

MANCHESTER

Literary and Philosophical Society, Dec. 1.—Rev. Wm. Gaskell, M.A., vice-president, in the chair.—Some doubts in regard to the law of the diffusion of gases, by Mr. H. H. Howorth.

Dec. 15.—Mr. Edward Shunck, F.R.S., president, in the chair.—Rev. Wm. Gaskell, M.A., read an interesting account of Horrocks' and Crabtree's observations of the Transit of Venus in 1639, published in the *Annual Register* for 1769.—Some particulars respecting the negro of the neighbourhood of the Congo, West Africa, by Mr. Watson Smith, F.C.S.—Analysis of one of the Trefriw mineral waters, by Mr. Thomas Carnelley, B.Sc. Communicated by Prof. H. E. Roscoe, F.R.S.

GLASGOW

Geological Society, Dec. 15.—Mr. John Young, F.G.S., vice-president, in the chair.—Mr. James Neilson, jun., exhibited a selection of fossils from the Irish and Scotch limestone beds, and read a paper on the Armagh limestones, and their equivalents in Scotch strata.—Mr. James Dairon read a paper on the graptolites of the Upper Llandeilo rocks of the south of Scotland. Mr. Dairon described more particularly the following forms: *Climacograpsus teretiusculus*, *Didymograpsus*, *Dicranograpsus*, and *Pleurograpsus*, pointing out the characteristic features of each, and indicating their range in the rocks of the formation, and the beds in which they severally occur most abundantly. The paper was illustrated by drawings and by a beautiful collection of specimens.

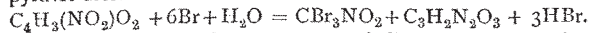
BOSTON, U.S.

Society of Natural History, March 18.—The president in the chair.—Dr. Samuel Kneeland read a paper illustrated by diagrams and specimens, on the evidence for and against the so-called sea-serpent. He thought a careful weighing of the evidence showed that such an animal is not a zoological absurdity, and that from palæontology (if we discard the testimony of many credible witnesses) we may even conclude that it is a possibility—and, he believed, a probability—that some form, intermediate between the marine saurians of the Secondary and the elongated cetaceans of the Tertiary has come down to the present epoch, and will eventually come under the notice of naturalists, and prove, in this as in many other cases, that widely spread popular beliefs in natural history, especially when professing to rest upon credible testimony, have generally for their foundation some portion of scientific truth. He believed there were at least two species of the creature (which he styled *Eremotherium*), one in the northern and another in the southern ocean.—Notes on Ophidiidae and Fierasferidae, with descriptions of new species from America and the Mediterranean, by F. W. Putnam.

PARIS

Academy of Sciences, Dec. 21.—M. Frémy in the chair.—The following papers were read:—New theory of the motion of the planet Neptune: remarks on the *ensemble* of the theories of the eight principal planets, Mercury, Venus, the Earth, Mars, Jupiter, Saturn, Uranus, and Neptune; by M. Le Verrier. The paper presented completes a work commenced on September 16th, 1839.—New theorems on series of similar triangles, by M. Chasles.—On the limited oxidation of the hydro-carbons: amylene; by M. Berthelot. The author employs a solution of chromic acid as the oxidizing agent. Hydride of amylene yields valerianic acid. Amylene when mixed with water and treated with the mixture yields a mixture of all the fatty acids from formic to valerianic—the latter and acetic acid being formed in the greatest proportions.—New documents on the flora of New Caledonia, by M. Ad. Brongniart.—On the carpillary theory according to the Liliaceæ, by M. A. Frécul.—The Laboratory of Experimental Zoology at Roscoff, by M. H. de Lacaze-Duthiers. The author gives a detailed account of this valuable establishment.—Micrometric measurements of the triple star ζ Cancri, by M. Otto Struve.—Report on a memoir by M. Sarrau, entitled, "Theoretical researches on the effects of gunpowder and explosive substances," by the Commissioners, MM. Morin, Tresca, Berthelot, and Résal.—On an apparatus for measuring gases in industrial analyses or *gas-hydrometer*, by M. E. J. Maumené.—Observations concerning a recent communication by M. A. Cornu on the degree of precision of Foucault's method for measuring the velocity of light; a letter from M. Lissajous to the perpetual secretary. The writer gave the following extract from Foucault in contradiction to M. Cornu's statement that the former had obtained results having an indeterminate approximation: "Increasing thus the length of the luminous path and applying greater accuracy to the measurement of the time, I obtained

determinations of which the extreme variations do not exceed $\frac{1}{17}$ and which combined by the method of means rapidly give series which agree nearly to $\frac{1}{17}$."—On the pyruvic ureides: synthesis of parabanic acid; by M. E. Grimaux. This acid has been obtained by the action of bromine and water on mononitro-pyruvic ureide:—



