

in which he claims to have proved long ago that mercury gives off vapours even below the freezing point of water. Upon this paper M. Boussingault made some remarks.—M. P. A. Favre presented a paper "On the Electrical Conductibility of Liquids without Electrolysis," in which he gives the details of certain experiments which seem to show that liquids have a conductivity of their own.—M. S. Meunier read a note on the co-existence of two lithological types in the same fall of meteorites. The author stated that the specimens in the Museum at Paris, from the falls of Sigena in Spain, on November 17, 1773, and of Trenzano in Italy on November 12, 1856, each includes two forms of rock, one, the Indian meteoric stone, described by Maskelyne under the name of *bustite*, the other identical with *parnallite*. He remarked upon the singularity of this phenomenon, which, he thinks, indicates that the stones which fell at Trenzano and Sigena were derived from the same deposits, and that *bustite* and *parnallite* have been stratigraphically related.—M. W. de Fonvielle presented an explanation by means of the theory of fringes of the appearance of luminous halos observed during balloon ascents.—M. Berthelot communicated a further series of thermo-chemical investigations upon the state of bodies in solutions, in which he discussed his researches upon the double decomposition of certain metallic salts.—A note was read on an apparatus for measuring the temperature of alterations and detonations of explosive compounds by MM. L. Leygue and Champion. This apparatus consists of a bar of metal to be heated at one end, upon various parts of which the explosive compounds may be placed.—M. F. Pisani communicated an analysis of the *amblygonite* (*montebrasite*) of Montebras, showing that the only difference between this mineral and the *amblygonite* of Arnsdorf consists in its containing a little less soda.—M. A. Trécul read an important memoir on the origin of the lactic and alcoholic yeasts, upon which M. Pasteur made some remarks.—M. H. Sainte-Claire Deville presented a note by M. F. Cailliet on the origin of the carbon fixed by plants containing chlorophyll, which he regards as wholly derived from the carbonic acid of the atmosphere; and M. Béclard referred to memoirs presented by him in 1858 on the influence of violet light upon vital phenomena.

BOOKS RECEIVED

ENGLISH.—Researches of the Calculus of Variations: J. Todhunter (Macmillan and Co.).—Volcanoes, the Characters of their Phenomena: J. P. Scrope (Longmans).—A Vision of Creation, a Poem: C. Collingwood (Longmans).—Hymns for Modern Man: H. Noyes (Longmans).

FOREIGN.—Principes de Biologie appliqués à la Médecine; Dr. Ch. Girard (Baillière et fils).

PAMPHLETS RECEIVED

ENGLISH.—Journal of the Iron and Steel Institute, Vol. II., No. 4.—Quarterly Journal of Amateur Mechanical Science, No. 4.—Science Directory of the Department of Science and Art.—Meteorological Notes for use in Science Classes; J. H. Collins.—Remarks on certain Oceanic Explorations: W. L. Jordan.—On Ocean Currents, Part 3: Jas. Croll.—The Quarterly German Magazine for November.—Inaugural Address before the Scottish Arboricultural Society: R. Hutchison.—Public School Reforms: M. A. B.—The Fauna of Devon, Part 7: E. Parfitt.—On the Boring of Molluscs, &c.: E. Parfitt.—Transactions of Engineers and Shipbuilders in Scotland.—Eight Days with the Spiritualists: Jas. Gillingham.—Report of the Board of Visitors to the Royal Observatory, Edinburgh.—Figures of Characteristic British Fossils, Part 3: W. H. Baily.—Method of Teaching Arithmetic: J. G. Fitch.—On the Relation of Therapeutics to Modern Physiology: R. Madden.—On the Method of Measuring the Lateral Diffusion of a Current: J. G. H. Gordon.—The Power above Matter: D. de B. Hovell.—Annual Report of the Council of the Institution of Civil Engineers.—Mining Magazine and Review, No. 1.—Ordinary Meetings of the Newcastle-on-Tyne Chemical Society, 1871-72.—Annual Report and Transactions of the Plymouth Institute, Vol. II., Part 2; Vol. III., Parts 1, 2; Vol. IV., Parts 1, 2.—Denudation in relation to Sedimentary Stratification: G. Race.—List of Members of the Royal Microscopical Society, 1871.

