

by MM. A. Trillat and R. Cambier.—Mechanism of the action of chlorine on isobutylic alcohol, by M. A. Brochet.—Researches on the red pigmentary matter of *Pyrrhocoris apterus* (L.), by M. C. Phisalix.—On the relations between the dorsal cord and the hypophysis in birds, by M. G. Saint-Remy.—On a new *grégarine* of the family of the Dactylophoridae, parasitic on Geophiles, by M. Louis Léger.—On a *Ustilaginée* parasitic on the beet-root (*Entyloma leproideum*), by M. L. Trabut.—On a vine disease caused by *Botrytis cinerea*, by M. L. Ravaz.—Contribution to the study of *gléoclastes conjugués*, by M. Stanislas Meunier.—Variations of the latent period of coagulation of milk soured by rennet, by M. C. Pagès.

DIARY OF SOCIETIES.

LONDON.

THURSDAY, JUNE 14.

ROYAL SOCIETY, at 4.30.—Flame Spectra at High Temperatures—Part II. The Spectrum of Metallic Manganese of Alloys of Manganese, and of Compounds containing that Element. Part III. The Spectroscopic Phenomena and Thermo-chemistry of the Bessemer Process: Prof. Hartley, F.R.S.—The Complexity and the Dissociation of the Molecules of Liquids: Prof. Ramsay, F.R.S.—(1) The Molecular Surface-energy of the Esters, showing its Variation with Chemical Constitution; (2) The Molecular Surface-energy of Mixtures of Non-associating Liquids: Prof. Ramsay, F.R.S., and Miss Emily Aston.—On a Method of Determining the Thermal Conductivity of Metals, with Applications to Copper, Silver, Gold, and Platinum: James H. Gray.

MATHEMATICAL SOCIETY, at 8.—The Solutions of Two Differential Equations: F. H. Jackson.—A Theorem in Inequalities: A. R. Johnson.—Some Properties of a Circle: R. Tucker.—Note on Four Special Circles of Inversion of a System of Generalised Brocard Circles of a Plane Triangle: J. Griffiths.—On the Order of the Eliminant of Two or more Equations: Dr. R. Lachlan.

FRIDAY, JUNE 15.

QUEKETT MICROSCOPICAL CLUB (20 Hanover Square, W.) at 8.

SATURDAY, JUNE 16.

GEOLOGISTS' ASSOCIATION.—Excursion to Gravesend and Northfleet.

Directors: Prof. T. Rupert Jones, F.R.S., and F. C. J. Spurrell.
YORKSHIRE NATURALISTS' UNION.—Meeting at Pontefract for the Investigation of the Neighbourhood of Ferrybridge, &c.

MONDAY, JUNE 18.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—A Survey of the English Lakes (with Illustrations): Dr. Hugh Robert Mill.

TUESDAY, JUNE 19.

ROYAL STATISTICAL SOCIETY (Museum of Practical Geology, 28 Jermyn Street, S.W.), at 7.45.—A Comparison of the Realised Wealth and of the Economic Condition of France and England, especially as relating to their Agricultural Production and their Security in case of War: Mr. William J. Harris.

ZOOLOGICAL SOCIETY, at 8.30.—On Lepidosiren and Protopterus: Prof. Ray Lankester, F.R.S.—Notes on some Specimens of Antlers of the Fallow Deer showing Continuous Variation and the Effect of Total or Partial Castration: Dr. G. Herbert Fowler.—On the Perforated Flexor Muscles in some Birds: Mr. P. Chalmers Mitchell.

MINERALOGICAL SOCIETY, at 8.—A Chemical Study of some Native Arseniates and Phosphates: Prof. A. H. Church, F.R.S.—The Occurrence of Mispickel in the Stewarty of Kirkcudbright: P. Dudgeon.

WEDNESDAY, JUNE 20.