On a fragment of cranium seeming to indicate that trepanning might have been employed among the Celtic people, by M. E. Robert.—M. Dumas read a telegram from M. Fleuriais relating to the transit of Venus.—Installation in Campbell's Isle of the expedition sent to observe the transit of Venus; a letter from M. A. Boquet de la Grye to M. Dumas.—Letter to the perpetual secretary on the subject of the obelisk raised at Montmartre in 1736 for the fixing of the meridian of Paris, by M. F. Lock.—On the first method given by Jacobi for the integration of equations to the partial derivatives of the first order, by M. G. Darboux.—On the changes of brilliancy of Jupiter's satellites, by M. C. Flammarion.—On the molecular equilibrium of solutions of chrome alum, by M. Lecoq de Boisbaudran.—Preparation of pure nickel salts from the nickel of commerce, by M. A. Terreil.—Action of chlorine on perbromide of acetylene, by M. E. B. urgoin.—Toxicological search for potassium cyanide in presence of non-toxic double cyanides, by M. E. Jacquemin. Researches on the pathological albumens, a method of estimating albumens, &c., by J. Birot.—Analysis of a meteorite which fell in the province of Huesca, in Spain, by M. F. Pisani.—Observations relating to the Roda meteorite, by M. Daubrèe.—Researches on the modifications which the blood undergoes in its passage through the spleen, from the double point of view of its richness in red globules and its respiratory capacity, by MM. L. Malassez and P. Picard.—Observations made at Bordeaux of two lunar halos of remarkable intensity on the 15th and 19th of December; a letter from M. G. Lespiault to the president.—During the meeting M. Du Moncel was elected a free member in place of the late M. Roulin.

BOOKS AND PAMPHLETS RECEIVED

BRITISH.—A Sketch of Philosophy. Part 4. Biology and Theodicy; a Prelude to the Biology of the Future: John C. Macvicar, M.A., LL.D., D.D. (Williams and Norgate)—Gardener's Year-Book for 1875: Robert Hogg, LL.D., F.L.S. ("Journal of Horticulture").—Heredity: From the French of Th. Ribot (Hy. S. King and Co.)—Geology of the Clyde Valley: John Young, M.D. (James Maclehose, Glasgow).—List of the Palæozoic Fishes. Extracted from the Geological Magazine (Triebner and Co.)—Seventh Annual Report of the Executive Committee of the Manchester Nat. Soc. for Woman's Suffrage (Alexander Ireland, Manchester).—Notes on a Till or Border Clay with broken Shells in the Lower Valley of the River Endrick: Robt. L. Jack, F.G.S. (Geological Society, Glasgow).—Astronomy; J. Norman Lockyer (Macmillan and Co.).—The Physics and Philosophy of the Senses: R. S. Wyld, F.R.S.E. (Henry S. King and Co.).—Cholera: How to Prevent and Resist it: T. Whiteside Hime, A.B., M.B., &c. (Baillière, Tindall, and Cox).—Studies on Biogenesis: Wm. Roberts, M.D. (Royal Society).—On the Connection between Colliery Explosions and the Weather in 1872: Robert H. Scott and Wm. Galloway (Quarterly Journal of the Meteorological Society).—British Wild Flowers. Parts 7 and 8: John E. Sowerby (John Van Voorst).—History of British Birds. Parts 6, 7, and 8: A. Newton, M.A., F.R.S. (John Van Voorst).—Micrographic Dictionary. Parts 18, 19, 20, and 21: J. W. Griffith, M.D., and A. Henfrey, F.R.S., F.L.S. (John Van Voorst).—Anthropologia. Vol. 1. Part 3 (Baillière, Tindall, and Cox).

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