AMERICAN AND COLONIAL.—Notes of some Cretaceous Vertebrates: E. D. Cope.—Preliminary Catalogue of the Bright Lines in the Spectrum of the Chromosphere: C. A. Young.—Monthly Notices of Papers and Proceedings of the Royal Society of Tasmania, 1870.—A Catalogue of the Birds of New Zealand: F. W. Hutton.—Remarks on the Adaptive Colouration of Mollusca: E. S. Morse.—Transactions of the Entomological Society of New South Wales, Vol. II., Part 3.

FOREIGN.—Oversigt af kongl. Vetenskaps Akad. Förhandlingar, Nos. 3, 4, 8, 9, 10.—Zeitschrift für Ethnologie, No. 5.—Zeitschrift für Meteorologie No. 23.—Giornale di Sicilia, No. 268.—Nova plantarum species: A. Kerner.—Können aus Bastarten Arten weraen: A. Kerner.—Ueber Iris Cengialti Ambrosi: A. Kerner.—Ueber den Einfluss der Winde auf die Verbreitung der Samen: A. Kerner.—Association Scientifique de France, No. 218.—Gazzetta Chimica Italiana, No. 9.—Sul bromuro di etilidene: E. Paterno.—Sintesi due nuovi clorobromuri di carbonio: E. Paterno.—Azione del bromocloruro di fosforo al clorales: E. Paterno.

DIARY

THURSDAY, JANUARY 4.

LONDON INSTITUTION, at 4.—The Philosophy of Magic. 3. The Magic of the Mediums: J. C. Brough, F.C.S.

FRIDAY, JANUARY 5.

GEOLOGISTS' ASSOCIATION, at 8.—On the Overlapping of Several Geological Formations on the North Wales Border: D. C. Davies.

SATURDAY, JANUARY 6.

ROYAL INSTITUTION, at 2.—On Ice, Water, Vapour, and Air: Dr. Tyrdall. (Juvenile Course.)

SUNDAY, JANUARY 7.

SUNDAY LECTURE SOCIETY, at 4.—On Atoms; being an explanation of what is definitely known about them: Prof. W. K. Clifford, M.A.

MONDAY, JANUARY 8.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—On Bunder Murayah, Somal Land: Capt. S. B. Miles.—On a Journey to the Murut Country in Northern Borneo: Lieut. De Crespigny.—On a Description of Fernando Noronha: Dr. A. Rattray.

VICTORIA INSTITUTE, at 8.—Chance Impossible: Dr. J. H. Wheatley.

TUESDAY, JANUARY 9.

PHOTOGRAPHIC SOCIETY, at 8.—On Photography in the Printing Press: J. R. Sawyer.

WEDNESDAY, JANUARY 10.

GEOLOGICAL SOCIETY, at 8.—On the Foraminifera of the family Rotulines (Carpenter) found in the Cretaceous formations, with Notes on their Tertiary and Recent Representatives: Prof. T. Rupert Jones, F.G.S., and W. K. Parker, F.R.S.—Notes on the Geology of the Plain of Morocco and the Great Atlas: Geo. Maw, F.G.S.—Further Notes on the Geology of the Neighbourhood of Malaga: M. D. M. d'Orneta.

THURSDAY, JANUARY 11.

ROYAL SOCIETY, at 8.30.

SOCIETY OF ANTIQUARIES, at 8.30.

MATHEMATICAL SOCIETY, at 8.—On the Surfaces the loci of the vertices of cones which satisfy six conditions: Prof. Cayley.—On the Constants that occur in certain summations by Bernoulli's series: J. W. L. Glaisher.—On the Construction of large tables of divisors and of the factors of the first differences of prime powers: W. B. Davis.—On the Parallel Surfaces of Conicoids and Conics: S. Roberts.

LONDON INSTITUTION, at 4.—The Philosophy of Magic. 4. The Magic of the Laboratory: J. C. Brough, F.C.S.

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NOTICE

We beg leave to state that we decline to return rejected communications, and to this rule we can make no exception. Communications respecting Subscriptions or Advertisements must be addressed to the Publishers, NOT to the Editor.