

like a street lamp in a November fog. A *Times* correspondent at Cheltenham says that the path of the body was almost due east and west, and the apparent time of flight about 20°. The meteor was also observed at Southampton, Tunbridge Wells, and Beckenham.

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

The Sedgwick Memorial Committee (Cambridge) have passed the following resolution, which has been sent to the Vice-Chancellor :—"That a communication be made on behalf of the Committee to the University to the effect that a sum of about 12,000*l.* is now at their disposal for a memorial to the late Prof. Sedgwick, and that the Committee are prepared to apply this money towards the erection of a new geological museum when a plan satisfactory to the Committee has been approved by the Senate."

On the nomination of Prof. Miller, Mr. W. J. Lewis, M.A., Fellow of Oriel College, Oxford, has been approved as Deputy Professor of Mineralogy for twelve months, from October 1, 1878, Prof. Miller assigning to Mr. Lewis two-thirds of his stipend.

Mr. J. A. Ewing, B.Sc., F.R.S.E., has been appointed Professor of Mechanical Engineering in the University of Tokio, Japan.

SCIENTIFIC SERIALS

Bulletin de l'Académie Royal de Belgique, No. 1, 1878.—In researches on Daltonism, here described, MM. Delboeuf and Spring used a solution of fuchsine between two convergent plates of glass (the red is wanting in M. Delboeuf's sight). Thus a suitable thickness of red could be readily selected, and it was found that colours previously confounded showed notable differences. A solution of chloride of nickel interposed between objects and the eye produces in non-Daltonians the same confusion as that of Daltonians. Fuchsine opposes and destroys the effect of chloride of nickel: so that the non-Daltonian in whom the latter produces confusions ceases to have these when he looks also through the fuchsine. Daltonism is regarded as merely an exceptional exaggeration of a peculiarity found in all eyes to a certain degree.—M. Terby furnishes fifteen figures of Mars as observed during the opposition of 1877.—The physiological action of *Gelsemine*, on respiration, circulation, and temperature, is described by MM. Putzey and Romée.—M. de Koninck announced that his son found, in the Ardennes, the very rare mineral carpholite, hitherto only met with in the Harz and Bohemia.

No. 2.—From experiments with regard to the fertilising action of the grey chalk of Ciply, in Belgium (which contains 11.50 per cent. of phosphoric acid), M. Petermann concludes that bicalcic phosphate, called precipitated phosphate, and the phosphates of iron and alumina, have the same agricultural value as the phosphoric acid of soluble phosphates, that is, their phosphoric acid may be immediately assimilated by plants. He therefore advises the disuse of the Cipley Chalk, and he considers it can only be utilised in agriculture after its transformation into precipitated phosphate. (M. Stas thinks this conclusion too absolute.)—M. Quetelet reviews observations of the movements of the magnetic needle at Brussels from 1828-76. The magnetic line diverges very little from a central axis, with which it makes an angle of about 5°. It turns round this axis in a direction opposite to that of the earth's diurnal motion; the angle described annually is about 42' 2", and the complete revolution would appear to be effected in 512 years. The secondary movements and accidental displacements do not sensibly affect the principal secular movement.—M. Donny recalls experiments he made, in 1843, with Prof. Mareska, on liquefaction of gases. They often compressed air (with a hydraulic pump) in the capillary part of a manometer to more than 500 atm., and M. Donny thinks they may have liquefied the gas without knowing it.—MM. Navez describe a combination of an induction coil with the telephone for speaking at great distances. The induced currents are sent into the line, while the sending instrument is inserted in the local circuit connected with the battery. The receiving telephone is somewhat modified.—The subjects for prizes offered by the Academy for 1879 are announced in this number.

