustrated and two appendices assemble in convenient form numerical data and tables for purposes of calculation.

The treatise as a whole presents an excellent epitome of the methods which have been employed with any degree of success in the past. Moreover, it is rich in suggestions for extending or adapting such methods to new problems, academic or industrial. The student will be stimulated by it; the research worker will find in it both guidance and help. A. B.

*Laboratory Studies in Mammalian Anatomy.* By Prof. I. W. Wilder. Pp. xi+157. (Philadelphia: P. Blakiston's Son and Co., 1923.) 2 dollars net.

THE work under notice is designed, primarily for medical students, as a guide to a course of practical work in mammalian comparative anatomy and histology, to accompany a series of lectures on human anatomy and physiology. This broadening of the anatomy course for medical students deserves at least passing emphasis. The book, however, should be of service in a wider field. The course is specially based on the smaller mammals, such as the rabbit, guinea-pig, and white mouse, which are easily bred in the laboratory, and on such parts or organs of the larger mammals as are readily obtainable through the agency of the local slaughter-houses and abattoirs, constant reference to and comparison with the human body being made throughout. The author's choice of material for dissection certainly minimises the expense, a question of practical importance where large classes have to be catered for. The book is, therefore, eminently suitable as a text-book of junior anatomy for veterinary students. It should also be of great practical value to the university student of zoology, though it includes rather more work than can be done conveniently in an ordinary degree course. The exercises, however, admit of condensation in the form of demonstrations by the teacher, without loss of continuity to the whole. With this possible use of the book before him, the author has modified the Basle Anatomical Nomenclature as applied to human anatomy to meet the needs of the student of pure zoology. The directions are clear and concise, and the instructions on such matters of technique as injections and the preparation of sections for histological study of great practical value.

*Mechanical Stoking.* By David Brownlie. (Pitman's Technical Primers: Double volume.) Pp. x+234. (London: Sir Isaac Pitman and Sons, Ltd., 1923.) 5*s.* net.

THE author of this work is well known from his published reports of experiments and investigations on steam generating plants; he has had experience with every type of mechanical stoker used in Great Britain, and his views as expressed in the volume before us may be taken as authoritative. Practically the whole of the modern principles of mechanical stoking were understood and applied on a large scale by the year 1845, when it began to be recognised that mechanical stoking, besides minimising black smoke, tended to do away with the laborious and unpleasant jobs of hand-firing and fire-cleaning. The book contains a large amount of excellent descriptive matter such as should be of value to the boiler owner, who may not be an engineer, in the understanding of the various types of stokers; sufficient also is given regarding the proper working conditions to be aimed at in the plant. The question of the efficient burning of coal is of national importance, and this little book should help to lead to a more intelligent appreciation of the problem.

*Historja Naturalna Lodu* (Histoire naturelle de la glace). By Antoni Boleslaw Dobrowolski. Pp. xvi +940. (Warszawa: J. Mianowskiego, 1923.) n.p.

IT is a pity that a volume which deals with so important a field of research should be published in a language that in all probability will render it useless to those who are most interested in the subject. The author, who many years ago sailed as meteorologist with the Belgian Antarctic Expedition, has produced a detailed monograph on the origin, nature, and properties of ice, paying relatively little attention to its climatic and geographical aspects. From a disappointingly brief French summary, we gather that his aim has been to collect the main problems which atmospheric and terrestrial ice present, with special reference to recent researches on the movements of ice and the crystallography of ice. There are detailed tables of contents in French, and with these most readers will have to be content unless they find the copious bibliographies of use. The latter, however, have some notable omissions, which are partly accounted for by the fact that the book was completed in 1916 but not printed until 1923. There are many illustrations of ice structure.