

acid with soda, potash, baryta, lead oxide, and silver oxide; and of the heat of formation of the various hydrates.—Estimation of phosphorus in the ashes of coal and coke, by M. Louis Campredon. It is shown that the whole of the phosphorus cannot be extracted from the ash even after a very prolonged heating with hydrochloric acid. Fusion with alkaline carbonates of the residue left after extraction with acid always gives a further amount of phosphate, which is the larger the longer the ash has been ignited.—Analysis of commercial copper by the electrolytic method, by M. A. Hollard. Details are given of the method employed for the exact estimation of the copper in crude coppers.—On ozone and the phenomena of phosphorescence, by M. Maurice Otto. Most organic substances are capable of giving rise to phosphorescence when placed in contact with ozone. The luminosity produced with ordinary distilled water is shown to be due to the presence of minute quantities of organic matter.—On the new bread for military purposes, by M. Balland.—Researches on the modifications of nutrition in cancerous subjects, by M. M. Simon Duplay and Savoirc. The alkaloidal substance isolated by M. Griffiths, in 1894, from cancerous urines, would appear to be due to the introduction of foreign micro-organisms; when the cancerous growth is in a part of the body naturally aseptic, no such substance can in general be found in the urine. An alkaloidal substance, differing in its reactions from that described by Griffiths, was, however, present in one case of sarcoma.—On a new method of collecting the venom of serpents, by M. Paul Gibier. It has been found that after suitable arrangements have been made for holding the snake and collecting the venom, the serpent refuses to emit a single drop of the venom. This difficulty is overcome by stimulating the venom glands and neighbouring muscles with a weak alternating current, when, in a few seconds, the glands are completely emptied.—Use of the grisometer in the medico-legal examination for carbon monoxide, by M. N. Gréhant. The gas is extracted by the aid of acetic acid and the mercury pump, and the carbon monoxide determined in the gas mixture by means of the grisometer.—On the development of some annelids, by M. Auguste Michel.—Observations on the rhizoctone of the potato, by M. E. Roze.—Destruction of *Heterodera Schachtii*, by M. Willot.—The endomorphic transformations of the granitic magma of Ariège, in contact with limestones, by M. A. Lacroix.—Artificial reproduction of pirssonite, northupite, and gaylussite, by M. A. de Schulten.—The Upper Jurassic strata in the neighbourhood of Angoulême, by M. Ph. Glangeaud.

## DIARY OF SOCIETIES.

### THURSDAY, DECEMBER 17.

ROYAL SOCIETY, at 4.30.—On the Dielectric Constant of Liquid Oxygen and Liquid Air: Prof. Fleming, F.R.S., and Prof. Dewar, F.R.S.—On the Effect of Pressure in the Surrounding Gas on the Temperature of the Crater of an Electric Arc: Correction of Results in former Paper: W. E. Wilson, F.R.S., and Prof. F. Fitzgerald, F.R.S.—Influence of Alterations of Temperature upon the Electrolytic Currents of Medullated Nerve: Dr. Waller, F.R.S.—Subjective Colour Phenomena attending Sudden Changes of Illumination: S. Bidwell, F.R.S.—On the Occurrence of Gallium in the Clay-Ironstone of the Cleveland District of Yorkshire: Prof. Hartley, F.R.S., and H. Ramage.—On some Recent Investigations in Connection with the Electro Deposition of Metals: J. C. Graham.

LINNEAN SOCIETY, at 8.—On the Chalcididae of the Island of Grenada: Dr. L. G. Howard.—On the Development of the Ovule of *Christisonia*, a Genus of the Orobanchæ: W. C. Worsdell.

CHEMICAL SOCIETY, at 8.—On the Experimental Methods employed in the Examination of the Products of starch-hydrolysis; on the Specific Rotation of Maltose and of Soluble Starch; on the Relation of the Specific Rotatory and Cupric-reducing Powers of Starch-hydrolysis by Diastase: Horace T. Brown, F.R.S., Dr. G. H. Morris, and W. H. Millar.

ROYAL STATISTICAL SOCIETY, at 5.30.

### FRIDAY, DECEMBER 18.

EPIDEMIOLOGICAL SOCIETY, at 8.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Wells, and Well-Sinking: John W. Kitchin.

### SUNDAY, DECEMBER 20.

SUNDAY LECTURE SOCIETY, at 4.—Creatures of Other Days: Rev. H. N. Hutchinson.

### TUESDAY, DECEMBER 22.

ROYAL INSTITUTION.—Use of Liquid Air in Scientific Research (before H. R. H. the Prince of Wales): Prof. Dewar, F.R.S.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Steel Skeleton Construction in Chicago: E. C. Shankland.

## BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Alterations of Personality; A. Binet, translated by H. G. Baldwin (Chapman).—The Cell in Development and Inheritance: Dr. E. B. Wilson (Macmillan).—Second Annual General Report upon the Mineral Industry of the United Kingdom of Great Britain and Ireland for the Year 1895: Dr. C. le Neve Foster (Eyre and Spottiswoode).—Light as the Interpretation of the Law of Gravity: A. M. Cameron (Sydney, Angus and Robertson).—London University Guide and University Correspondence College Calendar, 1895-7 (Clive).—Hygiene for Beginners: Dr. E. S. Reynolds (Macmillan).—Compressed Air Illness: Dr. E. H. Snell (Lewis).—Roentgen Rays and Phenomena of the Anode and Cathode: E. P. Thompson (Spon).—Knowledge, Vol. xix (326 High Holborn).—Studies in the Morphology of Spore-producing Members: Prof. F. O. Bower. II. Ophioglossaceæ (Dulau).—Die Leitfossilien: Dr. E. Koken (Leipzig, Tauchnitz).—Elementary Non Metallic Chemistry: S. R. Trotman (Rivington).—The Fauna of British India, including Ceylon and Burma. Moths, Vol. iv.: Sir G. F. Hampson (Taylor and Francis).

PAMPHLETS.—Die Seen des Salzkammergutes und die Österreichische Traun: Dr. J. Müllner (Wien, Hölzel).—Die Abfluss- und Niederschlagsverhältnisse von Böhmen, &c.: Dr. A. Penck (Wien, Hölzel).—Atlas der Österreichischen Alpenseen, i. Liefg.: Dr. F. Simony and Dr. J. Müllner (Wien, Hölzel).—Ditto, ii. Liefg.: Dr. E. Richter (Wien, Hölzel).—The Results of the Use of Tuberculin in the Cattle-craig Herd: J. Wilson (Edinburgh, Johnston).

SERIALS.—Lloyd's Natural History. Game Birds: W. R. Ogilvie-Grant, Parts 1 and 2 (Lloyd).—Himmel und Erde, November (Berlin, Paetel).—Engineering Magazine, December (Tucker).—Journal of the College of Science, Imperial University, Japan, Vol. x. Part 1 (Tōkyō).—American Journal of Science, December (New Haven).—Transactions of the Yorkshire Naturalists' Union, Part 20 (Leeds, Taylor).—Bulletin de l'Académie Royale des Sciences, &c., de Belgique, 1896, Nos. 9 and 10 (Bruxelles).—Journal of the Franklin Institute, December (Philadelphia).—Botanische Jahrbücher, &c., Zweiundzwanzigster Band, 3 Heft (Leipzig, Engelmann).

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