

or in the form of myriads of separate organisms, as the globigerinae and ventriculites of the chalk. The rhizopods, like the corals of a shallower zone, form huge accumulations of carbonate of lime, and it is probably to their agency that we must refer most of those great bands of limestone which have resisted time and change, and which come in here and there with their rich imbedded lettering, to mark, like milestones, the progress of the passing ages."

The following passage, referring to another aspect of the question, was published in the 114th Number of the "Proceedings of the Royal Society":—

"The vitreous sponges along with the living Rhizopods and other Protozoa which enter largely into the composition of the upper layer of the chalk-mud, appear to be nourished by the absorption through the external surface of their bodies of the assimilable organic matter which exists in appreciable quantity in all sea-water, and which is derived from the life and death of marine animals and plants, and, in large quantity, from the water of tropical rivers. One principal function of this vast sheet of the lowest type of animal life, which probably extends over the whole of the warmer regions of the sea, may possibly be to diminish the loss of organic matter by gradual decomposition, and to aid in maintaining in the ocean the 'balance of organic nature.'"

I cannot at present enter into detail, as the whole subject of the conditions of life at great depths will be fully discussed in the second part of the preliminary report to the Royal Society on the *Porcupine* Expedition. I may mention, however, that the much more extended researches of the past summer have increased our confidence in the general accuracy of our former conclusions; while careful analyses by the physicists who accompanied the expedition have proved the existence in the water at all depths of a very appreciable and tolerably constant proportion of organic matter in a condition suitable for assimilation by animal organisms.

WYVILLE THOMSON

January 7

My friend Mr. J. Gwyn Jeffreys informs me that he is not answerable for the postscript to his letter, a sentence in which I noticed in a letter published by you in the last number of NATURE. Will you kindly insert this statement.

Lee, January 10

P. MARTIN DUNCAN

[The postscript was editorial, and so appears on the face of it.]

NOTES

It was announced by Mr. Lockyer at the meeting of the Royal Astronomical Society, on Friday last, that the great refractor of 25 inches aperture, constructed by the Messrs. Cooke, of York, is so near completion that it will be erected in the observatory prepared for it at Gateshead early next month. The completion of this magnificent instrument, with which Mr. Newall has endowed science, marks an epoch in astronomy. Mr. Newall has in fact done what the French Government has already done, and what our Government ought to have done; he has furnished observers with an instrument capable of grappling with the physical problems which have now to be solved—one on a level with our present requirements; and we doubt not that when it is once at work, the wish of its owner, that science may be advanced by it, will be amply fulfilled.

WE are informed that the Senate of London University have proposed to establish a Faculty of Science.

THE last number of the journal of the German Chemical Society contains a biographical sketch of the late Professor Graham, in which his scientific merits are more fully analysed than in the interesting sketch lately published by Professor Williamson in the columns of NATURE. Professor Hofmann, the author of the German biographical notice, has added a photograph of the late Master of the Mint, and an autographic copy of a letter of particular interest to the society. It runs as follows:—"4, Gordon Square, London, Dec. 28, 1868. My dear Hofmann,—I am much gratified by the receipt of your kind letter, and have since received the official intimation of my election as an honorary member of the Berlin Chemical Society over which

you preside, which I esteem a high compliment and great honour. I have written a line to Messieurs the secretaries in acknowledgment, which I beg you to forward to them. There is a communication of mine before the Royal Society at present, which I believe will amuse you, or at least the hardiess of the thing will surprise. What do you think of Hydrogenium, a white magnetic metal of the specific gravity 2?—I remain, dear Hofmann, sincerely yours, THOS. GRAHAM."—On Saturday, January 8, this society gave a dinner to Professor Hofmann, on his retiring from the presidency. The presence of a great number of the celebrities of the town added to the significance of this meeting. Professor Magnus (who acted as chairman on the occasion), Dove, Virchow, Rose, Dubois-Raymond, Kronecker, Curtius, and others, as also some of the Ministers of State, the American Ambassador (Mr. Bancroft), &c., honoured the meeting with their presence, and partly with their speeches. A great number of the foreign members sent messages from England and France, or from distant parts of Germany. The following telegram was received from M. Dumas, at Paris:—"Félicitations et vœux! Longue prospérité à la société! Longue vie à Hofmann! Votre fête est la fête de famille des chimistes du monde entier, qui tous l'admirent et l'aiment." A photolithograph representing Dr. Hofmann, the discoverer of compound Ammonium, as Jupiter Ammon, surrounded by a halo of Aniline colours, was distributed and explained by the artist, and a hymn to Aniline, composed for the occasion, gave a humorous tone to the latter part of the festival.

ALL readers of the "Origin of Species" are aware that the theory now universally (and rightly) known as "Darwinian," was independently conceived and thought out by a naturalist who knew nothing of Darwin's views of the operation of natural selection, and who was at that time thousands of miles away from England. The English public are therefore not likely to forget that to Mr. Alfred Wallace, as well as to Mr. Darwin, belongs the distinction of having discovered "a new idea, a new genus of thought." In Germany, where Darwinism has excited such profound interest, the claims of Mr. Wallace have been somewhat overlooked by the distinguished men who have expounded the theory of natural selection. This has now been rectified by the publication of a pamphlet entitled "Charles Darwin und Alfred Russell Wallace," in which Dr. A. B. Meyer reprints the papers by which the theory was first made known; narrates the circumstances of their publication; and gives slight sketches of the lives of their authors. Dr. Meyer adds to these biographical sketches, lists of the writings of their subjects. Such lists are sometimes not brought down to so late a date as they should be; but in the case of Mr. Wallace, so far is this from being the case, that we see noted as published in the pages of NATURE an article on Geologic Time, which we regret to say we have not yet been able to lay before our readers, owing to the extraordinary pressure upon our columns.

PROFESSOR MAYER was elected, at the meeting of the French Academy on January 10, a correspondent of the section of Physics in place of the late Prof. Matteucci. Of 47 votes, Prof. Mayer received 40; of the remainder, 5 were given to Prof. Kirchhoff, and 1 each to M. Ångström and Sir W. Thomson. We are indebted to the *Revue des Cours Scientifiques* for the following information with regard to vacancies in the lists of corresponding members of the various sections of the Paris Academy of Sciences. The Astronomical section has four corresponding members to replace, namely, Encke, Admiral Smyth, Petit, and Valz; but as the most recent vacancy occurred so long ago as 1867, it is probable that the section considers that the number of places for corresponding members exceeds that of the foreign and provincial astronomers worthy of the honour. In the Physical section, into which, as our readers are aware, Prof. Helmholtz of