

Our Bookshelf.

Animal Ingenuity of To-day. By C. A. Ealand. Pp. 313. (London: Seeley, Service, and Co., Ltd., 1921.) Price 7s. 6d. net.

MR. EALAND describes in a lively way the ingenious or apparently ingenious behaviour of a great variety of animals, and we strongly recommend his book of wonders to the young in years and to the young in spirit. It deals with such matters as the humble-bee's nest, the wasp that uses a little pebble for beating down the soil closing the entrance to its burrow, the animated honey-pots of the honey-ants, the aquatic beetle that taps the water-lily's store of air, the male water-bug called *Zaitha*, which is made to carry the eggs, and the male cuckoo's abetting of his "paramour's" foisting of her egg into another bird's nest, for he takes advantage of his likeness to a sparrowhawk to distract attention from the "nefarious" deed. This case of "mimicry" takes our breath away, and we must rest awhile. But Mr. Ealand's book is extraordinarily interesting, though he is sometimes not critical enough. There is a good account of birds' nests and eggs, though we do not believe in the woodcock's "all-too-conspicuous eggs." With the usual withered leaves around them they do not seem to us to be conspicuous at all. Of courtships, migrations, modes of hunting, engineering triumphs, parental care, and of the whole gamut of animal behaviour, Mr. Ealand has vivid illustrations to give, and we should like it all, both old and new, without reserve, if he were a little more careful. Let us give one example. As he himself says: "Friendship between a crab and a pond-mussel seems to savour of the improbable," and we should think it did, for, friendship apart, the pea-crab in question lives in the sea. We have referred to credulity and inaccuracy, but we must make another criticism of what, after all, we regard as a wholesome book. Is it right and proper to quote long passages within inverted commas without telling us who wrote them? The illustrations of the book are very clever.

Prospector's Field-book and Guide. By H. S. Osborn. Ninth edition, revised and enlarged by M. W. von Bernewitz. Pp. xiii + 364. (London: Hodder and Stoughton, Ltd., 1920.) Price 12s. 6d. net.

A QUANTITY of new material has been added to this handbook since the last edition was published in 1910. Some of it, particularly those portions referring to the description of ore deposits and ore-testing, has been drawn from the bulletins of the United States Geological Survey and the Bureau of Mines, and various publications of schools of mines and the technical Press. Other additions which have been made are lists of outfits suitable for prospecting, fresh field tests, notes on sampling, and a new chapter dealing with alloy minerals. In face of the claim that the new edition is thoroughly up-to-date, it is curious to find "chloride of formyl" given in the appendix as the chemical name for chloroform.

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A glossary of more than twenty pages gives brief explanations of the technical terms in use, and, in addition, a very full index is provided.

Dictionary of Explosives. By A. Marshall. Pp. xiv + 159. (London: J. and A. Churchill, 1920.) Price 15s. net.

THIS book is essentially a work of reference for the specialist in explosives, and has little interest for the general reader. It consists of three sections. The main section is descriptive, and arranged alphabetically. This is prefaced by a list of explosives classified according to the uses for which they are intended, and followed by a list of the separate ingredients showing the explosives in which each is used.

In the dictionary the composition and some of the properties of a large number of explosives are given, including many of foreign origin, but only those explosives are dealt with which are, or have been, in practical use in the industries. It is easy to see that the author has been handicapped by the reticence of explosives manufacturers with regard to the composition of their products, only about half the authorised explosives mentioned in the 1914 Annual Report of H.M. Inspectors of Explosives, for instance, being described. For the same reason, many of the descriptions lack the detail desirable in a work of this kind.

A considerable amount of useful and accurate information is, however, presented in a compact and handy form. The book is well printed and free from typographical errors.

W. L. TURNER.

Report on the Quantum Theory of Spectra. By Dr. L. Silberstein. Pp. iv + 42. (London: Adam Hilger, Ltd., 1920.) Price 5s. net.

THIS small and unpretentious work is one of great value. Many important developments in the application of the quantum theory to spectra, especially to the fine structure of spectrum lines, have taken place during the last few years, and these are almost entirely due to workers in other countries. The literature of the subject is very inaccessible to English readers, who find it difficult to obtain any real idea of the fundamental advances which have been made, or of the logical suppositions on which such advances rest. Dr. Silberstein would have done good service if he had only collected together the original papers, in translation, as they stand. He has, however, done much more. The matter is presented as an orderly scheme, and great discrimination has been shown, so that there is nothing of real importance omitted from the work. At the same time, the author has modified the original treatment in many respects, and apparently always to its advantage. The work is especially noteworthy in that it gives a clear view of the problems which still await solution. We can give nothing but praise to this book, and can recommend it without reserve to those who are anxious to have a simple and not very mathematical account of a subject which is now fundamental in physical theory.