

of Mont Blanc, at Chamonix and at Meudon, by M. Hansky.—On differential equations of the second order with fixed critical points, by M. Paul Painlevé.—On the singular points of a function defined by a Taylor's Series, by M. Le Roy.—On the reduction of multiple integrals, by M. Ch. J. de la Vallée Poussin.—On a new phenomenon exhibited by light in traversing certain metallic vapours in a magnetic field, by MM. D. Macaluso and M. O. Corbino. A discussion of the theory advanced by M. Henri Becquerel.—Remarks by M. Becquerel on the preceding paper.—Absorption in a magnetic field, by M. A. Cotton.—Comparative study of the Hertzian field in air and in water, by M. Albert Turpain.—The Blondel-Carpentier hysteresimeter and its application to the static measurement of hysteresis, by M. A. Blondel. The paper is accompanied by diagrams of the apparatus. Measurements made by the ballistic method were in close agreement with the readings of the instrument.—On the transmission of sound by a wire capable of conducting electricity, by M. Dussaud.—Displacement of metals by hydrogen, by M. Albert Colson. Dry phosphate of silver absorbs hydrogen in the dark and at 12° C. with production of free silver and phosphoric acid. This change goes on more rapidly when the temperature is raised. Silver pyrophosphate, sulphate, and oxide behave similarly.—On the combination of acetone with mercuric sulphate, by G. Deniges. The compound formed has a very high molecular weight, and contains only one-seventeenth of its weight of acetone. Hence it is a suitable means of detecting and estimating small quantities of acetone.—Action of hydrocyanic acid upon epichlorhydrin, by M. R. Lespiau.—On the development of the dilator muscle of the pupil in the rabbit, by M. Ed. Grynfeldt.—On the digestion of starch in plants, by M. Leclerc du Sablon.—Elective absorption of some mineral elements by plants, by M. E. Demoussy. If nitrates and chlorides are simultaneously at the disposal of a plant, nitric nitrogen is absorbed in preference to chlorine.—Chlorophyll assimilation in terrestrial orchids, and in particular in *Limodorum abortivum*, by M. Ed. Griffon. Terrestrial orchids, considered from the point of view of carbon assimilation, are intermediate between plants such as *Epipactis*, in which carbon is taken from the air, and colourless species like *Neottia* and *Coralorhiza*, which are entirely saprophytic. In *Limodorum*, in spite of its richness in chlorophyll, its respiration of carbon dioxide is always greater than its assimilation.—On the toxic powers of chromium compounds with respect to the higher plants, by M. Henri Coupin.—On a new cupric broth, specially designed to combat the black rot, by M. Joseph Perraud. The addition of colophane imparts to the mixture great adhesive power and resistance to washing off by rain.

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 15.

ROYAL SOCIETY, at 4.30.—(1) Application of Liquid Hydrogen to the Production of High Vacua, and their Spectroscopic Examination; (2) The Boiling Point of Liquid Hydrogen under Reduced Pressure: Prof. Dewar, F.R.S.—Ionic Velocities: Prof. O. Masson.—Note on the Densities of Atmospheric Nitrogen, Pure Nitrogen, and Argon: Prof. Ramsay, F.R.S.—The Preparation and some of the Properties of Pure Argon: Prof. Ramsay, F.R.S.; and Dr. Travers.—Observations on the Anatomy, Physiology, and Degenerations of the Nervous System of the Bird: Prof. Rubert Boyce and Dr. W. B. Warrington.—The Action of Magnetised Electrodes upon Electrical Discharge Phenomena in Rarefied Gases. Preliminary Note: C. E. S. Phillips.—On the Reciprocal Innervation of Antagonistic Muscles, Fifth Note: Prof Sherrington, F.R.S.

LINNEAN SOCIETY, at 8.—Sketch of the Zoology and Botany of the Altai Mountains: H. J. Elwes, F.R.S.—A Description of some Marine and Freshwater Crustacea from Franz Josef Land, collected by W. S. Bruce, of the Jackson-Harmsworth Expedition: Thos. Scott.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.
CHEMICAL SOCIETY, at 8.—The Interaction of Ethylic Sodiomalonate and Mesityl Oxide: Dr. A. W. Crossley.—Derivatives of Camphoric Acid, Part III.: Dr. F. S. Kipping, F.R.S.—Synthesis of $\alpha\beta\beta$ Trimethylglutaric Acid: H. Perkin, jun., F.R.S., and Dr. J. F. Thorpe.

