

mental study of the change in the absorption spectrum of bromine vapour under pressures varying from one to twenty atmospheres.—A new element, lutecium, resulting from the splitting of Marignac's ytterbium: G. **Urbain**. The separation was effected by fractional crystallisation of the nitrates from nitric acid of density 1.3. The characteristic lines in the arc spectrum of the new element are given. For the purified ytterbium resulting from the separation the name of neo-ytterbium is proposed.—Bis-secondary butylene chlorowydryn: K. **Krassousky**. An account of this compound, recently described as new by M. Louis Henry, was published by the author in 1902. Further details of its preparation and properties are given.—The alkaline granite *massif* of Dahomey: Henry **Hubert**.—The uraltisation of pyroxene: Louis **Duparc**.—Remarks on the structure of the aleurone grains in the Gramineæ: A. **Guilliermond**. The author modifies some conclusions drawn by him in previous publications. The aleurone grains in the Gramineæ offer analogous characters to those of the lupin. They are distinguished only by their smaller content of protein (the latter constituting only a thin layer round the globoids), by the smaller number and larger size of the globoids, and by the insolubility of the protein in potash after fixation by Ladowsky's method or by alcohol.—The experimental production of grapes without pips: Lucien **Daniel**. The production of ripe grapes without pips can be caused by vigorous pruning immediately after the fruit is set, and is produced by overfeeding at the time when the fertilised seed starts developing with great activity.—The evolution of Frenzelina, intestinal parasites of decapod crustacea: L. **Legér** and O. **Duboscq**.—Classification of the Zygopterideæ according to the characters of their leaf impression: Paul **Bertrand**.—Variations of density and amount of oxygen of pools of sea water: R. **Legendre**.—Observation of a discontinuous lightning flash: M. **Luizet**.

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 14.

ROYAL SOCIETY, at 4.30.—On the Cranial and Facial Characters of the Neanderthal Race: Prof. W. J. Sollas, F.R.S.—Some Features in the Hereditary Transmission of the Self-Black and the "Irish" Coat Characters in Rats: G. P. Mudge.—On the Inheritance of Eye-colour in Man: C. C. Hurst.—On the Result of Crossing Round with Wrinkled Peas, with Especial Reference to their Starch Grains: A. D. Darbishire.—On the Rate of Elimination of Chloroform from the Blood after Anaesthesia: G. A. Buckmaster and J. A. Gardner.—Implantation of Actively Proliferating Epithelium: Dr. J. O. Wakelin-Barratt.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Dielectric Strength or Insulating Materials and the Grading of Cables: Alexander Russell.

MATHEMATICAL SOCIETY, at 5.30.—Annual General Meeting.—Election of Council and Officers.—On Hypercomplex Numbers: J. H. Maclagan Wedderburn.—Addendum to a Paper on the Inversion of a Repeated Infinite Integral: T. J. A. Bromwich.—Generalisation of a Theorem in the Theory of Divergent Series: G. H. Hardy.—Uniform and Non-uniform Convergence and Divergence of a Series and the Distinction between Right and Left: Dr. W. H. Young.—Application of Quaternions to the Problem of the Infinitesimal Deformation of a Surface: J. E. Campbell.—Nodal Cubics through Eight given Points: J. E. Wright.—The Invariants of a Binary Quintic and the Reality of its Roots: Dr. H. F. Baker.—On a Transformation of Hypergeometric Series: Rev. Dr. E. W. Barnes.—On a Transformation of a Certain Hypergeometric Series: Prof. M. J. M. Hill.—A General Theorem on Integral Functions of Order less than One-half: J. E. Littlewood.

FRIDAY, NOVEMBER 15.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Labour-saving Appliances at the Mines of the New Kleinfontein Co., Transvaal: E. J. Way.

MONDAY, NOVEMBER 18.

SOCIOLOGICAL SOCIETY, at 8.—Mental Defects: Dr. Charles Mercier.

TUESDAY, NOVEMBER 19.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.15.—Excavation of a Barrow on Chapel Carne Brea, Cornwall, and other Papers: H. King and B. C. Polkinghorne.—The Wild Tribes of the Ulu Plus: F. W. Knochner.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Discussion:—The Extension, Widening and Strengthening of Folkestone Pier: H. T. Ker.—*Probable Paper*:—The Tranmere Bay Development Works: S. H. Ellis.