GEOLOGICAL SOCIETY, at 8.—On Deep Borings at Culford and Winkfield, with Notes on those at Ware and Cheshunt: W. Whitaker, F.R.S., and A. J. Jukes-Browne.—On the Bargate Stone and the Pebble-beds of Surrey, with especial regard to their Microscopic Contents: Frederick Chapman.—On Deposits from Snowdrift, with special reference to the Origin of the Loess and the Preservation of Mammoth-remains: Charles Davison.—Additions to the Fauna of the Olenellus-zone of the North-West Highlands: B. N. Peach, F.R.S.—Questions relating to the Formation of Coal-Seams, including a New Theory of them: suggested by Field and other Observations made during the past decade on both sides of the Atlantic: W. S. Gresley.—Observations regarding the Occurrence of Anthracite generally, with a New Theory of its Origin: W. S. Gresley.—The Igneous Rocks of the Neighbourhood of Bulth: Henry Woods.—On the Relations of some of the Older Fragmental Rocks in North-West Cheshire: Prof. T. G. Bonney, F.R.S., and Miss Catherine Raisin.

ROYAL MICROSCOPICAL SOCIETY (20 Hanover Square, W.), at 8.—On the Unreliability of certain Characters generally accepted for Specific Diagnosis in the Diatomaceae: Mr. T. Comber.—Foraminifera of the Gault of Folkestone: Mr. T. Chapman.

ROYAL METEOROLOGICAL SOCIETY, at 8.—Fogs reported with Strong Winds during the Fifteen Years 1876-90 in the British Isles: Robert H. Scott, F.R.S.—Some Characteristic Features of Gales and Strong Winds: Richard H. Curtis.

THURSDAY, JUNE 21.

ROYAL SOCIETY, at 4.30.—The following Papers will probably be read:—On the Absorption Spectra of Dilute Solutions: Dr. T. Swan.—On some Phenomena in Vacuum-tubes: Sir D. Salomons.—On Operators in Physical Mathematics, Part III.: O. Heaviside.—On the Structure and Affinities of *Heliopora cærulea* (Pall.), with some Observations on the Structure of Xenia and Heteroxenia: Albert C. Bourne.—On the Differential Invariants of Twisted Curves, with some Illustrations of the Application to Quartic Curves: R. F. Gwyther.—Degenerations consequent on Experimental Lesions of the Cerebellum: Dr. Risien Russell.—Measurement of Colour produced by Contrast: Captain Abney, F.R.S.—On the Singular Solutions of Simultaneous Ordinary Differential Equations and the Theory of Congruencies: Prof. A. C. Dixon.—And other Papers.

LINNEAN SOCIETY, at 8.—On Tabulation Areas: C. B. Clarke, F.R.S.

CHEMICAL SOCIETY, at 8.—The Specific Character of the Fermentation Functions of Yeast Cells: Adrian J. Brown.—The Interaction of Lead

Sulphide with Lead Sulphate and Oxide: J. B. Hannay.—The Oxidation of Tartaric Acid in the Presence of Iron: H. J. H. Fenton.—The Relation between the Solubility of a Gas and the Viscosity of its Solvent: Prof. Thorpe, F.R.S., and J. W. Rodger.—And other Papers.

FRIDAY, JUNE 22.

PHYSICAL SOCIETY, at 5.—An Exhibition of Photographs of Flames: Captain Abney.—An Elementary Theory of Planimeters: Prof. Henrici.—The Hatchet Planimeter: F. W. Hill.—A New Integrating Apparatus: A. Sharp.—Other Papers if time allows.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Histoire de L'Alimentation, L. Bourdeau (Paris, Alcan).—On the Development and Transmission of Power: Prof. W. C. Unwin (Longmans).—Quain's Elements of Anatomy: edited by Profs. Schäfer and Thane, Vol. 3, part 3, 10th Edition (Longmans).—Ostwald's Klassiker der Exakten Wissenschaften, Nos. 46, 47, 52, 53 (Leipzig, Engelmann).—Report of the Department of Public Works (N. S. W.) for the Year 1892 (Sydney, Potter).—U.S. Commission of Fish and Fisheries Report, 1889-91 (Philadelphia).—Iowa Geological Survey, Vol. 1 (Des Moines).—Publications of the Washington Observatory of the University of Wisconsin, Vol. 8 (Madison).—Report of the Chief of the Weather Bureau, 1891-92 (Washington).—The Frena Handbook, No. 2 (Beck).—Catalogue of the Mesozoic Plants in the Department of Geology, British Museum (Natural History), the Wealden Flora, Part 1: A. C. Seward (London).—Sitzungsberichte der K. B. Gesellschaft der Wissenschaften, 1893 (Prag).

