

technique and the measurements of monatomic gases and vapours. It is here that the greatest success has been achieved in the association of critical potentials with the single line, double line, arc and spark spectra. Of particular interest is the evidence for the existence of atoms in metastable states. The possibility of a change from one state to another slightly less stable is likely to prove one of the most helpful ideas in the interpretation of both critical potentials and spectra. The diatomic gases present a much more difficult problem, as these molecules may dissociate or be disturbed in so many different ways.

The final chapters deal with the photoelectric effect and the statistical equilibrium between atoms, electrons, and radiation. The author points out the ever-increasing importance of the Wilson track photographs in this field. This volume, which forms the eleventh of the series of monographs issued under the auspices of La Société *Journal de Physique*, fully maintains the high standard set by its predecessors.

*Forme della terra. Trattato di geologia morfologica (Geomorfologia).* By Prof. Gaetano Rovereto. Vol. 1: *Basi e generalità*. Pp. xv + 641 + 16 tavole. Vol. 2: *Tipi regionali*. Pp. viii + 645-1188 + 22 tavole. (Milano: Ulrico Hoepli, 1924-25.) 150 lire.

PROF. ROVERETO, of the University of Genoa, has prepared an elaborate and beautifully illustrated textbook of geo-morphology which should be of wide service to geologists and geographers, owing to its authoritative account of the physical geology of Italy, its copious bibliographies thereon, and its clear explanation of Italian geological terminology. It also includes a wide selection of references to the cosmopolitan literature on the subject. As might be expected from the previous contributions of the author, the volume draws many illustrations from South America, and the section on mountain structure, which is illustrated by an instructive map of the tectonic divisions of Italy, is of especial interest.

The first volume deals with the general principles and processes of physical geology, and the second describes the chief regional types due to them, including coast lands, volcanic regions, glaciated areas, karsts and deserts, plains and mountains. The classifications adopted are in many cases more artificial and elaborate than those used by British geographers, but the book should be the standard authority in Italy, and elsewhere a convenient work of reference to recent work on the exceptionally interesting geography of the Italian peninsula.

*The Vegetation of Burma from an Ecological Standpoint.* By Prof. L. Dudley Stamp. (University of Rangoon Research Monographs, No. 1.) Pp. vi + 65 + 28 plates. (Calcutta: Thacker, Spink and Co., 1925.) 7 rupees.

THIS is one of the first presentations of a study of the vegetation of a British tropical dependency, based on present-day ecological methods. The author, in collaboration with Mr. Leslie Lord, has already given a more detailed study entitled "Part of the Riverine Tract of Burma." The present work shows this area in relation to the rest of the country and provides a general review of the distribution of the vegetation

and its controlling factors. Of these, the chief are elevation, climate, and geology and soil. A brief discussion is given of the effect of each of these, after which the author enumerates, with brief descriptions, the main types of vegetation and their natural relationships. These types are classed under mountain vegetation with six types and lowland vegetation with twenty-five types. Four seral medial stages are also noted. The inter-relationships of the types are graphically indicated in tabular form, where it is clearly seen that with a very high rainfall soil has little effect, but with a rainfall of 40 inches and less its influence is paramount. The discussion on geology and soils is in more detail, and the general relationship of geology and ecology is discussed and summarised in the concluding chapter. The book is accompanied by several maps reproduced as text figures, and is profusely illustrated with photographs of the various types of vegetation discussed.

*An Introduction to Economic Geography.* By Wellington D. Jones and Derwent S. Whittlesey. Vol. 1: *Natural Environment as related to Economic Life*. Pp. xxxvii + 375 + 225 plates + 7 maps. (Chicago: University of Chicago Press; London: Cambridge University Press, 1925.) 5 dollars.

IN spite of its large size, this book covers only a small part of economic geography. It claims to deal in outline with the several factors of the natural environment as they affect human life. A second volume is to treat of the chief economic activities in relation to natural environment. The plan of the book is novel. In the first part a number of exercises are set which the student is to work out by reference to the "textual materials" in the second part and the illustrations and maps in the third part. Atlases, topographic maps of the United States, and outline maps are also to be used. The textual materials are short paragraphs and extracts from authoritative works dealing with different aspects of the subject. The exercises are well planned, and the paragraphs in Part 2 are accurate and fairly representative, and the book may be regarded as a useful introduction to the subject. Examples are mainly drawn from America. Illustrations and maps are clear and well chosen, and a full index is provided.

*Block Diagrams and other Graphic Methods used in Geology and Geography.* By Prof. A. K. Lobeck. Pp. xi + 206. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd., 1924.) 22s. 6d. net.

THE value of block diagrams in geographical and geological instruction cannot be questioned, but many teachers find these difficult to draw, especially on the blackboard, at short notice. Prof. Lobeck has written a volume that should prove most helpful and deserves to be widely known. By the help of several hundred diagrams and sketch maps, he explains the value of perspective and the construction of diagrams from maps and illustrations. Examples of various land forms are given, and it would be a dull teacher who fails to gain something advantageous from a study of the pages. Later chapters deal with isometric diagrams, sketching from photographs, and crystal drawing. Each step in the development of the art has a number of instructive practice exercises.