

OUR BOOK SHELF.

The Geology of Coal and Coal-Mining. By Walcot Gibson. Pp. x+341. (London: Edward Arnold, 1908.) Price 7s. 6d. net.

THIS book is the first of a series of works on economic geology under the general editorship of Dr. J. E. Marr, F.R.S. The author is a recognised authority on the coal-bearing rocks of this country and of South Africa, and his introduction to the geology of coal is a welcome addition to technical literature that cannot fail to prove of great educational value to mining students. General principles of practical significance are dealt with in detail, and the world's coalfields are briefly described. The chemical and physical characters of coal are clearly explained, and chapters are devoted to coal as a rock, the formation and origin of coal, the distribution of coal, fossils as zonal indices, prospecting, the study of an exposed coalfield, and the study of a concealed coalfield. The coalfields of Great Britain are described in three chapters, dealing respectively with the southern, midland, and northern districts, whilst the remaining four chapters are devoted to the coalfields of Continental Europe, the North American coalfields, the coalfields of Africa, India, Australia, and South America, and the coalfields of China, Central Asia, Japan, New Zealand, and the Dutch East Indies.

The book is illustrated by eight well-reproduced plates of fossils. The palæontological chapter will undoubtedly prove most useful, as many mining engineers still fail to appreciate the value of fossil evidence, and the information given by the author will enable the student to see how far one part of the Carboniferous formation may be distinguished from the other. Besides the plates, there are in the text thirty-seven sketch-maps and sections of the various coalfields. Although somewhat crudely executed, these illustrations are clear and instructive. The least satisfactory chapter in the book is that describing the coalfields of Continental Europe, which is disfigured by a number of typographical errors, such as "Taplitz" for Teplitz, "Peckkohle" for Pechkohle, "Creusot" for Le Creusot, "Asturia" for Asturias, and by eccentricities in geographical nomenclature, such as "Pologne" for Poland, "Cracovie" for Cracow, and "the province of Oviedo in Asturia" for the province of Oviedo, or, as it was formerly termed, Asturias.

Die Vegetation der Erde. VIII. Grundzüge der Pflanzenverbreitung in Chile. By Dr. Karl Reiche. Pp. xiv+374. (Leipzig: W. Engelmann, 1907.) Price 30 marks.

THE first half-dozen volumes of the series were concerned with European regions, then followed a monograph on West Australia, after which comes the volume under notice. The State of Chile has been frequently visited by explorers, and among the early writings the histories by Padre Ovallo (1646) and von Diego de Rosales (1647) both claim attention for their phytogeographical descriptions. Subsequently the flora of the country has been studied by many scientific men, including Sir William and Sir Joseph Hooker; but to R. A. Philippi and his son must be accredited the first place in the exploration and identification of the botanical resources of the country, while in recent years the author has contributed in no small measure to a better and more accurate knowledge.

Apart from the consideration of characteristic plants arranged according to their orders, ecology is presented under the various aspects of vegetation forms, plant formations, biology and sketches of the vegetation. The latter are too detailed to convey definite impressions to the general botanist, being more suited to the traveller on the spot; but the morphological notes

and catalogue of plant forms present a good idea of the most striking features met with in Chilean plants. Many of the parasites are remarkable, such as the species of *Phrygilanthus* and *Cuscuta*, and especially the unique *Pilostyles Berterii*, that lives entirely inside its host except when it thrusts out its small flowers; *ianes* abound, and various other climbing plants, while epiphytes are not so numerous, but the genus *Tillandsia* is interesting. The remarks on devices for checking transpiration are supplemented by drawings of leaf-sections, and the notes on the biology of the flowers and fruits are attractive. Comparisons are instituted with the floras of California, New Zealand, and the Argentine as a prelude to a discussion of the origin of the flora.

The author deserves a full measure of praise for the excellent and careful manner in which he has summarised the enormous amount of information contained in more than six hundred contributions. Two distribution charts and fifty reproductions of photographs add to the completeness of the work.

From a Hertfordshire Cottage. By W. Beach Thomas. Pp. viii+294. (London: Alston Rivers, Ltd., 1908.) Price 3s. 6d.

THIS recent addition to the numerous English books dealing with what has come to be known as nature-study is evidently the work of a careful observer of natural phenomena. To a first-hand knowledge of the open-air life of the country Mr. Thomas adds the power of clear and pleasing expression, and his collection of essays deserves to be read widely. The volume is in no sense a text-book; its design is rather to attract attention to the beauties and wonders of familiar natural objects. Some of the essays are sufficient evidence that scientific subjects can be described pleasingly in literary language.

The Open Air. By Richard Jefferies. With illustrations by Ruth Dollman. Pp. xii+234. (London: Chatto and Windus, 1908.) Price 5s. net.

ALL lovers of nature know the writings of Richard Jefferies, and admire his power of bringing a breath of country air, as it were, to accompany the reading of his essays. Many nature students, whether they have previously made the author's acquaintance or not, will delight in this volume. Miss Dolman has succeeded by her well-chosen and skilfully executed pictures in adding charm to work which was already beautiful.

School Hygiene. By Robert A. Lyster. Pp. viii+360. (London: W. B. Clive, University Tutorial Press, Ltd., 1908.) Price 3s. 6d.

THIS book "largely consists of the material of the various courses of lectures to teachers" in the West Riding and Midlands. But the chapters have none of the looseness usually associated with lectures. On the contrary, the book is succinct and well arranged. It incorporates much of the most recent work. It is well adapted for the training of teachers in school hygiene generally, as well as in the special personal hygiene that forms an indispensable preliminary to an effective system of medical inspection of school children.

The Ethics of Nature. By M. Deshumbert. Translated from the French by I. M. Hartmann. With an introduction by Henry James. Pp. 144. (London: D. Nutt, 1908.) Price not stated.

THIS little volume is filled with common-sense teaching. The morality advocated is based upon natural laws, errs rightly on the side of severity, and indicates many conflicts in which the best of men even will find effort enough necessary. Many problems are discussed which have engaged the attention of moralists in every age, and even if they are not solved, the method of dealing with them provides abundant food for thought.