ROYAL STATISTICAL SOCIETY, at 5.—Presidential Address: The Right Hon. Sir Charles W. Dilke, Bart., M.P.

WEDNESDAY, NOVEMBER 20.

GEOLOGICAL SOCIETY, at 8.—Glacial Beds of Cambrian Age in South Australia: Rev. W. Howchin.—On a Formation known as "Glacial Beds of Cambrian Age" in South Australia: H. Basedow and J. D. Iliffe.

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—The International Balloon Ascents, July 22 to 27, 1907: Reports by W. H. Dines, F.R.S., J. E. Petavel, F.R.S., W. A. Harwood, Capt. C. H. Ley, R.E., and Prof. W. E. Thrift.—Discussion of the Meteorological Observations made at the British Kite Stations, 1906-7: Miss M. White, T. V. Pring, and J. E. Petavel, F.R.S.

ENTOMOLOGICAL SOCIETY, at 8.

ROYAL MICROSCOPICAL SOCIETY, at 8.—(1) François Watkins' Microscope; (2) A Reply to Prof. Porter's and Mr. Everitt's Criticism upon the Paper,

On the Limits of Resolving Power for the Microscope and Telescope: E. M. Nelson.—Mercury Globules as Test Objects for the Microscope: J. W. Gordon.—Light Filters for Photomicrography: E. Moffat.

SOCIETY OF ARTS, at 8.—Inaugural Address by Sir Stuart Colvin Bayley, K.C.S.I.

THURSDAY, NOVEMBER 21.

ROYAL SOCIETY, at 4.30.—*Probable Papers*:—Results of the Interaction of Mercury with Alloys of Other Metals: J. W. Mallet, F.R.S.—Note on the Sensibility of the Ear to the Direction of Explosive Sounds: A. Mallock, F.R.S.—On the Silver Voltmeter: Part I., A Comparison of Various Forms of Silver Voltmeters: F. E. Smith; and a Determination of the Electrochemical Equivalent of Silver: F. E. Smith and T. Mather, F.R.S.; Part II., The Chemistry of the Silver Voltmeter: F. E. Smith and Dr. T. M. Lowry.—On the Normal Weston Cadmium Cell: F. E. Smith.—On a Method of Depositing Copper upon Glass from Aqueous Solutions in a Thin Brilliantly Reflecting Film, thus Producing a Copper Mirror: Dr. F. D. Chattaway, F.R.S.—On Luminous Efficiency and the Mechanical Equivalent of Light: Dr. C. V. Drysdale.—The Dispersion of Double Refraction in Relation to Crystal Structure: T. H. Havelock.

CHEMICAL SOCIETY, at 8.30.—The Interaction of Metallic Sulphates and Caustic Alkalies: S. P. U. Pickering.—The Chemistry of Bordeaux Mixture: S. P. U. Pickering.—Aromatic Azoimides, Part III., The Naphthylazoimides and their Nitro-derivatives: M. O. Forster and H. E. Fierz.—Studies of Dynamic Isomerism. Note on the Action of Carbonyl Chloride as an Agent for Arresting Isomeric Change: T. M. Lowry and E. H. Magson.—Emulsions: S. P. U. Pickering.—The Electrometric Measurement of the Hydrolysis of the Salts of Anilinium, Ammonium, Aluminium, Chromium, Thallium, Zinc, Magnesium, Cerium, Thorium, Nickel and Cobalt: H. G. Denham.

INSTITUTION OF MINING AND METALLURGY, at 8.

LINNEAN SOCIETY, at 8.—Abnormal Structures in Leaves, and their Value for Morphology: W. C. Worsdell.—Specimen-preservation in Australian Museums: J. G. Otto Tepper.—Revision of the Genus *Illigeria*, Blume: S. T. Dunn.—*Exhibits*:—Luminous Larva from British Guiana: C. W. Anderson.—Living Specimens of Peripatus, from South Africa: Prof. A. Dendy.—*Linaria arenaria*, and other British Plants: G. C. Druce.

FRIDAY, NOVEMBER 22.

PHYSICAL SOCIETY, at 5.—On Singing Sand from New England: S. Skinner.—Exhibition of a Micromanometer: L. Bairstow.—A Diabolo Experiment: Vernon Boys.—Exhibition of a Gyroscope illustrating Brennan's Monorailway: Prof. H. A. Wilson.

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