OUR BOOK SHELF

A Ride through the disturbed Districts of New Zealand, together with some Account of the South Sea Islands. Being Selections from the Journals and Letters of Lieut. the Hon Herbert Meade, R.N., edited by his Brother. With Maps and Illustrations from the Author's Sketches. (Murray, 1870.)

THE title-page sufficiently describes this book, which is illustrated by some nice woodcuts, and several coloured lithographs of less merit. There is a good description of the Geysers of New Zealand, and of the state of the native insurrection in 1865; with some exciting narratives of attacks on Papuan cannibals in the New Hebrides. A good-sized house, built in a lofty tree and used as a fort, was seen in one of the Solomon Islands. One cannot but regret that the opportunities possessed by our officers on the Pacific Station for investigating the little-known natural history of the islands, are so seldom utilised. The author of this book often shoots, but hardly seems aware that his game could be of any other use than for food. The only natural history passage in the book is the following, dated Upolu, Samoan Islands:—"Saw a very rare bird, the Dodunculus, native name, which is peculiar to this island. It has the feet of a pigeon, beak of a hawk," &c., &c. Dodunculus! native name!! A. R. W.

Metals, their Properties and Treatment By C. L. Bloxam, Professor of Chemistry in King's College, London; Professor of Chemistry in the Royal Military Academy, and in the Department of Artillery Studies, Woolwich. Pp. 296. (London: Longmans, Green and Co., 1870.)

THIS is one of the text-books of science which are being edited by Mr. T. M. Goodeve and published by Messrs. Longmans. The series is intended to supply a want that has long been felt of exact and complete works on mechanical and physical science for the use of schools, and for the self-instruction of working men. A difficulty must have been experienced by many who are engaged in teaching science, when asked to recommend a small and inexpensive text-book, which may at the same time be so simply and clearly written as to be useful to those who have not had a scientific education, and who have not the advantage of being able to attend long courses of lectures. Many popular books on scientific subjects have been written, but they are not unfrequently somewhat inaccurate; difficult questions being often omitted, or, what is worse, treated in a superficial manner which is likely to mislead the student, inducing him to believe that these questions are very simple, and deluding him with the notion that he knows all about them. He is thus frequently disappointed at a subsequent period by finding that on studying the subject more minutely, it is much more complex than he at first imagined, and that many of the simple ideas which he had carefully fixed in his mind have to be discarded, and new ones acquired.

The book opens with an introductory section on the properties and treatment of metals, containing many useful tables, such as specific gravities, fusing points, conductivity, &c. The more common metals used in the arts are alone discussed, so as not to introduce unnecessary complication. The remaining sections of the book treat of iron and steel, copper, tin, zinc, lead, silver, gold, mercury, platinum, palladium, antimony, bismuth, aluminium, magnesium, and cadmium. The last six being far less important than the others, are very shortly described, and only occupy twelve pages.

Each section commences with a description of the ores of the metal under consideration, their composition being given, and also the per-centage of metal present. This is followed by the methods of treating the ores in order to extract the metal, chemical reactions being written in words without formulæ, so hat no preliminary knowledge is necessary. The mechanical treatment of the reduced metal is then detailed, and its useful applications in the pure condition or in the form of alloys. The book is profusely illustrated with good woodcuts, and is written in an extremely interesting manner which cannot fail to attract the attention of the student. This, together with the trustworthiness of its contents and its low price, will render the treatise extremely useful for scientific instruction. If the remaining text-books of the series possess all the advantages which are presented by this one, the thanks of teachers and students of science will be due to the editor and publishers for their undertaking.

Odd Showers: or, Explanations of the Rain of Insects, Fishes, and Lizards; Soot, Sand, and Ashes; Red Rain and Snow; Meteoric Stones; and other Bodies. By Carribber. (London: Kerby and Son, 1870.)

THIS little book is stated on the title-page to be "intended chiefly for young persons;" but others will, doubtless, gain information from it, as to the causes of the sudden appearance of swarms of insects and other animals, and showers of rain tinged with various colours, with respect to which so many popular errors are afloat. The writer derives his experience from a long residence in Canada, and one explanation of so-called "showers of blood" is new to us, that it is caused by the exudation of a crimson fluid by various chrysalides when passing into the imago state. The writer states that, on one occasion, twenty-eight chrysalides of *Vanessa antiopa*, the Camberwell Beauty, which he had preserved in a small room, underwent transformation in a single day in July; when the walls and floor were bespattered with a bright crimson-coloured substance resembling blood, as to give the appearance of a regular shower of the fluid.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his Correspondents. No notice is taken of anonymous communications.*]

Natural Science at Cambridge

IN NATURE for January 12, 1871 (p. 209), there appeared an article headed "Natural Science at Cambridge," which has the air of having been promulgated *permissu* (if not *auctoritate*) *superiorum*. It is extremely gratifying to read the list of exhibitions and scholarships founded or proposed to be founded in certain Colleges in this University, but the concluding sentence of the article has struck me as having been penned by one with whom the wish was father to the thought. It is said that "most of the Colleges are understood to be willing to award Fellowships for merit in Natural Science equivalent to that for which they are in the habit of giving them for Classics and Mathematics." Now this is entirely at variance with my own opinion on the subject, formed on a somewhat wide acquaintance with members of various colleges; and I would beg of the writer to be good enough to inform the public through your columns, first, how many Fellowships have solely and actually been awarded for merit in Natural Science, and, secondly, which of the sixteen colleges, besides Trinity, have absolutely declared that a Fellowship shall be the reward of great proficiency in Natural Science. I need not say how glad I shall be to find that my opinion is erroneous. M. A.

Cambridge, Jan. 28

Yellow

IT was not from any experiments of my own, but on the authority of Helmholtz, that I asserted the identity of brown with a dark yellow or orange. He found that the pure red and yellow of the spectrum gave the various shades of brown when seen by the side of more brilliantly lighted white surfaces. (Physiologische Optik, p. 281.) There is therefore nothing in the nature of the colour to exclude complete saturation, although it may well happen that most of the browns we ordinarily see fall somewhat short of it.