

fore his generalized statement, even when raised into a law and dignified with a name, is not an explanation of the phenomena. Darwin has convinced men of evolution where Lamarck failed and where certainly Dr. Eimer would fail, not because he discovered any law, but because he discovered an intelligible mechanism, an obvious sequence of cause and effect, which could, and probably did, act.

P. C. M.

OUR BOOK SHELF.

The Birds of Dorsetshire: A Contribution to the Natural History of the County. By J. C. Mansel-Pleydell, B.A., F.L.S., &c. 8vo. pp. i-xvi., 1-179. (London and Dorchester: R. H. Porter, 1888.)

Notes on the Birds of Herefordshire, contributed by Members of the Woolhope Club. Collected and Arranged by the late Henry Graves Bull, M.D., &c. pp. i-xxxii., 1-274. (London and Hereford: Jakeman and Carver, 1888.)

COUNTY lists of birds are still the order of the day. First we have Mr. Mansel-Pleydell's book on the Ornithology of Dorsetshire, a very neat little volume, compiled evidently with the greatest care. The author's long acquaintance with the country and his well-known love of natural history have rendered him the most competent authority on the subject, and he has been aided by many well-known naturalists in supplying him with instances of the capture of rare birds, so that the list is a very complete one. The inevitable Great Black Woodpecker (*Picus martius*) of course appears, on Pulteney's authority, but no recent specimen is extant, nor is likely to be. The Pied-billed Grebe (*Podilymbus podiceps*), which was first recorded by ourselves as a British bird, is placed between brackets, and considered to be "extremely doubtful" by the author. All we can say is that we should not have been godfather to the specimen, to add one more doubtful species to the already overburdened British list, unless we had felt tolerably certain of its authenticity, while the fact of the specimen being immature renders its occurrence as a chance wanderer much more probable than if it had been an adult bird in breeding-plumage. The bird has ten times more claim to a place amongst our stragglers than such species as *Picus medius*, *Pycnonotus barbatus*, and dozens of others. A most interesting history is given of the celebrated swannery at Abbotsbury, with a photographic plate, in which the birds are well depicted, but the keeper's face lacks expression! Some pretty woodcuts by Mr. Lodge are interspersed in the text. The author informs us that *Puffinus obscurus* (p. 113) should be *P. griseus*.

Dr. Bull's "Birds of Herefordshire" is one of the most useful of the county lists; for it contains a complete list of British birds, with special notes on the Herefordshire species. A great deal of care has evidently been taken over this book, which is rendered more interesting by the poetical researches of the author. Mr. Phil. Robinson, when he issues a new edition of his "Poets' Birds" will certainly have to consult this work of Dr. Bull, which contains many quotations we have not seen elsewhere.

R. BOWDLER SHARPE.

Geology for All. By J. Logan Lobley, F.G.S., &c. (London: Roper and Drowley, 1888.)

THE object of this little book is to give an account of the important facts and deductions in geology, without "unnecessary scientific terminology." That there is room for such a work will not be questioned, and doubtless many who have paid no heed to the subject would

begin to study it if only their lessons were made easy and attractive. This was accomplished in old times by Hugh Miller, and more recently by Canon Kingsley in his charming "Town Geology"; and Mr. Lobley, in his enthusiastic preface, raises the hope that he will follow a similar course, and provide "all intelligent readers" with a simple record of the earth's history. In this respect, however, we are disappointed. The work is a condensed account of the leading geological facts and deductions, arranged much after the fashion of an ordinary text-book. Of its general accuracy and clearness we can speak with confidence; and indeed, through his long connection with the Geologists' Association, the author has had ample opportunities of qualifying himself for his task. The work, however, is more adapted for the young student who wishes to pursue the subject, than for the general reader. We fear the patience of the latter will be tried when he reads the explanations—and not always happy explanations—of outcrops, anticlinals, unconformities, and outliers, for there are no diagrams to give pictorial aid. Nor is the chapter on the composition of rocks likely to prove more readable; for surely the accounts of the physical characters of minerals, and the chemical formulæ, introduce "unnecessary scientific terminology." Again, when we read of the acidic and basic rocks, of the seismic focus and the meizoseismic curve, of the "homocircle (*sic*) or equal-lobed tailed fishes," and of those that present a "heterocircle-tailed character," we feel that the author has not sufficiently carried out his good intentions. In the chapter on metamorphic rocks a popular account might have been given of recent researches in the Highlands, and then perhaps the author would not have remarked that "rarely a reversed-fault is seen."

H. B. W.

Sound, Light, and Heat. By Thomas Dunman.
Electricity and Magnetism. By the same Author.
(London: Ward, Lock, and Co., 1888.)

THESE two books are revised reprints of the articles on the subjects which have already appeared in Messrs. Ward, Lock, and Co.'s well known "Universal Instructor." They have been published in their present form for the convenience of students. The work of revision and expansion has been undertaken by Mr. Chapman Jones, the death of the original author having rendered it necessary for other hands to perform this part of the work.

As might be expected, the books are of a popular character, but their value to students of elementary physics does not in the least suffer on this account. The almost entire absence of mathematical statements makes them suitable for the most elementary students.

The method of treatment is that of the orthodox text-book, and there is very little that calls for special remark. They differ mainly from other elementary text-books inasmuch as they are brought quite up to date, especially in electrical matters. The 300 diagrams which are distributed throughout the text, though not of a high order of excellence, will do much towards enlightening the minds of those who read the books.

Though not designed to suit the syllabus of any examining body, they are well adapted for students preparing for the Science and Art Department examinations.

Sea-side and Way-side. By Julia McNair Wright.
(Boston: D. C. Heath and Co., 1888.)

THIS little volume is the first of a series of "Nature Readers," intended for the use of beginners in reading. As a rule, the authors of reading-books take little trouble to excite the interest of children. Their object is to bring together a number of simple sentences, and they seem to be indifferent whether the sentences express sense or nonsense. In the present series an attempt will be made to