

a tropical region, by MM. V. Marcano and A. Muntz. The observations were made at Caracas, in the Gulf of Venezuela, lat. 10° 3' N., altitude 922 metres. An examination of twenty samples of rain gave a mean proportion of ammonia of 1.58 milligram per litre, with a minimum of 0.37 and a maximum of 4.01. The proportion of gaseous ammonia present has been determined by exposing a known surface of acidulated water to the air and observing the ammonia absorbed in a certain time. Eleven determinations, extending over 174 days, have been made, and they show that, on the average, an acid surface of 1 mq. absorbed, in twenty-four hours, 12.52 mgr. of ammonia, with a minimum of 5.30 mgr. and a maximum of 27 mgr. It appears, therefore, that the air of the tropical station is not so rich in gaseous ammonia as that of temperate regions.—Influence of the sun's rays on the bacilli of fermentation found on the surface of grapes, by M. V. Martinand.—On some effects of the parasitism of plants, by M. A. Magnin.

DIARY OF SOCIETIES.

LONDON.

THURSDAY, DECEMBER 10.

ROYAL SOCIETY, at 4.30.—(n a Compensated Air-Thermometer: H. L. Callendar.—Note on the Necessity of using Well-annealed and Homogeneous Glass for the Mirrors of Telescopes: A. A. Common, F.R.S.—(On some of the Properties of Water and of Steam: Prof. Ramsay, F.R.S., and Dr. Young.—On the Surya Siddhanta (Hindoo Astronomy): W. Brennand.—Repulsion and Rotation produced by Alternating Electric Currents: G. T. Walker.

MATHEMATICAL SOCIETY, at 8.—The Equations of Propagation of Disturbances in Gyrostatically-loaded Media: Dr. J. Larmor.—Theory of Elastic Wires: A. B. Basset, F.R.S.—Researches in the Calculus of Variations; II. Discrimination of Maxima and Minima Solutions when the Variables are connected by Algebraical Equations, the Limits being supposed Fixed: E. P. Culverwell.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Annual General Meeting.—Election of Council and Officers.—On the Specification of Insulated Conductors for Electric Lighting and other Purposes: W. H. Preece, F.R.S.

LONDON INSTITUTION, at 7.—An Hour with my Mozart Manuscripts (Illustrated): Prof. Bridge.

CAMERA CLUB, at 8.—A Short Description and Demonstration of New Telescopic Lens for Photography: T. R. Dallmeyer.—The Use of the Lantern for Scientific Illustration: Dr. A. H. Fison.

FRIDAY, DECEMBER 11.

ROYAL ASTRONOMICAL SOCIETY, at 8.

INSTITUTION OF CIVIL ENGINEERS, at 7.30.—Meters for Recording the Consumption of Electrical Energy: C. H. Wordingham.

CAMERA CLUB, at 8.—Retouching Class.

SATURDAY, DECEMBER 12.

ROYAL BOTANIC SOCIETY, at 3.45.

SUNDAY, DECEMBER 13.

SUNDAY LECTURE SOCIETY, at 4.—The Origin and History of the Thames (with Oxyhydrogen Lantern Illustrations): Prof. J. F. Blake.

MONDAY, DECEMBER 14.

SOCIETY OF ARTS, at 8.—The Pigments and Vehicles of the Old Masters: A. P. Laurie.

ARISTOTELIAN SOCIETY, at 8.—The True Sense of the Term *a priori*: J. H. Muirhead.

LONDON INSTITUTION, at 5.—Tropical Plants and Flowers (Illustrated): D. Morris.

CAMERA CLUB, at 8.30.—Development: Lyonel Clark.

TUESDAY, DECEMBER 15.

ROYAL STATISTICAL SOCIETY, at 7.45.—Enumeration and Classification of Paupers and State Pensions for the Aged: Charles Booth.

UNIVERSITY COLLEGE BIOLOGICAL SOCIETY, at 5.15.—The Sources of Nitrogenous Food of Leguminous Plants: H. Thompson.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Sale of Water by Meter in Berlin: Henry Gill. (Discussion.)

WEDNESDAY, DECEMBER 16.

SOCIETY OF ARTS, at 8.—Typological Museums, as Exemplified by the Pitt Rivers Museum at Oxford: General Pitt Rivers.

ROYAL METEOROLOGICAL SOCIETY, at 7.—Report on the Thunderstorms of 1888 and 1889: William Marriott.—On the Prevalence of Fog in London during the Twenty Years 1871-90: Frederick J. Brodie.

ROYAL MICROSCOPICAL SOCIETY, at 8.—On the Resolution of Podura: Hon. J. G. P. Vereker.

INSTITUTION OF CIVIL ENGINEERS, at 2.—Students' Visit to the Stations of the Westminster Electric Supply Corporation, 11 Millbank Street, and Eccleston Place, S.W.