FRIDAY, DECEMBER 16.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Kentish Town Widening, Midland Railway: Walter Daniel.
QUEKETT MICROSCOPICAL CLUB, at 8.

TUESDAY, DECEMBER 20.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Paper to be further discussed: The Ventilation of Tunnels and Buildings: Francis Fox.—And, time permitting, Paper to be read with a view to discussion: High-Speed Engines: John Handley Dales.

WEDNESDAY, DECEMBER 21.

GEOLOGICAL SOCIETY, at 8.—On a Megalosauroid Jaw from Rhætic Beds near Bridgend, Glamorganshire: E. T. Newton, F.R.S.—The Torsion-Structure of the Dolomites: Dr. M. M. Ogilvie (Mrs. Gordon).—The Oceanic Deposits of Trinidad. W.I.: Prof. J. B. Harrison and A. J. Jukes-Browne.

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—The West Indian Hurricane, September 1898: Captain A. Carpenter, R.N.—The Connection between the Winter Temperature and the Height of the Barometer in North-Western Europe: W. H. Dines.

ROYAL MICROSCOPICAL SOCIETY, at 7.30.—Exhibition of Binocular Microscopes.

THURSDAY, DECEMBER 22.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Telegraphy by Magnetic Induction: S. Evershed.—The Discussion on Dr. Lodge's Paper (Improvements in Magnetic Space Telegraphy, and on Mr. Evershed's Paper, will be opened by Dr. Fleming and Mr. Preece, with Experimental Demonstrations.

BOOKS and SERIALS RECEIVED.

BOOKS.—Wild Life at Home: R. Kearton (Cassell).—The Way the World went then: I. Barclay (Stanford).—Preliminary Report of an Investigation of Rivers, &c., of Ohio (Cleveland, Ohio).—The Witwatersrand Goldfields Banket, and Mining Practice: S. J. Truscott (Macmillan).—Zoological Record, Vol. xxiv. (Zoological Society).—Lecture Notes on the Theory of Electrical Measurements: Prof. W. A. Anthony (Chapman).—Elements of Sanitary Engineering: Prof. M. Merriman (Chapman).—Manual of Determinative Mineralogy: G. J. Brush, 15th edition (Chapman).—The Annals of Mont Blanc: C. E. Mathews (Unwin).—Michael Faraday: Prof. S. P. Thompson (Cassell).—The Life Story of the late Sir Charles Tilston Bright: E. B. and C. Bright, 2 Vols. (Constable).—An Experimental Course of Chemistry for Agricultural Students: T. S. Dymond (Arnold).—Annalen der Sternwarte in Leiden, Siebenter Band (Haag, Nijhoff).—A Cotswold Village: J. A. Gibbs (Murray).—Earth Sculpture: Prof. J. Geikie (Murray).—Marine Boilers: L. E. Bertin, translated and edited by L. S. Robertson (Murray).—Who's Who, 1899 (Black).—Band of Mercy, Vol. xx. (Partridge).—Animal World, Vol. xxix. (Partridge).—Annuaire, 1899: par le Bureau des Longitudes (Paris, Gauthier-Villars).—The Purification of Sewage: Dr. S. Barwise (Lockwood).—British Journal Photographic Almanac, 1899 (Greenwood).—An Atlas of Bacteriology: C. Slater and E. J. Spitta (Scientific Press).—Flashlights on Nature: Grant Allen (Newnes).—Knowledge, Vol. xxi. (High Holborn).

SERIALS.—Journal of Botany, December (West).—Geographical Journal, December (Stanford).—Zeitschrift für Wissenschaftliche Zoologie, lxx. Bd. 1 Heft (Leipzig).—Catalogus Mammalium: Dr. E. L. Trouessart, nova editio, fasc. 4 and 5 (Berlin, Friedländer).

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