

alphabetical order of all the known American tribes and their languages. Each volume has a good useful index, a most important item in a work of this nature.

The abundant equipment of maps adds greatly to the value of the volumes, as the numerous illustrations do to their interest.

OUR BOOK SHELF

Geometry in Modern Life, being the Substance of Two Lectures on Useful Geometry, given before the Literary Society at Eton. By J. Scott Russell, F.R.S. (Eton: Williams and Son, 1878.)

IN a recent number (*NATURE*, vol. xviii. p. 263) we took occasion to suggest that the usefulness of a school scientific society might still further be increased by calling in the assistance of scientific men to deliver lectures which should be open not merely to the members, but also to a wider circle. The literary Society at Eton has, we believe, adopted this plan on very many occasions; recently it will be remembered that Mr. Gladstone addressed the society on Homer. Mr. Russell's lecture is a full one, and on the lines which it follows, a useful one. "Geometry is a pure science, gives logical training, is a discipline of thought, is an instrument of human culture, and has high educational value. But geometry is equally the development of a method pervading nature; its mastery gives man a power to govern matter. The training which enables him to comprehend the mechanism of the universe, enables him also to make creations of his own in harmony with those greater designs of which his own are but a small portion. These two uses of geometric education the one purely gymnastic, the other practical and technic, may be so combined that each shall aid and not impede the other. The order, number, and measure which pervade the universe can be easily brought within the scope of elementary education, and so form the fit preparation for scientific observation and experiment in later life, by means of which the standard of application of abstract truths to matter and events in human life are determined and made familiar. But the one learning cannot be too soon begun, nor the other too long continued, and each is a material aid to the other." This extract shows the author's views, which he has worked out in some detail. Starting from the Greek geometry, he passes on to useful geometry: its applications to land-measuring, trigonometry, navigation. He touches also on numbers, goes on to symmetry, harmony, melody, then to light, shape, and shadow. He closes with a chapter on matter, force, and motion. To sum up, the whole furnishes a quantity of illustration from an eminent practical man, which is likely to be profitable to teachers in search of such illustration—to allure the "what's the use of it?" boys who form a part of every mathematical master's geometrical classes.

Die Geologie der Gegenwart. Dargestellt und beleuchtet von Bernhard von Cotta. Fünfte umgearbeitete Auflage. (Leipzig: J. J. Weber, 1878.)

THE appearance of a fifth edition of von Cotta's well-known work is a sufficient proof of its popularity—a popularity which, in spite of some unfortunate drawbacks to its usefulness, we cannot but regard as being well deserved. Since the first appearance of the volume in 1866 it has been steadily growing in bulk, and in the present edition the author has brought his work up to date by noticing the principal contributions which have recently been made to geological science. Among such additions we may point to his notices of the method of study of rocks by the means of the microscope, of the new classification and nomenclature of the stratified rocks suggested by Carl Mayer, of the results of the

Challenger expedition, of the latest speculations on the causes of volcanic activity and the nature of meteorites, and of Croll's theory of the recurrence of glacial periods. The coloured frontispiece now added to the work, we can scarcely regard as an improvement, seeing that it tends to perpetuate those views of the restriction of certain classes of volcanic products to distinct geological periods, which, though so frequently insisted upon by German petrographers, do not appear to be sustained by extended observation in the field.

Ocean and Her Rulers. By Alfred Elwes. New and Revised Edition. (London: Griffith and Farran, 1878.)

Under the Red Ensign. By Thomas Gray. (London: Simpkin, Marshall, and Co., 1878.)

THESE are two good books, each in its way. The former is a narrative of the nations which have from the earliest ages had dominion over the sea, comprising a brief history of navigation down to the present time. It is evidently intended for boys and is likely to interest the more thoughtful of them and send them to works which will give a more detailed account of the peoples whose exploits by sea are told, and lead them to take an interest in geographical discovery. The reading is rather miscellaneous and unconnected, and the information sometimes undigested, but as a whole the book is useful and interesting.

Mr. Gray's booklet is one that will prove thoroughly useful to parents intending to send their boys to sea, as well as to the boys themselves. Mr. Gray knows well what he writes about, and the information and advice he gives as to the choice of a sea-life as a calling, how to get a boy launched into it, what kind of ship to choose, how the boy should conduct himself, what books he should read, and a multitude of other points are admirable. We are glad to see that among the books he recommends a large proportion are standard scientific works.

Memoir of the late Alfred Smee, F.R.S., by his Daughter. With a Selection from his Miscellaneous Writings. (London: George Bell and Sons, 1878.)

MR. SMEE was in many respects a remarkable man, and this readable memoir by his daughter will, we doubt not, be acceptable to those who knew him personally or through his works. An Appendix contains about forty papers, letters, pamphlets, &c.; these occupy quite two-thirds of the volume.

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. No notice is taken of anonymous communications.]

[The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to ensure the appearance even of communications containing interesting and novel facts.]

An Intra-Mercurial Planet

WITH reference to the important announcement, by telegram, of the discovery by Mr. Watson of an intra-Mercurial planet during the late eclipse of the sun, it may be worth remarking that the position of θ Cancri agrees very well with that given in the telegram published in *NATURE*, and that there may be a possibility that the object observed is in reality this star. The position of the suspected planet recorded by Mr. Watson is R.A. 8h. 26m., and N.P.D. 72° ; the apparent place of the star, computed from the mean place given in the new Nine-Year Catalogue for 1872, January 1, is, for July 29, R.A. 8h. 24m. 40s., and N.P.D. $71^\circ 29' 40''$. The magnitude of this star is, however, smaller than that given by Mr. Watson, that in the British Association Catalogue being $5\frac{1}{2}$, and that in Argelander's