

toria Cave, Settle," by William Brockbank, F.G.S. For various reasons, he submitted, there is no ground for the theory of glacial action as put forth by Messrs. Boyd Dawkins and Tiddeman, but on the contrary that the filling of the Victoria Cave was the work of long ages, by the action of running water, and that there is no reason to suppose that the remains found in it are older than the glacial epoch.—The President exhibited a syphon barometer, the peculiarity of which consisted in the introduction of a small quantity of sulphuric acid over the ends of the mercurial column.—Mr. Spence, F.C.S., communicated to the Society the result of an experiment in heating a diamond, which will considerably modify the general impression as to that gem being combustible only at an extremely high heat. A friend of his had brought over a number of diamonds from the African mines. Some of these were what is called "off colour," not being purely white, and he put one of these into Mr. Spence's hands to try some experiments for displacing the colour if practicable. This diamond, the size of a small pea, was immersed in fire-clay in a small crucible, the clay being mixed with a little carbonate of soda and hydrate of lime; the crucible was then placed in a muffle, and for three days and nights exposed to a heat, which at no time was beyond a low cherry red. After cooling, the crucible was broken, and the lump of hardened fire-clay was carefully broken up to extract the diamond; after two or three fractures of the lump an impression or hole in the indurated clay was discovered just at the spot where the diamond should have been, but not a vestige of the precious stone remained.

DUBLIN

Royal Irish Academy, March 15.—The Rev. Prof. Jellett, B.D., president, in the chair. The annual report of the council was read by Dr. Ingram, secretary to council. The election of the president and members of council was proceeded with, when the Rev. J. H. Jellett, B.D., was re-elected President.

Royal Geological and Zoological Societies of Ireland. A joint meeting of these societies was held on Wednesday evening, March 12. Colonel Meadows Taylor read a paper on the coal fields of Central India.—Prof. Edward Hull, F.R.S., read a paper on the Microscopical Structure of the Limerick Carboniferous Trap Rocks.—A Geological Map of New Zealand, and a fine recent specimen in spirits of *Pentacrinus Müllerii* Orst were exhibited.

PARIS

Academy of Sciences, March 31.—M. de Quatrefages, president, in the chair.—The following papers were read:—On the theory of the normal magnet, and on the means of indefinitely increasing the force of magnets, by M. J. Jamin.—On the carpellary theory of the Ranunculacæ, by M. A. Trecul.—On the proposed apparatus for pumping out and elevating water by means of the action of waves on the shores of the Mediterranean, by M. A. de Caligny. The author has suggested a means of utilising the force of the waves for the above purposes.—New papers on the shock of earthquake in Italy, observed on the 12th of March, 1873, by M. P. de Tchiatchef.—The Academy then proceeded to elect a member in the place of the late Marshal Vaillant. After two votings, in which no candidate obtained an absolute majority, a ballot was proceeded with, when M. Cosson obtained 31 and M. de la Gourmerie 30 votes. M. Cosson was then declared duly elected.—A report on two memoirs on the silicified vegetables of the Autun coal measures, by M. B. Regnault, was then read, and followed by M. Roger's fourth memoir on capillary phenomena, which dealt with the mathematical nature of the subject.—On a new method of optically determining the velocity of projectiles, by M. M. Deprez. The method consists in attaching a magnesium fuse to the projectile and observing its flight by means of two telescopes. The method is an application of that used for meteors.—The Secretary read a number of extracts from a paper on a new classification of clouds, by M. Poey.—On certain points in M. Faye's theory of the solar spots, by M. Tacchini. Father Tacchini thinks that the hydrogen carried down by cyclones, according to M. Faye's theory, would become so violently heated that it would rush back with such force as to destroy the cyclone, and also that if such a process really occurred the gas would carry up with it metallic vapours; as these are not generally visible in prominences, he thinks the explanation untenable.—On the foci (*faïsseaux*) of circles, by M. Ribaucour.—On the spectrum of boric anhydride, by M. Lecocq

de Boisbaudran.—On alcohol and normal acetic acid from milk considered as products of the functions of microzymes, by M. A. Béchamp.

