

will be amply rewarded by Prof. Schuchert's competent management of his vast subject.

We are informed by the publishers that the two works are now available as a single volume entitled "Foundations of Geology", price 25s. net.

*Climatology.* By A. Austin Miller. (Methuen's Advanced Geographies.) Pp. x + 304. (London: Methuen and Co., Ltd., 1931.) 12s. 6d. net.

THIS is an excellent book, well produced and well illustrated, and should be of great value to geographers both for reading and reference. After three introductory chapters on the scope of climatology, the elements, and the factors of climate, the major part of the book is descriptive. The author first sets out the modern ideas on the classification of climates, especially those of Köppen, and then arranges his material according to the major climatic provinces—equatorial, tropical, tropical monsoon, etc., ending with two chapters on desert and mountain climates. This logical arrangement is probably the best for teaching purposes, though it breaks up the unity of the continents. The various climatic types and subtypes receive clear treatment, illustrated by charts and diagrams, and completed by paragraphs on the associated vegetation and cultivation; and each chapter is followed by a short bibliography and by two pages giving averages of temperature and rainfall for a number of typical stations. The book ends with an interesting chapter on changes of climate, and a very good index.

The author's physical explanations are sometimes obscure: thus, a cooling breeze surely cannot promote radiation, as stated on p. 13, though it does promote conduction; and the explanation of the vertical decrease of temperature on p. 37 is very muddled. The diagram on p. 184 is also difficult to understand; the fact that the "highest mean monthly maximum on record" (whatever that is) at Cambridge in January is just higher than the "lowest mean monthly minimum on record" in July is not evidence that "the coldest July was actually colder than the warmest January", a statement which is, in fact, incorrect. These are small blemishes, however, and the book as a whole shows that the author has read with understanding as well as widely.

*Commonwealth Bureau of Census and Statistics, Canberra. Official Year Book of the Commonwealth of Australia.* No. 23, 1930. Prepared under instructions from the Minister of State for Home Affairs by Chas. H. Wickens. Editor: John Stonham. Pp. xxxii + 806. (Melbourne: H. J. Green, 1931.) 5s.

THE issue of this year book for 1930 is considerably smaller than for recent years, and yet a comparison with last year's volume suggests that nothing of real importance has been omitted. As usual, the book contains full statistics of every aspect of Australian activity, and, in many cases, the figures for recent years which enable comparisons to be made.

It has been the custom for the Year Book to

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contain at least one specially contributed article. This practice is continued with an article by Prof. Radcliffe Brown on the former numbers and distribution of the Australian aborigines. In making his estimates, for which data naturally vary in different parts, Prof. Brown has divided each State into districts which so far as possible are those recognised by the natives. The final figures give 251,000 as the lowest, and 300,000 as the highest, figure for the original population of Australia. This is equal to 12 per square mile for the continent as a whole with as many as 38 per square mile in South Australia and as few as 6.7 per square mile in Queensland. Prof. Brown admits that much of the evidence on which these figures are based, especially in regard to Queensland, New South Wales, and Tasmania, is not wholly satisfactory.

*The Journal of the Institute of Metals.* Vol. 44. Edited by G. Shaw Scott. Pp. xii + 880 + 56 plates. (London: Institute of Metals, 1930.) 31s. 6d. net.

THIS volume is the last of the present series. In future, the papers read before the Institute of Metals will appear, as before, in half-yearly volumes, but the abstracts will form a third volume, published annually. The papers read at the Southampton meeting include several on aluminium alloys, including an illuminating discussion of the methods of refining the grain size of aluminium by the use of volatile chlorides or of chlorine-bearing vapours. It appears that the entry of water vapour from products of combustion into aluminium and its alloys may be particularly harmful. An interesting monograph on the origin and development of rolled gold contains information which will be new to most readers, on a material in familiar use. Further work has been done on the atmospheric corrosion of copper, and a basic sulphate is shown to be the principal constituent of the product in ordinary atmospheres, largely replaced by the basic chloride in marine situations. Prof. Tammann has contributed a paper on the determination of crystallite orientation in metals, which will be found useful as a summary of numerous papers by that author which have appeared elsewhere. The plates are, as usual, excellently produced.

*Exercices de mécanique.* Par H. Beghin and Prof. G. Julia. Tome I, Fascicule 2. Pp. iv + 337-577. (Paris: Gauthier-Villars et Cie, 1931.) 60 francs.

THIS part of the work, by M. Beghin and Prof. Julia of the Faculty of Science of the University of Paris, contains six chapters dealing with fundamental laws, general theorems, work and power, virtual work, impulsive motion, and Lagrange's equations as applied to this type of motion. Each chapter contains a short theoretical introduction and a collection of illustrative examples worked out in detail. These are usually of a fairly advanced type, and frequently deal with interesting physical or engineering problems. The book should be useful to the teacher in search of problems or to the student working alone from text-books.