Reale Istituto Lombardo di Scienze e Lettere, Rendiconti, vol. xi. fasc. iv.-vi.—We note the following papers in these numbers :—Deformative hypertrophy of the nails, by M. Sangalli.—Claustrophobia, by M. Verga. Some experiments with the telephone, by M. Serpieri.—On the dominant diseases of the vine, by MM. Garovaglio and Cattaneo.—On the kinematics of a solid body, by M. Bardelli.—Lecture experiment (illustrating liquefaction of gases), by M. Brugnatelli.—An experiment on electrostatic induction, by M. Cantoni.—On a case of heterogenesis observed in nature, by MM. Battista and Corrado.—Reduction of argentic and ferric chloride, by M. Tommasi.—Geological observations on the Carso di Trieste and the valley of the Recci with reference to water supply, by M. Taromelli.

THE Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg (t. xxiv. No. 4) contains the following papers of interest :—Development into converging series of the odd negative powers of the square roots of the function $1 - 2\eta U + \eta^2$, by Dr. J. Backlund.—Variation of the volume of liquids through the effect of temperature, by M. Avenarius.—On some new forms of crystals of ilmeno-rutile, by P. Jeremejew.—On the development of excrescences (cephalodia) on the thallus of *Lichen, Peltigera aphthosa*, Hoffm., by M. Babikoff.—On a new case of divisibility of the numbers of the form $2^{2m} + 1$, found by the Rev. J. Pervouchine, by V. Bouiniakowsky.—A note on the opposition of planets during 1877, by A. Sawitch.—On an extremely slight earthquake observed by means of a very delicate level on May 10, 1877, by M. Nyren.

Morphologisches Jahrbuch, vol. iv., supplement, dedicated to Carl von Siebold.—On the cranial skeleton of alepocephalus, a clupeid fish, by Prof. Gegenbaur, two plates, 42 pp.—Fossil vertebrae, by C. Hasse, dealing with the relationship of the genus Selache; two plates. The author believes this genus to have developed from Carcharodon in the tertiary period.—The gorilla's brain and the third frontal convolution, by Prof. von Bischoff, a controversial article referring to Prof. Broca's researches and views.—Contribution on the coral family Antipatharia, by G. von Koch.—The disposition and development of elastic tissue, by L. Gerlach, with two beautiful plates.—The development of the muscular structure of the human foot, by G. Ruge, 36 pp. one plate.

The Notizblatt des Vereins für Erdkunde zu Darmstadt (iii. xvi. Nos. 181 to 192) contains some interesting statistical data from the Hessian Central Statistical Office. The papers of geological interest are : On the crystalline lime of Auerbach on the Bergstrasse, by R. Ludwig.—On the minerals found in the cavities of the melaphyr from Traisa and in the basalt of the Rossberg, by the same.—On the minerals and fossils found near Hering (Hessen), by the same.—Comparative account of the products of all Hessian mines during the years from 1860 to 1876, by Herr Tecklenburg.—On the fauna of the real Cyrene emery of Sulzheim, near Woerstadt (Hessen), by Dr. O. Boettger.

SOCIETIES AND ACADEMIES

LONDON

Royal Society, May 2.—"Preliminary Notes on Experiments in Electro-Photometry." By Prof. James Dewar, F.R.S., Jacksonian Professor, University of Cambridge.

Edmond Becquerel, in the year 1839, opened up a new field of chemical research through the discovery that electric currents may be developed during the production of chemical interactions excited by solar agency.

Hunt, in the year 1840, repeated, with many modifications, Becquerel's experiments, and confirmed his results.

Grove, in 1858, examined the influence of light on the polarized electrode, and concluded that the effect of light was simply an augmentation of the chemical action taking place at the surface of the electrode.

Becquerel, in his well-known work, "La Lumière," published in 1868, gives details regarding the construction of an electro-chemical actinometer formed by coating plates of silver with a thin film of the sub-chloride, and subsequent heating for many hours to a temperature of 150° C.

Egeroff, in 1877, suggested the use of a double apparatus of Becquerel's form, acting as a differential combination, the plates of silver being coated with iodide instead of chloride.

The modifications of the halogen salts of silver when subjected to the action of light have up to the present time been used most