

hardly be admitted; the persistence over large areas of the different palæontological zones of this formation shows that the Liassic sea formed one great life province, and that however it may have been broken up by projecting headlands or insular masses of land, there was free communication between all its parts. That the water was shallower in some places than others is likely enough, and variations in depth would seem to be sufficient to account for the changes which occur in the lithological character of the Lias in North Yorkshire without invoking the neighbourhood of an extensive shore line. A very interesting fact is the decided unconformity between the Lias and the Inferior Oolite east of Easingwold; the upheaval to which it is due was only the forerunner of the still more important movements which a little later on drove back the sea and established estuarine and terrestrial conditions over a large part of the North Riding.

It is not necessary that a scientific work should be a model in point of style, but it is a matter for regret when scientific writers neglect the graces of composition, and it is certainly a blot on the work before us that the writing is occasionally obscure, and that instances of somewhat slipshod English are not uncommon in it.

If we stop here it is not for want of more to say; a book as rich in matter as this would furnish texts for many another lengthy disquisition. We may fairly congratulate the authors on having produced a monograph which will take a high place among standard works on local geology, and may be recommended as a model for writings of a similar kind. We wish every natural geological district in our island was likely to be worked out with the same amount of patient labour and faithful description as Messrs. Tate and Blake have bestowed on the Yorkshire Lias.

A. H. G.

#### OUR BOOK SHELF

*Die Fauna der Clavulina Szabói Schichten.* Von Max von Hantken. I. Theil; Foraminiferen. Mit 16 Tafeln. (Buda-Pesth, 1875.)

EVERY visitor to the Loan Exhibition of Scientific Apparatus at South Kensington must have noticed in the Geological Department some beautiful series of preparations of Foraminifera and Bryozoa from Hungary. These have been sent by Dr. von Hantken, the Director of the Hungarian Geological Survey, who has greatly distinguished himself by the remarkable skill with which he has studied these minute fossil organisms. One of these series of fossils, which English geologists have now such a valuable opportunity of studying, illustrates the remarkably rich Foraminiferal fauna of the zone of Clavulina Szabói in Eastern Europe, a fauna which is very admirably described in the work before us. This memoir is a reprint of a portion of the fourth volume of the "Mittheilungen aus dem Jahrbuche der kön. ungar. geologischen Anstalt," which is published in both the Hungarian and German languages.

The Clavulina Szabói Schichten are a series of clays, marls, and marly limestones, sometimes glauconitic, which are situated at the junction of the Eocene and Oligocene formations, and appear to have a wide distribution in Western Hungary. These strata are very remarkable for the wonderful richness of their fauna, especially in Foraminifera, Bryozoa, Echinoderms, and Mollusca, while in certain portions of the formation great numbers of fish-remains have also been found. No less than 213 species of Foraminifera have been described by Dr. von Hantken as occurring in these beds, and their distribution in the Eocene and Neogene strata of Eastern Europe, as

well as in the strata which most nearly correspond in geological age with the zone of Clavulina Szabói in Germany and Italy respectively, are shown by the author in a very useful table. The lithographic plates with which this monograph is illustrated are beautifully executed, and reflect the highest credit on the present condition of the art of book-illustration in Hungary. Although the dimensions of each of the forms described is given with great exactness in the definition of the species, we think it is unfortunate that the extent to which each figure is magnified is not also indicated either on the plates themselves or in the descriptions which accompany them.

J. W. J.

*Elements of Algebra for Middle-Class Schools and Training Colleges.* By Edward Atkins, B.Sc. (Collins's School Series, 1876.)

THIS is a handy book, covering the ground usually occupied by similar treatises on the subject. It is a fairly independent work, keeping near the beaten track as regards results arrived at, but giving these results in many cases by new modes of proof. The chief additional features of interest are in some articles on "Imaginary Quantities," "Properties of Numbers," and "Determinants." We do not like the use of the expression, "It is easily found," and so on, in a few passages, and we must point out that there are a great many mistakes, not merely typographical ones. These are faults which can easily be rectified in a second edition. Care also should be taken to correct the numerous wrong references.

#### 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.]

Carl Jelinek

ALLOW me to correct a little inadvertency in the necrology of Carl Jelinek (NATURE, vol. xv. p. 85). In line 8 from commencement "Prague" should be read instead of "Vienna," as the former and not the latter observatory was then under the direction of Kreil. Jelinek passed four years (1843-1847) as assistant in the Vienna observatory, then under my direction, and published in that period a valuable memoir on hygrometrical observations made at Vienna in the years 1829-1845, besides several astronomical observations and computations in the *Astronomische Nachrichten*, and in the *Annals of the Vienna Observatory*.

CH. DE LITROW

Vienna, November 29

#### Ancient Solar Eclipses

IN NATURE, vol. xv. p. 65, is given the result of calculation of the solar eclipse of June 14, B.C. 763.

As soon as notice of the probability of this eclipse was given by Sir Henry Rawlinson (in May 1867), I asked the assistance of Mr. Hind for its computation. Mr. Hind most kindly acceded at once to my request, and sent to me on June 19, 1867, the following results, which he permits me now to offer to NATURE. They were transmitted to Sir Henry Rawlinson on June 20, 1867, and to Mr. George Smith on October 17, 1867.

SOLAR ECLIPSE, - 762, JUNE 14-15.

*Path of Totality, according to the Lunar Tables of Hansen and the Solar Tables of Le Verrier.*

Greenwich Mean Solar Time, B.C. 763.	Northern Limit.		Central Line.		Southern Limit.	
	Long.	Lat.	Long.	Lat.	Long.	Lat.
h. m.	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "
June 14, 18 54	35 23	37 52	36 3	37 7	36 44	36 20
19 0	38 29	38 53	39 6	38 4	39 43	37 14
19 6	41 33	39 45	42 7	38 54	42 39	38 3
19 12	44 35	40 31	45 4	39 38	45 32	38 46
19 18	47 34	41 9	47 59	40 14	48 23	39 21
19 24	50 32	41 40	50 52	40 45	51 12	39 49