CAMERA CLUB, at 8.—Retouching Class.

THURSDAY, DECEMBER 17.

ROYAL SOCIETY, at 4.30.

LINNEAN SOCIETY, at 8.—Development of the Head of the Imago of Chironomus: Prof. L. C. Miall and A. R. Hammond.—On Two Species of Cumacea in New Zealand: G. M. Thomson.

CHEMICAL SOCIETY, at 8.—The Composition of Cooked Vegetables: Miss K. Williams.—On some Metallic Hydrosulphides: S. E. Linder and H. Picton.—On the Physical Constitution of some Solutions of Insoluble Sulphides: Harold Picton.—Solution and Pseudo-solution: H. Picton and S. E. Linder.—The Change proceeding in Acidified Solutions of Sodium Thiosulphate when the Products are retained within the System; and The Action of Sulphurous Acid on Flowers of Sulphur: Dr. A. Colefax.—The α and β modifications of Chlorobenzene Hexachloride: Dr. Matthews.—Camphrene, a Product of the Action of Dehydrating Agents on Camphor: Drs. Armstrong and Kipping.—Studies on the Dibromonaphthalenes: Dr. Armstrong and Mr. Rossiter.

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LONDON INSTITUTION, at 6.—Winchester Cathedral (illustrated): Very Rev. the Dean of Winchester.

CAMERA CLUB, at 8.30.—Simplified Collographic Process (Description and Demonstration): Leon Warnerke.

FRIDAY, DECEMBER 18.

PHYSICAL SOCIETY, at 5.—On Interference with Alternating Currents: H. Kilgour.

CAMERA CLUB, at 8.—Retouching Class.

BOOKS, PAMPHLETS, AND SERIALS RECEIVED.

BOOKS.—The Universal Atlas, Part IX. (Cassell).—The Powe which Propel and Guide the Planets: S. Laidlaw (Kegan Paul).—Progressive Mathematical Exercises, First Series: A. T. Richardson (Macmillan).—The Principles of Chemistry, 2 vols.: D. Mendelëeff; translated by G. Kamensky; edited by A. J. Greenaway (Longmans).—Lehrbuch der Vergleichenden Entwicklungsgeschichte der Wirbellosen Thiere, Specielle Theil, Zweites Heft: Dr. E. Korschelt and Dr. K. Heider (Jena, Fischer).—Proceedings of the American Association, August 1890 (Salem).—Oriental Cicadidae, Part 4: W. L. Distant (London).—Annalen der k.k. Universitäts-Sternwarte in Wien, Band vii. (Williams and Norgate).—Travels in Africa during the Years 1879-1883: Dr. W. Junker; translated by A. H. Keane (Chapman and Hall).—An Essay on Reasoning: E. T. Dixon (Cambridge, Deighton).—Proceedings of the U. S. National Museum, vol. xiii., 1890 (Washington).—An Introduction to Chemical Theory: Dr. A. Scott (Black).—Himalayan Journals: Sir J. D. Hooker (Ward, Lock).—Falling in Love, &c.: Grant Allen; new ed. (Smith, Elder).—Nature and Man in America: N. S. Shaler (Smith, Elder).—Annuaire 1891, par le Bureau des Longitudes, Paris (Gauthier-Villars).—Connaissance des Temps ou des Mouvements Célestes, 1893 (Gauthier-Villars).—Ephémérides des Etoiles de Culmination Lunaire et de Longitude pour 1891: M. M. Lowry (Gauthier-Villars).—The Harveian Oration on Harvey in Ancient and Modern Medicine: Dr. W. H. Dickinson (Longmans).—The Cause of an Ice Age; Sir R. S. Ball (Kegan Paul).—Scientific Results of the Second Yarkand Mission—Introductory Note and Map, 1878-91.—Scientific Results of the Second Yarkand Mission: Aves: Dr. R. B. Sharpe (Taylor and Francis).—Animal Sketches: C. Lloyd Morgan (Arnold).—A Manual of Physics: Dr. W. Peddie (Baillière).—Memory, its Logical Relations and Cultivation: Dr. F. W. Edridge-Green; 2nd edition (Baillière).

PAMPHLETS.—Connaissance des Temps, Extrait pour l'an 1892 (Paris, Gauthier-Villars).—Australian Museum, Sydney; Hand-List of Australian Mammals: J. D. Ogilby (Sydney).—Compass-Deviation; Syllabus of Examination in the Laws of Deviation (Imray).

SERIALS.—Records of the Australian Museum, vol. i., No. 9 (Sydney).—North American Fauna, No. 5 (Washington).—Proceedings of the Academy of Natural Sciences of Philadelphia, 1891, Part 2 (Philadelphia).—Brain, Parts 54 and 55 (Macmillan).

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