DIARY

THURSDAY, APRIL 10.

MATHEMATICAL SOCIETY, at 8.—On Systems of Porismatic Equations, Algebraical and Trigonometrical; Note on Epicycloids and Hypocycloids; Locus of point of concurrence of perpendicular Tangents to a Cardoid; Elliptic motion under acceleration constant in direction: Prof Wolstenholme.—On the calculation of the Value of the theoretical unit-angle to a great number of decimal places: Mr. J. W. L. Glaisher.

SATURDAY, APRIL 12.

ROYAL BOTANIC SOCIETY, at 3.45.

TUESDAY, APRIL 15.

STATISTICAL SOCIETY, at 7.45.

WEDNESDAY, APRIL 16.

SOCIETY OF ARTS, at 8.—On the Condensed Milk Manufacture: L. P. Merriman.

METEOROLOGICAL SOCIETY, at 7.—On a proposed new form of Rain Gauge, "The Atmospirometer": J. J. Hall.—Discussion on the Report of the Proceedings of the Meteorological Conference at Leipzig.

LONDON INSTITUTION, at 7.—Third Musical Lecture: Prof. Ella.

THURSDAY, APRIL 17.

LINNEAN SOCIETY, at 8.—Burmese *Orchidea*, from the Rev. C. P. Parish: Prof Reichenbach.—Perignium of *Carex*: Prof. McNab.

CHEMICAL SOCIETY, at 8.—On Heat produced by Chemical Action: Dr. Debus, F.R.S.

NUMISMATIC SOCIETY, at 7.

ZOOLOGICAL SOCIETY, at 4.

BOOKS RECEIVED

ENGLISH.—A Manual of Photography. 8th edit.: G. Dawson (Churchill).—Electricity and Magnetism. 2 vols: C Maxwell (Macmillan).—Flies and Fly-fishing: Capt. St. J. Dick (R. Hardwicke).—A Catalogue of the Collection of Cambrian and Silurian Fossils in the Geological Museum of the University of Cambridge: J. W. Salter, Prof. A. Sedgwick, Prof. Morris (University Press, Cambridge).—Fever and Cholera from a new point of view: A. Smith (Calcutta).—Illustrated Guide to the Fish Amphibian. Reptilian and supposed Mammalian remains of the Northumberland Carboniferous Strata, with Atlas; T. P. Barkas (Hutchings).—A Journey through the Caucasus and the interior of Persia: A. H. Mounsey (Smith and Elder).—A Journey to the Source of the River Oxus. 2nd edit.: Capt. J. Wood (Murray).—Turning for Amateurs.—Birds of the Humber District: J. Cordeaux (Van Voorst).—A General System of Botany, Descriptive and Analytical: Emm. de Mout and J. Decaisne. Translated by Mrs. Hooker, Edited by Dr. Hooker (Longmans).—The Principles of Animal Mechanics: The Rev. S. Houghton (Longmans).—Field and Forest Rambles: A. L. Adams (H. S. King & Co.).

PAMPHLETS RECEIVED

ENGLISH.—The Agricultural Returns of Great Britain for 1872.—Quarterly Weather Report of the Meteorological Office, Pt. 2, April-June, 1872.—A Message to the British Entomologists by the Ghost of the Rector of Barham: E. W. Janson.—Journal of Mental Science, No. 49, April: H. Maudsley and Thos. Clouston, M.D. (Churchill).—The Potato Disease, its cause and its remedy: S. Smith (Smart & Allen).—General Report on the Operations of the great Trigonometrical Survey of India during 1871-2: Major Montgomerie, R.E., F.R.S.

FOREIGN.—Anales del Museo Publico de Buenos Aires, 1872-73.—Report of the Commissioners of Fisheries of the State of New York.—Recherches expérimentales sur l'influence que les changements dans la pression barometrique exercent sur les phenomenes de la vie (8th note): M. P. Bert.

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