bacteria to lose their power of producing pigment, either temporarily, as in the case of the *bacillus prodigiosus*, or even permanently, in the case of the *bacillus ruber* of Kiel. We are, therefore, surprised at being categorically informed, both in the introduction and in the appendix of this work, that pigment is formed especially under the influence of light, a statement which is entirely out of harmony with the observations of Laurent, and for which the experimental foundation should have been carefully set forth.

These and other points of a similar character will doubtless be rectified by the translator in preparing a second edition, which it would be well to amplify with references to literature, with which even an elementary student in a new science must at once be made familiar. The illustrations are in the majority of cases very good, and contrast most favourably with those we have seen in some recent works of the kind in which photographic representations have been attempted. The coloured prints of cholera and typhoid bacilli are especially excellent.

OUR BOOK SHELF.

Exploration of Mount Kina Balu, North Borneo. By John Whitehead. (London: Gurney and Jackson, 1893.)

MR. JOHN WHITEHEAD belongs to the much-maligned class of field-naturalists. For the purpose of obtaining a knowledge of the ornithology of Mount Kina Balu, he spent nearly four years collecting in the region, and accumulated a large number of new species. In addition to visiting North Borneo, he stayed some time at Java and Palawan, and made an expedition into the State of Malacca. The rather cumbersome volume before us recounts the story of these explorations. It consists of 192 pages of general description and 115 pages of matter reprinted from the proceedings of various Societies. Thirty-two excellent plates illustrate specimens from the extensive zoological collections made by Mr. Whitehead, and the places and peoples seen by him. It need hardly be said that these add considerably to the value of the book. Several woodcuts are also included. It would be ungracious to find fault with Mr. Whitehead for looseness of expression, since he craves indulgence for his "literary shortcomings." He found it far easier to explore an unknown tract of country than to write an account of his travels. Like some other travellers who have given to the world accounts of their wanderings, Mr. Whitehead dwells too much on trivialities. But for all that, there is much that is new and interesting in the book, and one cannot but admire the indomitable spirit which carried the author through numerous difficulties, and enabled him at last to reach an altitude of 13,525 feet on the mountain of Kina Balu.

Pillow Problems. Curiosa Mathematica, Part II. By Charles L. Dodgson, M.A. (London: Macmillan and Co., 1893.)

IN these pages we have a series of problems worked out, or, as the author says, "nearly all thought out during sleepless nights." In the preface he informs us the exact method of procedure, and the way in which he obtained his results. The problems are about seventy in number, and deal with many branches of mathematics, but chiefly with algebra, plane geometry, and trigonometry. The order of the three and only chapters is as follows: questions, answers, and solutions; and he explains the reason for this peculiarity in the preface. Considering the problems themselves, one is apt to think that some of them at least are not so very hard, but the publication of them will be found very interesting and perhaps useful to those of ordinary mathematical powers, who may like to follow the same routine way of thinking as that adopted by the author.

The A B C Five-Figure Logarithms. By C. J. Woodward, B.Sc. (London: E. and F. N. Spon, 1893.)

THIS small book of logarithms may be said to be a second edition of the tables previously published by the author. In addition to the tables of mantissæ of numbers, the same A B C system has been applied to logarithms of arc functions, with only a slight difference in the method. Besides these the square roots of numbers (from 1 to 100) to three places of decimals are given, and a table of "numbers often wanted," and of the densities of gases, weights and measures, &c. To facilitate the finding of the logarithms, &c., a lateral index is adopted. Besides being a compact and convenient set of tables, the worker will find them easy to use, and accurate enough for such calculations as are generally met with in the physical laboratory, the class-room, &c.

Enunciations in Arithmetic, Algebra, Euclid and Trigonometry. By P. A. Thomas, B.A. (London: Macmillan and Co., 1893.)

IN these pages one is treated to a selection of some of the chief questions that relate to Arithmetic, Algebra, Euclid, and Trigonometry. Stress is laid on the more elementary parts of each subject, and several typical problems are inserted. The latter relate chiefly to the arithmetical and algebraical sections, while the Euclid section is accompanied by important riders. The book should prove acceptable to those revising these subjects, whether for examination or not, and will be, both for teachers and taught, a useful companion to the text-books in use.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Thoughts on the Bifurcation of the Sciences suggested by the Nottingham Meeting of the British Association.

THE opening paragraph of the President's address contains this sentence: "We have come to learn what progress has been made in departments of knowledge which lie outside of our own special scientific interests and occupations, to widen our views, and to correct whatever misconceptions may have arisen from the necessity which limits each of us to his own field of study."

A most worthy and attractive ideal. Something of this kind of intersectional information does go on at these meetings; but to how small an extent! It may be said, indeed, that except for the presidential address and the two evening lectures, everyone sticks to his own section, and discusses matters lying in his own groove.

This state of things is perhaps inevitable, but it is none the less to be regretted. It is extremely difficult for anyone actively engaged in the work of any one section to attempt to attend any other. I myself used to make the attempt, but concluded that the results were too precarious and uncertain to be worth the dissipation of energy involved, and have now abandoned it. Yet there can be little doubt that if the state of things postulated by the President were feasible in practice it would be a distinct gain.

But it would seem as if the modern tendency were all in the other direction. Papers in the two great scientific departments are read as far as possible on different days at the Royal Society, and are published in separate volumes. Such an arrangement is decidedly convenient: I am not repining at it. The