PAMPHLETS.—Report on the Social Condition of the People: J. Nyland (Davy).—Sulla Solidificazione delle Amalgame: D. Mazzotto, I. and II. (Ven-zia, Ferrari).—Sui Sistemi Nodali delle onde Elettriche: Ditto, II. and III. (Torino, Clausen).—Technogeography: O. T. Mason (Washington).—The Birth of Invention: O. T. Mason (Washington).—The Progress of Anthropology: O. T. Mason (Washington).—National Academy of Sciences, Vol. 64th; Memoir—The Proteids or Albuminoids of the Oat Kernel: T. B. Osborne.—Dry Methods of Sanitation: G. V. Poore (Stanford).—Rapport Annuel sur l'État de l'Observatoire de Paris pour l'Année 1893 (Paris).—North American Species of Sagittaria and Lophotocarpus: J. G. Smith (St. Louis).

SERIALS.—Gazetta Chimica Italiana, 1894, fasc. 5 (Roma).—Indian Museum Notes, Vol. 3, No. 3 (Calcutta).—Bulletin of the Essex Institute, Vol. 26, Nos. 1, 2, 3 (Salem).—Essex Institute Historical Collections, Vols. 23 and 30 (Salem).—Illustrated Archæologist, Juré (Clark).—Bulletin de la Société d'Anthropologie de Paris, No. 2, 1894 (Paris, Masson).—Mémoires de la Société d'Anthropologie de Paris, Tome 1 (5^e series), 2^e fasc. (Paris, Masson).—Bulletin de la Société Impériale des Naturalistes de Moscou, 1893, No. 4 (Moscou).—Himmel und Erde, vi. Jahrg. Heft 9 (Berlin).—Journal of the Anthropological Institute, May (K. Pau).—Medical Magazine, June (Southwood).—Proceedings of the Edinburgh Mathematical Society, Vol. 1, Session 1893 (Williams and Norgate).—Proceedings of the American Philosophical Society, Vol. 31, No. 142 (Philadelphia).—American Meteorological Journal, June (Ginn).—Verhandlungen des Naturhistorischen Vereins, Fünfte, Jahrg. Zweite Hälfte (Bonn).—Journal of the Asiatic Society of Bengal, Vol. 62, Part 2, No. 4 (Calcutta).

CONTENTS.

	PAGE
Mining Books	145
A New Standard Dictionary	146
Our Book Shelf:—	
Roberts-Austen: "An Introduction to the Study of Metallurgy."—W. Gowland	147
Scott: "Structural Botany (Flowering Plants)"	147
Drummond: "The Lowell Lectures on the Ascent of Man"	147
Letters to the Editor:—	
Tribute to Hertz	148
Bullet-Proof Shields.—Mrs. Hubbard	148
The Teeth and Civilisation.—Dr. Ed. Jas. Wenyon; Surgeon-Major W. G. Black	148
The Lowell Observatory.—John Ritchie, jun.	149
The Berthollet-Proust Controversy and the Law of Definite Proportions.—Philip J. Hartog	149
The Oxford Meeting of the British Association	151
Exhibitions of Physical Apparatus. By R.A.G.	151
August Kundt. By Dr. H. du Bois	152
Notes	153
Our Astronomical Column:—	
Report of the Astronomer-Royal for Scotland	157
Award of the Watson Medal	157
Two New Catalogues	157
The Density of Nitrogen Gas. By Lord Rayleigh, Sec. R.S.	157
Dr. Armstrong on the Publication of Scientific Literature	159
The Work of Hertz. By Prof. Oliver Lodge, F.R.S.	160
Study of Fluid Motion by Means of Coloured Bands. By Prof. Osborne Reynolds, F.R.S.	161
University and Educational Intelligence	164
Scientific Serials	165
Societies and Academies	165
Diary of Societies	168
Books, Pamphlets, and Serials Received	168