

or blended with each other by insensible gradations, are *primâ facie* entitled to the rank of species." (British Conchology, vol. i., Introduction, p. xix). Now we may see several species of *Rissoa* living under the same stone between tide-marks, several species of *Limnaea* in the same stream or ditch, and more than one species of *Helix* feeding together on the same leaf. In such cases there is no fusion or confusion of species; each has its own definite limits, and retains its own peculiar characters. I say nothing of genera and more comprehensive groups which form communities in a still more diversified fashion, but are equally free from intermixture.

J. GWYN JEFFREYS

OUR BOOK SHELF

Echinides du Département de la Sarthe, considérés au point de vue zoologique et stratigraphique. Par Cotteau et Triger. (Paris: Bailliére, 1855-1869. London: Williams and Norgate.)

We fear that some time must elapse before science will resume its place in unhappy France; but in the meantime its professors, who are innocent of the mischievous and insane acts which have caused so much ruin, demand our heartfelt sympathy. M. Cotteau, of Auxerre, whose work we are about to notice, is well known to English geologists, and is highly esteemed by them for his long and conscientious labours in the field of Mesozoic echinology. His coadjutor, M. Triger, died during the progress of the work. It consists of two royal octavo volumes, one containing an account of Echinoderms found in the Jurassic and Cretaceous formations in the Department of the Sarthe, the other having sixty-five well-executed plates of species, besides several charts to show their geological and stratigraphical distribution. It appears from the preface that this most creditable production of French palæontology was commenced in 1857, and finished in 1869. We therefore regret to observe that M. Cotteau was not aware of Dr. Wright's admirable monograph on British fossil Echinodermata, which was published by our Palæontographical Society in 1856, and which goes over a great deal of the same ground as M. Cotteau. Had the latter author consulted it, he would probably have avoided some mistakes, e.g. in attributing the specific name of *Pseudodiadema hemisphericum* to Desor instead of to Agassiz. A comparison of the figures of this and other species given in both works is decidedly favourable to the British artist (Mr. Bone) as regards accuracy and completeness, although MM. Levasseur and Humbert are deservedly eminent in their style of lithography.

The Echinoderms found in the Jurassic and Cretaceous formations must have inhabited a soft bottom in seas of considerable depth, judging from the present habits of allied species; and their variability was not less in those remote periods of the world's history than it was in the epochs which preceded and followed.

J. G. J.

LETTERS TO THE EDITOR

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

The Paris Observatory

HAVING read only yesterday the agonising account written by M. Marie-Davy and countersigned by M. Delaunay, descriptive of the Communists having made the Paris Observatory one of their chief strategical points, of the domes of the observatory having five hundred bullet-holes through them, and of the rabid attempts made by the citizens in arms, before retiring on the ap-

proach of the Versailles, to burn or blow up the whole building, I am not a little surprised to find in NATURE of June 8, received here this morning, a statement to the effect "that the Paris Observatory had suffered scarcely any injury up to the end of the second siege. No delegate of the Commune had presented himself either to take possession of it or to blow it up."

I presume that you wrote in ignorance of the real facts, and perhaps not without some intention of whitewashing the poor Communists from the exaggerated denunciations which have been poured on them since their fall; yet neither they nor you should object to true accounts of what they actually did while in power appearing before the world without menace and without favour.

The mere showing of the Commune during this second siege, and still more its international organisation, seems to have surprised most persons; yet the character of the association, and its imminence under the feet of all the Governments of Europe, was duly noted in the section on Metrological Legislation of my report presented to the Board of Visitors of the Royal Observatory, Edinburgh, in June 1870; the association, though political, having obtained mention there on account of its having adopted the scientific metrical system of weights and measures, and professing to find it a most efficient agent for assisting in breaking down the barriers between nations, and rooting up traditional customs and beliefs. I must confess, however, that I was not prepared for these revolutionaries taking up so very early in their outward career, as this their first and just-concluded essay in Paris, the chronological department of the metrical system, thereby repudiating, as the order found on General Delescluze indubitably shows, both the Christian Era and the accustomed months, for decimal periods of days and the era of the first French Revolution. In my book, "Our Inheritance in the Great Pyramid," published in 1864, I did indeed remind that that most revolutionary method in chronology was originally a part of the metrical system, and though deposed under Napoleon Bonaparte, might be expected to reappear when the present promoters of French metrology in this country had acquired more boldness; but here is the accomplished fact upon us at this very moment, and it would be well for all those metrical agitators who were so loud at the British Association last summer in Liverpool in their outcries to Government to make the metrical system compulsory throughout this country, now to declare honestly whether they are inwardly with the Communists in desiring ultimately the abolition of the Christian era and the destruction of the week of seven days. C. PIAZZI SMYTH

15, Royal Terrace, Edinburgh, June 9

Science Lectures for the People

It is all very well to say, Let our children be taught science in the schools; but that does not meet the need of a large section of the nation, the product of the schools of a former generation. Many hard-worked men who had no scientific teaching whilst at school, have now acquired the wish to know more of nature's mysteries, but know not whither to turn for aid. Books are plentiful, but it is very tiresome to wade through dry pages, scientifically dried of their sap by the use of terms which are not commonly understood—especially after the wearying labours of the day. Experimental lectures, like those at the Royal Institution, but a little more specialised, are wanted for popular use; the question is, How are we to get them? Are we to go to Government for aid, or shall we bestir ourselves and voluntarily endow these lectures?

Surely Huxley or Tyndall would be quite as much sought after as Spurgeon if they came forward and announced a series of lectures; St. James's Hall would be as crowded as the Tabernacle if they held a weekly lecture; pew-rents would be as certain of collection from scientific as from religious devotees. Those busily engaged professors can indeed hardly be asked to undertake such a task as this; but any competent man of science, able to explain the facts of science in popular language, might reckon on public support if he made such a venture as this. Let him, for example, give a series of twelve lectures on Biology, as it affects our daily existence; not wandering into the remote regions of extraordinary phenomena, but simply expounding ordinary life laws. Here would be a subject refreshingly new and interesting to thousands of City-born and bred toilers.

The lectures, if on week days, must be after office hours—from nine o'clock to ten, say; and in some hall easily accessible, as St. James's.

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